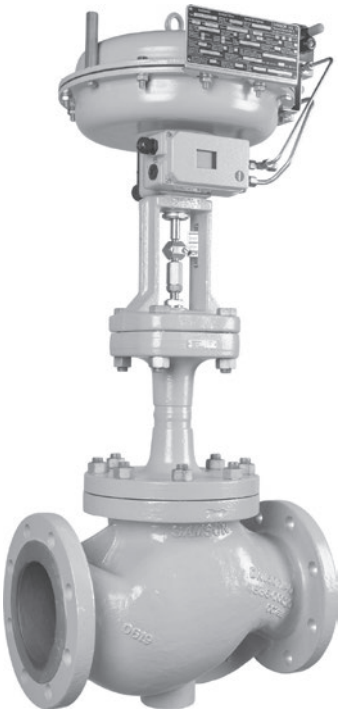
MOUNTING AND
OPERATING INSTRUCTIONS

EB 8020-1 EN

Translation of original instructions

NOTICE on the scope of this document

These mounting and operating instructions only apply to valves already in use.
For control valves of the valve class D, refer to the updated mounting and operating instructions ▶ EB 8020
They can be downloaded from our website at
▶ www.samsongroup.com > Service & Support > Downloads > Documentation



Type 3241-7-Gas with Type 3963 Solenoid Valve and Type 3730 Positioner

Type 3241-1-Gas and Type 3241-7-Gas Automatic Shut-off Valves for Gases

~~Valve class D~~ and valve class E

Edition February 2020

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).

The mounting and operating instructions for the devices are included in the scope of delivery. The latest documentation is available on our website at ***www.samsongroup.com > 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 3241G Globe Valve in combination with the Type 3271 or Type 3277 Pneumatic Actuator and a solenoid valve is designed to regulate the flow rate, pressure or temperature of fuel gases in gas-consuming equipment.

The valve, actuator and solenoid valve are 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 applications that meet the specifications used for sizing the valve at the ordering stage. In case operators intend to use the control valve in other applications or conditions than specified, contact SAMSON.

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

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

Reasonably foreseeable misuse

The 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 mounted on the control valve

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

– Use of non-original spare parts
– Performing service and repair work not described in these instructions

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 are to be observed. According to these mounting and operating instructions, trained personnel refers to individuals who are able to judge the work they are assigned to and recognize possible hazards due to their specialized training, their knowledge and experience as well as their knowledge of the applicable standards (e.g. Gas Appliances Regulation (EU) 2016/426). Furthermore, the operating personnel must be specially trained for the correct and safe handling of fuel gases in gas-consuming equipment.

SAMSON does not assume any liability for personal injury or property damage caused by untrained operating personnel.

Personal protective equipment

We recommend checking the hazards posed by the process medium being used (e.g. ▶ GESTIS (CLP) hazardous substances database).

➔ Provide protective equipment (e.g. safety gloves, eye protection) appropriate for the process medium used.

➔ Wear hearing protection when working near the valve.

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

Revisions and other modifications

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

Safety devices

– Upon supply air or control signal failure, the valve moves to its fail-safe position (see section 3.1). The fail-safe action of the actuator is the same as its direction of action and is specified on the nameplate of SAMSON actuators (see actuator documentation).

– **Valve class D:** the safety control valves are tested according to DIN EN 161 (2013-04). In the event of a malfunction, the valves shut off the gas supply. They meet the strict leakage requirements of Class D.

– **Valve class E:** the safety control valves are tested according to DIN EN 161 (1996-08). In the event of a malfunction, the valves shut off the gas supply. The valves meet the strict leakage requirements of Class E and are assigned to Valve Group 2.

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. They must observe all hazard statements, warning and caution notes in these mounting and operating instructions.

We also recommend checking the hazards posed by the process medium being used (e.g. ▶ GESTIS (CLP) hazardous substances database).

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

Responsibilities of the operator

The operator is responsible for proper operation and compliance with the safety regulations. Operators are obliged to provide these mounting and operating instructions as well as the referenced documents to the operating personnel and to instruct them in proper operation. Furthermore, the operator must ensure that operating personnel or third persons are not exposed to any danger.

Responsibilities of operating personnel

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

Referenced standards and regulations

- The control valves comply with the requirements of the European Pressure Equipment Directive 2014/68/EU. Valves with a CE marking have an EU declaration of conformity, which includes information about the applied conformity assessment procedure. The EU declaration of conformity is included in the annex of these instructions (see section 10.2).
- **Valve class D:** the control valves meet the requirements of the previously valid European Gas Appliance Directive 2009/142/EC and the currently valid Gas Appliances Regulation (EU) 2016/426. The EC type examination certificate and EU declaration of conformity are included in the annex of these instructions (see section 10.2).
- **Valve class E:** the control valves meet the requirements of the 90/396/EEC. This type examination certificate is included in the annex of these instructions (see section 10.2).
- The control valves meet the safety, construction and function requirements for automatic shut-off valves with gas burners, gas equipment and similar applications according to DIN EN 161.

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
- Mounting and operating instructions for mounted valve accessories (positioner, solenoid valve etc.)
- ▶ AB 0100 for tools, tightening torques and lubricant

1.1 Notes on possible severe personal injury

⚠ DANGER

Risk of bursting in pressure equipment.

Valves and pipelines are pressure equipment. Improper opening can lead to valve components bursting.

➔ 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 affected as well as the valve.

➔ Wear personal protective equipment.

1.2 Notes on possible personal injury

⚠ WARNING

Crush hazard arising from moving parts.

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

➔ Do not insert hands or fingers into the yoke while the valve is in operation.

➔ While working on the control valve, disconnect and lock the pneumatic air supply as well as the control signal.

Risk of personal injury when the actuator vents.

While the valve is operating, the actuator may vent during closed-loop control or when the valve opens or closes.

➔ Install the control valve in such a way that the actuator does not vent at eye level.

➔ Use suitable silencers and vent plugs.

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

⚠ WARNING

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 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).

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

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

➔ If possible, drain the process medium from all the plant sections affected and the valve.

➔ Wear protective clothing, safety gloves and eye protection.

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 heat up.

➔ Wear protective clothing and safety gloves.

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.

➔ Observe the maximum permissible pressure for valve and plant.

NOTICE

Risk of valve damage due to unsuitable medium properties.

The valve is sized according to Gas Appliances Regulation (EU) 2016/426 (valve class D) or the Directive 90/396/EEC (valve class E) for fuel gases.

➔ Only use the process medium specified for sizing the valve.

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

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

➔ Observe the specified tightening torques (▶ AB 0100).

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 (▶ AB 0100).

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 the surface.

➔ Only use lubricants approved by SAMSON (▶ AB 0100).

2 Markings on the device

2.1 Nameplate for gas version

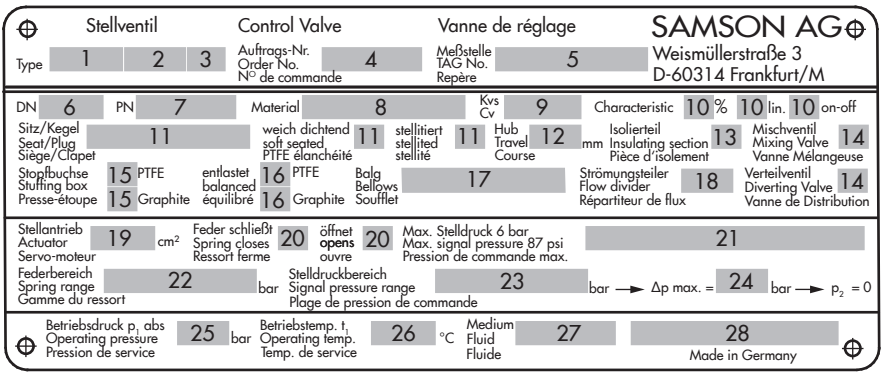


Fig. 1: *Nameplate for gas version*

1 Type
2 Configuration ID
3 (empty)
4 Order number
5 Tag no.
6 Valve size:
DIN: DN · ANSI: NPS
7 Pressure rating:
DIN: PN · ANSI: CL
8 Material
9 Flow coefficient:
DIN: K_{VS} · ANSI: C_V
10 Characteristic:
%: equal percentage · lin: linear · on-off: on/off service
11 Seat-plug seal:
Material
Stellite® facing
Soft seal with PTFE
12 Valve travel in mm
13 Insulating section
14 Mixing or diverting valve
15 Packing:
PTFE
Graphite
16 Pressure balancing:
PTFE
Graphite
17 Bellows material
18 Flow divider
19 Actuator area in cm²
20 Direction of action
Fail-close
Fail-open
21 Max. signal pressure in bar
22 Bench range in bar
23 Signal pressure range in bar
24 Max. differential pressure in bar
25 Operating pressure in bar
26 Operating temperature in °C
27 Process medium
28 (empty)

2.2 Valve nameplate

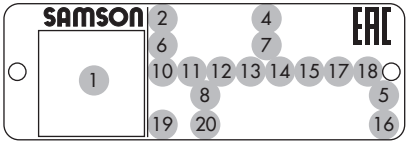


Fig. 2: *Inscriptions on the valve nameplate*

Item	Inscription meaning	
1	Data Matrix code	
2	Type designation	
4	Material	
5	Month and year of manufacture	
6	Valve size: DIN: **DN** · ANSI: **NPS**	
7	Pressure rating: DIN: **PN** · ANSI: **CL**	
8	Serial number	Order number/item
10	Flow coefficient: DIN: **KVS** · ANSI: **CV**	
11	Characteristic: **%**: equal percentage · **LIN**: linear **mod-lin**: modified linear	
	NO/NC: on/off service	
12	Seat-plug seal: **ME**: metal · **HA**: carbide metal **ST**: metal base material with Stellite® facing **KE**: ceramic · **PK**: PEEK soft seal	
13	Seat code (trim material): on request	
14	Pressure balancing: DIN: **D** · ANSI: **B**	
	Version: **M**: mixing valve · **V**: flow-diverting valve	

Item	Inscription meaning
15	Noise reduction: **1**: flow divider (ST) 1 · **2**: ST 2 · **3**: ST 3 **1/PSA**: ST 1 standard and integrated in seat for PSA valve · **AC-1/AC-2/AC-3/AC-5**: AC trim, versions 1 to 5 · **LK**: perforated plug · **LK1/LK2/LK3**: perforated plug with flow divider ST 1 to ST 3 · **MHC1**: multi-hole cage **CC1**: Combi Cage · **ZT1**: Zero Travel
16	Country of origin
17	PSA version: **PSA**
18	Cage/seat style: **CC**: clamped cage, clamped seat **SF**: suspended cage, flanged seat **FF**: flanged cage, flanged seat
19	CE marking
20	ID of the notified body
	PED: Pressure Equipment Directive
	G1/G2: gases and vapors Fluid group 1 = hazardous Fluid group 2 = other
	L1: liquids Fluid group 1 = hazardous Fluid group 2 = other
	I/II/III: Category 1 to 3

2.3 Actuator nameplate

See associated actuator documentation.

2.4 Other markings

2.4.1 DVGW register number

Fig. 3: *DVGW register number*

2.4.2 Material numbers

The seat and plug of the valves have an item number written on them. Specifying this item number, you can contact us to find out which material is used. Additionally, a seat code is used to identify the trim material. This seat code is specified on the nameplate. For more details on the nameplate, see section 2.2.

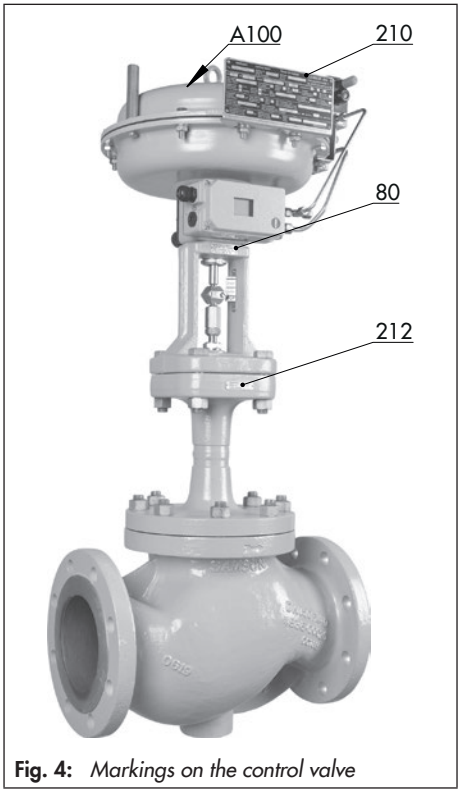


Fig. 4: *Markings on the control valve*

2.5 Position of marking

The nameplate for the gas version (210) is affixed to the actuator.

The valve nameplate (80) is affixed to the flange.

The actuator nameplate (A100) is stuck on the diaphragm casing (Fig. 4).

The plate with the DVGW register number (212) is affixed to the bellows seal.

3 Design and principle of operation

The Type 3241G Valve is a single-seated globe valve. It is combined with a SAMSON Type 3271 or Type 3277 Pneumatic Actuator, solenoid valve and strainer (see Fig. 5). Optionally, a positioner can be used.

The seat (4) and plug with plug stem (5) are installed in the body (1). The plug stem is screwed to the plug stem with bellows seal (37). The plug stem is sealed by the metal bellows and the packing (15). The stem connector clamps (A26/27) connect the actuator stem (A7) of the mounted actuator.

The bellows seal (22) is fitted with a test connection (42). It can be used to monitor the sealing ability of the bellows.

A strainer installed upstream of the valve body. It prevents solid particles in the process medium from damaging the valve. The strainer is not required when a central strainer facility is installed.

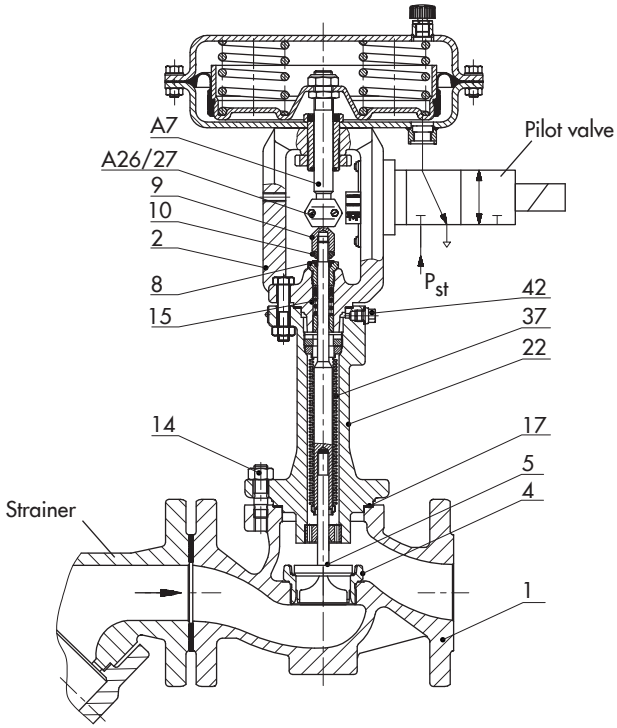
i Note

For special versions made of A216 WCC or A351 CF8M in Class 300: as a DIN version of the Type 2 NI Strainer is only available, a central strainer facility must be installed when an ANSI version is used.

The springs in the pneumatic actuator are located either above or below the diaphragm depending on the selected fail-safe action (see section 3.1). A change in the signal pressure acting on the diaphragm causes the plug to move. The actuator size is determined by the diaphragm area.

The process medium flows through the strainer and the valve in the direction indicated by the arrow. A rise in signal pressure causes the force acting on the diaphragm in the actuator to increase. The springs are compressed. Depending on the selected direction of action, the actuator stem retracts or extends. As a result, the plug position in the seat changes and determines the flow rate through the valve.

The signal pressure p_{st} is applied to the pilot valve whose coil is connected to the safety interlock circuit (switch 14, Fig. 6 and Fig. 7). During operation, the coil is energized and the signal pressure p_{st} acts on the diaphragm. In the event of a malfunction, the pilot valve is activated and the pressure acting on the diaphragm is relieved, causing the control valve to quickly close.



1	Body
2	Flange
4	Seat
5	Plug (with plug stem)
8	Threaded bushing (packing nut)
9	Stem connector nut
10	Lock nut
14	Body nut
15	Packing
17	Body gasket
22	Bellows seal
37	Plug stem with metal bellows
42	Test connection
A7	Actuator stem
A26/27	Stem connector clamps

Fig. 5: *Type 3241-1-Gas Automatic Shut-off Valve*

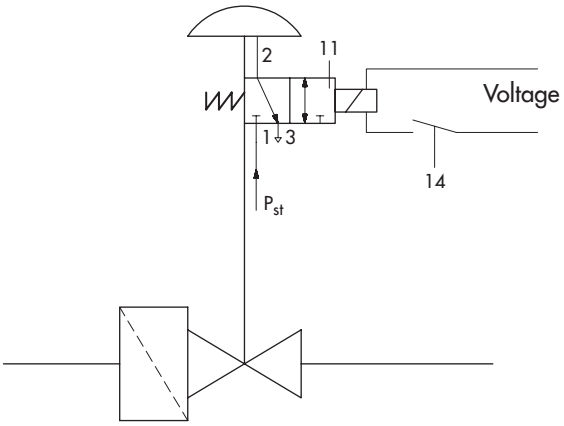


Fig. 6: *Functional diagram showing version without positioner*

11 Pilot valve
13 Positioner
14 Switch for safety interlock circuit

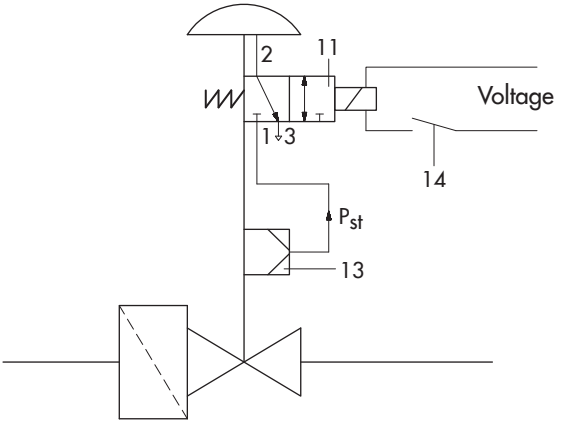


Fig. 7: *Functional diagram showing version with positioner*

3.1 Fail-safe positions

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.

i ***Note***

The "stem retracts" direction of action is only permitted for a certain version designated for valve class E. See Table 9.

3.2 Versions

Actuators

➔ To select a suitable actuator, see Table 6 (valve class D) or Table 9 (valve class E).

3.3 Technical data

The nameplate provides information on the control valve version (see section 2.1).

3.3.1 Common technical data

– **DIN DVGW test mark**
The valves were typetested by TÜV (German technical surveillance association) and received the test mark by DVGW (German Technical and Scientific Association for Gas and Water) as specified in Table 5 or Table 8.

– **Compliance**
The Type 3241G Valve bears both the CE and EAC marks of conformity.

– **Leakage class**
Leakage class according to DIN EN 161

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.

⚠ WARNING

Risk of hearing loss or deafness due to loud noise.
Wear hearing protection when working near the valve.

Table 1: *Materials (material numbers according to DIN EN)*

Valve	**DN 15 to 150 (NPS ½ to 6)**		**DN 15 to 80**		**Strainer**	
Body [1]	Cast steel 1.0619	Cast stainless steel 1.4408	Forged steel 1.0460	Forged stainless steel 1.4571	Cast steel 1.0619	Cast stainless steel 1.4408
Valve bonnet	1.0460	1.4404	1.0460	1.4404	Standard strainer insert and dual strainer insert 1.4401	
Seat and plug	1.4404 Plug with soft seal, PTFE seal with 15 % glass fiber					
Guide bushing	1.4104	1.4404	1.4104	1.4404		
Packing	V-ring packing: PTFE with carbon · Spring: 1.4310					
Intermediate piece	1.0460	1.4404	1.0460	1.4404		
Metal bellows	1.4571					
Body gaskets	Graphite on metal core					

[1] Special version: A216 WCC or A351 CF8M in Class 300. As a DIN version of the Type 2 NI Strainer is only available, a central strainer facility must be installed.

Dimensions and weights

Table 2 to Table 4 provide a summary of the dimensions and weights of the standard version of Type 3241 Valve.

Dimensions in mm · Weights in kg

Table 2: *Dimensions for Type 3241G Valve*

Valve		**DN**	**15**	**25**	**40**	**50**	**80**	**100** [1]	**150** [1]
Length L		mm	130	160	200	230	310	350	480
Length L1		mm	260	320	400	460	620	700	960
Height H1 with 175, 355 and 750 cm² actuator area		mm	222		223		262	354	390
H2	Cast steel	mm	44		72		98	118	175
	Forged steel	mm	53	70	92	98	128	–	

[1] Only with valve body made of 1.0619 or 1.4408

Table 3: *Dimensions for Types 3271 and 3277 Pneumatic Actuators*

Actuator area		**cm²**	**175v2**	**240**	**350**	**355v2**	**700**	**750v2**
Diaphragm ØD		mm	215	240	280	280	390	394
H [1]		mm	78	62	82	121	199	236
H3 [2]		mm	110	110	110	110	190	190
H5	Type 3277	mm	101	101	101	101	101	101
Thread	Type 3271		M30x1.5					
	Type 3277		M30x1.5					
a	Type 3271		G ¼ (¼ NPT)	G ¼ (¼ NPT)	G ⅜ (⅜ NPT)	G ⅜ (⅜ NPT)	G ⅜ (⅜ NPT)	G ⅜ (⅜ NPT)
a2	Type 3277		G ⅜	G ⅜	G ⅜	G ⅜	G ⅜	G ⅜

[1] Height with welded-on lifting eyelet or height of eyebolt according to DIN 580. Height of the swivel hoist may differ. Actuators up to 355v2 cm² without lifting eyelet

[2] Minimum clearance to remove actuator due to solenoid valve and bracket

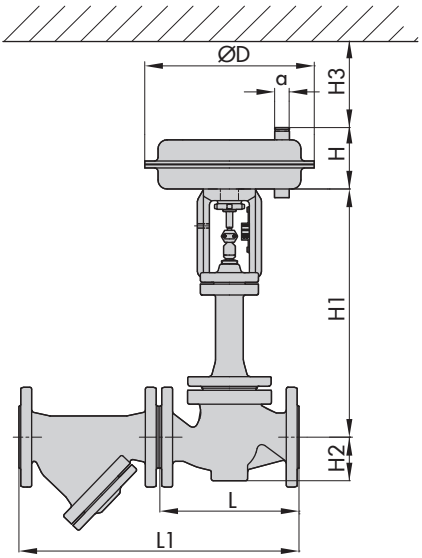
Table 4: *Weights*

Valve	**DN**	**15**	**25**	**40**	**50**	**80**	**100**	**150**
Weight without actuator	kg (approx.)	8	10	18	21	38	60	150
Strainer								
Weight	kg (approx.)	2	4	7	10	19	28	60

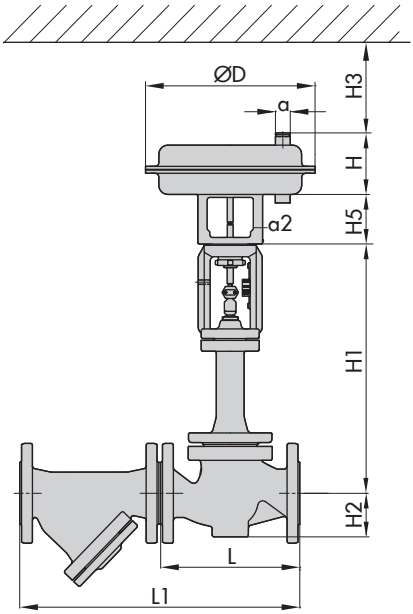
Actuator	**cm²**	**175v2**	**240**	**350**	**355v2**	**700**	**750v2**
Weight of Type 3271	kg (approx.)	6	5	8	15	22	36
Weight of Type 3277	kg (approx.)	10	9	12	19	26	40

Solenoid valve	kg (approx.)	1

Dimensional drawings



Type 3241-1-Gas



Type 3241-7-Gas

3.3.2 Technical data of version for valve class D

Table 5: *Type 3241G Valve*

Cast body: DN 15 to 150 · Forged body: DN 15 to 80

DIN DVGW test mark		CE-0085CQ0516																				
Valve size	**DN**	**15**		**25**			**40**		**50**				**80**				**100**			**150**		
Pressure rating	PN	40																				
K_{VS} coefficient (without flow divider ST 1)		0.4	1.6	0.4	1.6	6.3	6.3	16	6.3	16	25	40	25	40	60	80	63	100	160	160	260	
		0.63	2.5	0.63	2.5	10	10	–	10	–	–	–	–	–	–	–	–	–	–	–	–	
		1.0	4.0	1.0	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
K_{VS}I (with flow divider ST 1)		–	–	–	–	–	–	–	–	–	22	36	22	36	54	72	57	90	144	144	234	
Seat diameter	mm	6	12	6	12	24	24	31	24	31	38	48	38	48	63	80	63	80	100	100	130	
Permissible differential/ operating pressure	bar	20													15				10		5	
Rated travel	mm	15															30					
Rangeability		50 : 1											30 : 1									
Perm. ambient temperature		–40 to +60 °C																				
Permissible medium temperature		–20 to +220 °C																				
Closing time		<5 s [1]																				
Valve class		Valve class D																				
Strainer		Type 2 NI, special version for gas, 0.25 mm mesh size																				

[1] Closing time <1 s when fitted with correspondingly sized pilot valves (possibly in combination with a quick exhaust valve)

Table 6: *Types 3271 and 3277 Pneumatic Actuators*

Actuator area in cm²		**175**		**355**					**750**		
Signal pressure range	bar	0.8…2.4	1.7…3.3	2.35…2.95					1.6 … 2.4	1.65…2.65	
Required supply pressure	bar	2.7	3.6	3.25	3.3	3.25	3.3	3.25	2.7	3	2.95
Max. supply pressure	bar	6		6					6		
Closing force	kN	1.4	3	8.34	8.3	8.34	8.3	8.34	12	12.4	
Fail-safe position		Fail-close									

Table 7: *Pilot valves for Type 3241-1-Gas · Valid for closing time <5 s*

Valve			Solenoid valve manufacturer and model number			
Valve size DN	Actuator area [cm²]	Fail-safe position	SAMSOMATIC model K_{VS} coefficient (attachment: threaded connection)		Norgren series Herion (Attachment: NAMUR interface)	
			3963-xxxxx13 1.4	3963-xxxxx14 4.3	24011 [1]	98015
15	175	Stem extends (FA) Fail-close	•	•	•	•
25	175		•	•	•	•
40	175		•	•	•	•
50	175		•	•	•	•
	355		•	•	•	•
80	355		•	•	•	•
	750		•	•	•	•
100	750		•	•	•	•
150	750		•	•	•	•

[1] Herion Type 24011 Solenoid valve with quick exhaust module

3.3.3 Technical data of version for valve class E

Table 8: *Type 3241G Valve*

Cast body: DN 15 to 150 · Forged body: DN 15 to 80

DIN DVGW test mark	**CE-0085AQ 0787**																								**-0734** [1]
Valve size DN	**15**		**25**			**40**		**50**			**80**							**100**					**150**		**25** [1]
Pressure rating PN	40																								
K_{VS} coefficient (without flow divider ST 1)	0.4	1.6	0.4	1.6	6.3	6.3	16	6.3	16	25	40	25	40	60	80	60	80	63	100	160	160	160	260	10
	0.63	2.5	0.63	2.5	10	10	–	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	1.0	4.0	1.0	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
K_{VS}I (with flow divider ST 1)	–	–	–	–	–	–	–	–	–	22	36	22	36	54	72	54	72	57	90	144	144	144	234	–
Seat diameter mm	6	12	6	12	24	24	31	24	31	38	48	38	48	63	80	63	80	63	80	100	100	100	130	24
Perm. diff./op. pressure bar	25													15	6	25	15	15	10	4	10	4	3	20
Rated travel mm	15																	30						15
Rangeability	50 : 1											30 : 1												50 : 1
Perm. ambient temperature	–40 to +60 °C																								
Perm. medium temperature	–20 to +220 °C																								
Closing time	<1 s																								
Valve class	Valve class E · Valve group 2, class 2																								
Strainers	Type 2 NI, special version for gas, 0.25 mm mesh size																								

[1] Test mark: CE-0085AQ 0734 for special version with "fail-open" fail-safe action

Table 9: *Types 3271 and 3277 Pneumatic Actuators*

Actuator area in cm²		240		350							700					350
Signal pressure range	bar	0.4 to 2.0	0.6 to 2.2	0.3 to 1.9	0.4 to 2.0	0.8 to 2.4	0.8 to 2.4	1.4 to 2.3	0.8 to 2.4	1.4 to 2.3	1.2 to 2.0	1.85 to 2.3	1.4 to 2.3	2.1 to 3.3	1.4 to 2.3	0.4 to 2.0
Req. supply pressure	bar	2.2	2.4	2.1	2.2	2.6	2.6	2.5	2.6	2.5	2.2	2.5	2.5	3.5	2.5	3.0
Max. supply pressure	bar	6.0									3.5					3.0
Closing force	kN	0.96	1.44	1.05	1.4	2.8	2.8	4.9	2.8	4.9	8.4	12.95	9.8	14.7	9.8	3.5
Fail-safe position		Fail-close														Fail-open

Table 10: *Pilot valves for Type 3241-1-Gas*

Valve				Solenoid valve manufacturer and model number			
Type 3241	DN	Actuator	Fail-safe position	SAMSOMATIC model K_{VS} coefficient (Attachment: threaded connection)		Norgren series Herion (Attachment: NAMUR interface)	
				3963-xxxxx13 1.4	3963-xxxxx14 4.3	24011 [1]	98015
-0261	15	240	Stem extends (FA) Fail-close	•	•	•	•
-0263	25	350		•	•	•	•
-0265	40	350		•	•	•	•
-0266	50	700		–	•	–	•
-0267		350		•	•	•	•
-0269	80	700		–	•	–	•
-0271	100	700		–	•	–	•
-0275	150	700		–	•	–	•
-4321	25	350	Stem retracts (FE) Fail-open	•	•	•	•

[1] Herion Type 24011 Solenoid valve with quick exhaust module

4 Measures for preparation

After receiving the shipment, proceed as follows:

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

4.1 Unpacking

i ***Note***

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

Proceed as follows to lift and install the valve:

1. Remove the packaging from the valve.
2. Dispose of the packaging in accordance with the valid regulations.

! ***NOTICE***

Risk of valve damage due to foreign particles entering the valve.
The protective caps fitted on the valve's inlet and outlet prevent foreign particles from entering the valve and damaging it.
Do not remove the protective caps until immediately before installing the valve into the pipeline.

4.2 Transporting and lifting

⚠ DANGER

Risk due to suspended loads falling.
Stay clear of suspended or moving loads.

⚠ 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, if applicable).
– Refer to section 3.3 for weights.

⚠ 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.

NOTICE

Risk of valve damage due to incorrectly attached slings.
The welded-on lifting eyelet on SAMSON actuators is only intended for mounting and removing the actuator as well as lifting the actuator without valve. Do not use this lifting eyelet to lift the entire control valve assembly.
– When lifting the control valve, make sure that the slings attached to the valve body bear the entire load.
– Do not attach load-bearing slings to the actuator or any other parts.
– Observe lifting instructions (see section 4.2.2).

Tip

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

4.2.1 Transporting

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 control valve against moisture and dirt.
– The permissible transportation temperature of standard control valves is –20 to +65 °C.

Note

Contact our after-sales service for the transportation temperatures of other valve versions.

4.2.2 Lifting

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

Lifting instructions

– Secure slings against slipping.
– Make sure the slings can be removed from the valve once it has been installed into the pipeline.

– Prevent the control valve from tilting or tipping over.
– Do not leave loads suspended when interrupting work for longer periods of time.
– Make sure that the axis of the pipeline is always horizontal during lifting and the axis of the plug stem is always vertical.
– Make sure that the additional sling between the lifting eyelet and rigging equipment (hook, shackle etc.) does not bear any load when lifting actuators with an actuator area of 700 cm² or larger. The sling only protects the control valve from tilting while being lifted. Before lifting the control valve, tighten the sling.
– Make sure that the sling around the strainer is long enough and that the load that it bears is not too heavy. The sling must not bend the strainer upwards and not place strain on the flanged joint. Attach one sling to each flange of the body and to the rigging equipment (e.g. hook) of the crane or forklift (see Fig. 8).

3. **700 cm² and larger:** attach another sling to the lifting eyelet on the actuator and to the rigging equipment.
4. Attach another sling to the flange of the strainer.
5. Carefully lift the control valve. Check whether the lifting equipment and accessories can bear the weight.

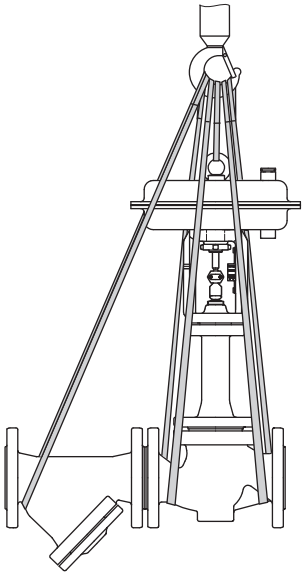


Fig. 8: *Lifting points on the control valve*

6. Move the control valve at an even pace to the site of installation.
7. Install the valve into the pipeline (see section 5.2.3).
8. After installation in the pipeline, check whether the flanges are bolted tight and the valve in the pipeline holds.
9. Remove slings.

Tip

We recommend using a hook with safety latch (see Fig. 8). The safety latch prevents the slings from slipping during lifting and transporting.

4.3 Storage

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 long storage periods.

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).
– Do not damage the corrosion protection (paint, surface coatings). Repair any damage immediately.
– Protect the control valve against moisture and dirt. Store it at a relative humidity of less than 75 %. In damp spaces, prevent condensation. If necessary, use a drying agent or heating.
– Make sure that the ambient air is free of acids or other corrosive media.
– The permissible storage temperature of standard control valves is –20 to +65 °C.

Note

Contact SAMSON's After-sales Service for the storage temperatures of other valve versions.

– 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.

4.4 Preparation for installation

Proceed as follows:

➔ Flush the pipelines.

i ***Note***

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

➔ Check the valve to make sure that it is clean.

➔ Check the valve for damage.

➔ Check to make sure that the type designation, valve size, material, pressure rating and temperature range of the valve match the plant conditions (size and pressure rating of the pipeline, medium temperature etc.).

➔ Check any mounted pressure gauges to make sure they function.

➔ When the valve and actuator are already assembled, check the tightening torques of the bolted joints (▶ AB 0100). Components may loosen during transport.

5 Mounting and start-up

SAMSON valves are delivered ready for use. Proceed as follows to mount and start up the valve.

NOTICE

Risk of valve damage due to excessively high or low tightening torques.
Observe the specified torques on tightening control valve components. Excessively tightened torques lead to parts wearing out quicker. Parts that are too loose may cause leakage.
Observe the specified tightening torques (▶ AB 0100).

NOTICE

Risk of valve damage due to the use of unsuitable tools.
Only use tools approved by SAMSON (▶ AB 0100).

5.1 Mounting the actuator onto the valve

Valve and actuator are delivered ready mounted.

5.2 Installing the valve into the pipeline

5.2.1 Checking the installation conditions

Pipeline routing

The inlet and outlet lengths vary depending on the process medium. To ensure the control valve functions properly, follow the installation instructions given below:

➔ Observe the inlet and outlet lengths (see Table 11). Contact SAMSON if the valve conditions or states of the medium process deviate.

➔ Install the valve free of stress and with the least amount of vibrations as possible. If necessary, attach supports to the valve.

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

Mounting orientation

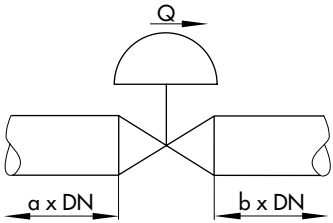
Generally, we recommend installing the valve with the actuator upright and on top of the valve.

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

Support and suspension

Depending on the valve version and mounting position, the control valve and pipeline must be supported or suspended. The plant engineering company is responsible in this case.

Table 11: *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
	0.3 ≤ Ma ≤ 0.7	2	10

NOTICE

Premature wear and leakage due to insufficient support or suspension.
In the following versions, the control valve must be supported or suspended:
– *Valves that are not installed with the actuator in the upright position on top of the valve.*

Attach a suitable support or suspension to the valve.

Vent plug

Vent plugs are screwed into the exhaust air ports of pneumatic 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 workplace of operating personnel.

➔ On mounting valve accessories, make sure that they can be operated from the workplace of the operating personnel.

Note

The workplace of operating personnel is the location from which the valve, actuator and any mounted valve accessories can be accessed to operate them.

5.2.2 Additional fittings

Insulation

Only insulate control valves with bellows seal up to the bonnet flange of the valve body for medium temperatures below 0 °C and above 220 °C.

Test connection

Versions with bellows seal fitted with a test connection (G ⅛) on the top bonnet allow

the sealing ability of the bellows to be monitored.

⚠ WARNING

Risk of personal injury due to pressurized components and process medium escaping under pressure.
Do not loosen the screw of the test connection while the valve is in operation.

Noise emissions

Trims with flow dividers can be used to reduce noise emission (see ▶ T 8081).

5.2.3 Installing the control valve

1. Depressurize the plant.
2. Remove the protective caps from the valve ports before installing the valve.
3. Lift the valve using suitable lifting equipment to the site of installation (see section 4.2.2). Observe the flow direction through the valve. The arrow on the valve indicates the direction of flow.
4. Make sure that the correct flange gaskets are used.
5. Bolt the pipe to the valve free of stress.
6. Depending on the field of application, allow the valve to cool down or heat up to reach ambient temperature before start up.
7. Make sure that the vent of the pilot valve and the pressure connection on the top case of the actuator are open.
8. Check the valve to ensure it functions properly.

5.3 Quick check

SAMSON valves are delivered ready for use. To test the valve's ability to function, the following quick checks can be performed:

Leak test

➔ Perform the leak testing as described in section 7.5.

Travel motion

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

➔ Open and close the valve, observing the movement of the actuator stem.

➔ Apply the maximum and minimum control signals to check the end positions of the valve.

➔ Check the travel reading at the travel indicator scale.

Fail-safe position

➔ Shut off the signal pressure line.

➔ Check whether the valve moves to the fail-safe position.

Pressure test

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.

i ***Note***

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

6 Operation

Immediately after completing mounting and start-up (see section 5), the valve is ready for use.

⚠ WARNING

Crush hazard arising from moving parts (actuator and plug stem).
Do not insert hands or fingers into the yoke while the valve is in operation.

⚠ WARNING

Risk of personal injury when the actuator vents.
Wear eye protection when working in close proximity to the control valve.

⚠ 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.
Wear protective clothing and safety gloves.

❗ *NOTICE*

Operation disturbed by a blocked actuator or plug stem.
Do not impede the movement of the actuator or plug stem by inserting objects into their path.

7 Servicing

The control valve is subject to normal wear, especially at the seat, plug and packing. Depending on the operating conditions, check the valve at regular intervals to prevent possible failure before it can occur.

Tip

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

We recommend removing the valve from the pipeline for service or repair work (see section 9.2).

DANGER

Risk of bursting in pressure equipment.
Valves and pipelines are pressure equipment. Improper opening can lead to bursting of the valve.
- *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 affected as well as the valve.*
- *Wear personal protective equipment.*

WARNING

Risk of personal injury due to residual process medium in the valve.
While working on the valve, residual process medium can escape and, depending on its properties, may lead to personal injury, e.g. (chemical) burns.
Wear protective clothing, safety gloves and eye protection.

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

NOTICE

Risk of valve damage due to incorrect servicing or repair.
Service and repair work must be performed by trained staff only.

NOTICE

Risk of valve damage due to excessively high or low tightening torques.
Observe the specified torques on tightening control valve components. Excessively tightened torques lead to parts wearing out quicker. Parts that are too loose may cause leakage.
Observe the specified tightening torques (▶ AB 0100).

NOTICE

Risk of valve damage due to the use of unsuitable tools.
Only use tools approved by SAMSON (▶ AB 0100).

NOTICE

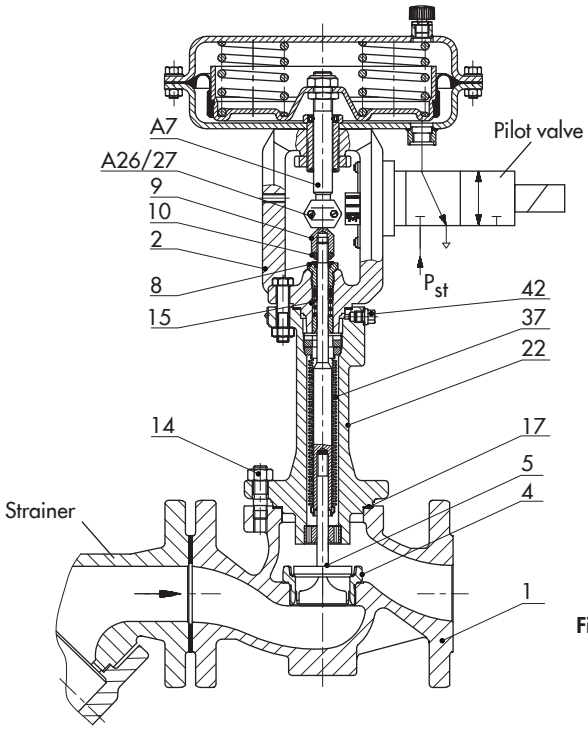
Risk of valve damage due to the use of unsuitable lubricants.
Only use lubricants approved by SAMSON (▶ AB 0100).

Note

The control valve was checked by SAMSON before it left the factory.
– Certain test results certified by SAMSON lose their validity when the valve is opened. Such testing includes seat leakage and leak tests.
– After completing servicing work, the gas-tight shut-off of the valve must be tested. This test must be performed by fully trained, qualified operating personnel.
– 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.

7.1 Replacing the gasket

1. Remove the actuator from the valve. See associated actuator documentation.
2. Undo the body nuts (14) gradually in a crisscross pattern.
3. Lift the bellows seal (22) with valve bonnet (2) and plug with plug stem (5) off the body (1).
4. Remove the gasket (17). Carefully clean the sealing faces in the valve body (1) and on the bellows seal (22).
5. Insert a new gasket (17) into the body.
6. Place the bellows seal (22) with valve bonnet (2) and plug with plug stem (5) onto the body.
   Version with V-port plug: place the assembly onto the valve body, making sure that the largest V-shaped port of the V-port plug faces toward the valve outlet. See section 7.3.
7. Firmly press the plug (5) into the seat (4). Fasten down the bellows seal (22) with the body nuts (14). Tighten the nuts gradually in a crisscross pattern. Observe tightening torques.
8. Mount actuator. See associated actuator documentation.
9. Adjust lower or upper signal bench range. See associated actuator documentation.
10. Check the control valve. See section 7.5.



1	Body
2	Flange
4	Seat
5	Plug (with plug stem)
8	Threaded bushing (packing nut)
9	Stem connector nut
10	Lock nut
14	Body nut
15	Packing
17	Body gasket
22	Bellows seal
37	Plug stem with metal bellows
42	Test connection
A7	Actuator stem
A26/27	Stem connector clamps

Fig. 9: *Type 3241-1-Gas Automatic Shut-off Valve*

7.2 Other service work

NOTICE

Risk of control valve damage due to incorrect service or repair.

To replace seat and plug, packing or bellows seal, contact SAMSON's After-sales Service.

7.3 Aligning the V-port plug

Each V-port plug has three V-shaped ports. Depending on the valve size, the size of the symmetrically arranged V-shaped ports varies. The process medium in the valve flows through the V-shaped ports as soon as the plug is lifted out of the seat (i.e. the valve opens).

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

Tip

Usually, this is the largest V-shaped port.

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

NOTICE

Medium flow obstructed due to incorrect installation of the V-port plug.
To achieve the best flow conditions inside the valve, the V-port plug must always be installed with the largest port facing toward the valve outlet.
Make sure the V-port plug is installed correctly.

7.4 Cleaning the strainer

See associated device documentation.

7.5 Testing the control valve

After completing servicing work, the gas-tight shut-off of the valve must be tested, for example. The tests must be documented.

The following tests are required (see Table 12):

– Seat leakage testing
– Leak test
– Function testing

Tip

SAMSON's After-sales Service can support you to perform the required tests.

7.6 Preparation for return shipment

Defective valves can be returned to SAMSON for repair.

Proceed as follows to return devices to SAMSON:

1. Put the control valve out of operation (see section 9).
2. Decontaminate the valve. Remove any residual process medium.
3. Fill in the Declaration on Contamination. The declaration form can be downloaded from our website at ▶ www.samsongroup.com > Service and Support > Checklists for after-sales service > Declaration on Contamination.
4. Send the valve together with the filled-in form to your nearest SAMSON subsidiary. SAMSON subsidiaries are listed on our website at ▶ www.samsongroup.com > Contact.

7.7 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 section 10.3 for details on spare parts.

Lubricant

See document ▶ AB 0100 for details on suitable lubricants.

Table 12: *Required tests*

Seat leakage testing	
Standard	IEC 60534-4 or ANSI/FCI 70-2
Test medium	Use dry compressed air free of oil and grease
Test pressure	Inlet: 4 bar (standard); max. 40 bar Outlet: atmospheric pressure or connection to a flow meter
Test procedure	1. Move the plug out of the seat (valve closed). 2. Apply the test medium at the test pressure to the inlet side. 3. As soon as the leakage rate is constant, measure the seat leakage. Make sure the measured seat leakage does not exceed the maximum permissible leakage rate specified for the associated leakage class.
Leak test	
Standard	Test similar to DIN EN 12266-1, test P11
Test medium	Use dry compressed air free of oil and grease
Test pressure	5 bar (standard)
Test time	See DIN EN 12266-1
Test procedure	1. Clamp the valve into the test fixture or fit it with a test adapter. 2. Move the plug out of the seat (valve open). 3. Apply the test pressure to the valve and hold the pressure for the specified test duration. 4. Perform the leak test visually using leak detection spray or immerse the valve in a water bath. No bubbles must become visible during the test period. 5. Leak-test the bellows. For example, connect a hose to the test connection and immerse the end of the hose into a water bath. No bubbles must become visible during the test period. 6. After the test duration has elapsed, reduce the test pressure to atmospheric pressure.
Function test: testing the rated travel	
Measures for preparation	The actuator is mounted properly. Valve accessories (positioner, solenoid valve etc.) are mounted properly. The packing is tightened correctly. No pressure prevails inside the valve.
Test procedure	1. Apply the input signal to move the valve to the end positions. 2. Determine the rated travel using the travel indicator scale.

Tools

See document ▶ AB 0100 for details on suitable tools.

8 Malfunctions

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

Tip

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

8.1 Troubleshooting

Malfunction	Possible reasons	Recommended action
Actuator or plug stem does not move on demand.	Actuator is blocked.	Check attachment. Unblock the actuator.
	Signal pressure too low	Check the signal pressure. Check the signal pressure line for leakage.
Actuator or plug stem does not move through the whole range.	Signal pressure too low	Check the signal pressure. Check the signal pressure line for leakage.
The valve leaks to the atmosphere (fugitive emissions).	The packing and metal bellows are defective.	Contact SAMSON's After-sales Service.
	Metal bellows is defective.	Contact SAMSON's After-sales Service.
	Flange joint loose or gasket worn out.	Check the flange joint. Replace gasket at the flanged joint (see section 7.1 or contact SAMSON's After-sales Service).
Increased flow through closed valve (seat leakage).	Dirt or other foreign particles deposited between the seat and plug.	Shut off the section of the pipeline and flush the valve.
	Valve trim is worn out.	Contact SAMSON's After-sales Service.
Reduced flow rate	Strainer blocked	Clean strainer. See associated device documentation.

i ***Note***

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

8.2 Emergency action

Upon supply air or control signal failure, the valve moves to its fail-safe position (see section 3.1).

The plant operator is responsible for emergency action to be taken in the plant.

In the event of a valve malfunction:

1. Depressurize the plant.
2. Check the valve for damage. Contact SAMSON's After-sales Service.

9 Decommissioning and removal

⚠ DANGER

Risk of bursting in pressure equipment.
Valves and pipelines are pressure equipment. Improper opening can lead to bursting of the valve.
– 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 affected as well as the valve.
– Wear personal protective equipment.

⚠ WARNING

Risk of personal injury due to residual process medium in the valve.
While working on the valve, residual process medium can escape and, depending on its properties, may lead to personal injury, e.g. (chemical) burns.
Wear protective clothing, safety gloves and eye protection.

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

9.1 Decommissioning

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

1. Depressurize the plant.
2. Completely drain the pipelines and valve.
3. Disconnect and lock the pneumatic air supply to depressurize the actuator.
4. If necessary, allow the pipeline and valve components to cool down or heat up.

9.2 Removing the valve from the pipeline

1. Put the control valve out of operation (see section 9.1).
2. Unbolt the flange joint.
3. Remove the valve from the pipeline (see section 4.2).

9.3 Removing the actuator from the valve

See associated actuator documentation.

9.4 Disposal

➔ Observe local, national and international refuse regulations.

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

10 Annex

10.1 After-sales service

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

E-mail address

You can reach our after-sales service at aftersalesservice@samson.de.

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

Required specifications

Please submit the following details:

- Order number and position number in the order
- Type, model number, nominal size and valve version
- Pressure and temperature of the process medium
- Flow rate in kg/h or Nm^3/h
- Bench range of the actuator (e.g. 0.2 to 1 bar)
- Installation drawing

10.2 Certificates

The EU declaration of conformity and the type examination certificates are provided on the next pages.

SMART IN FLOW CONTROL

SAMSON

EU-KONFORMITÄTSERKLÄRUNG
(Original)

SAMSON erklärt in alleiniger Verantwortung für folgende Produkte:

Stellventil Typ 3241-1-Gas (mit pneumatischem Antrieb Typ 3271)
Stellventil Typ 3241-7-Gas (mit pneumatischem Antrieb Typ 3277)

die Konformität mit nachfolgender Anforderung:

Verordnung des Europäischen Parlaments und des Rates über Geräte zur Verbrennung gasförmiger Brennstoffe und zur Aufhebung der Richtlinie 2009/142/EG	**(EU) 2016/426**	**vom 9. März 2016**

Produktart Ausrüstungsteile für Gas- und Druckgeräte
Absperrventil, automatisch, Klasse D

Produktbezeichnung 2/2 Wegeventil mit pneumatischem Antrieb,
spannungslos durch Federkraft geschlossen

Prüfgrundlagen (EU) 2016/426
EN 16678
DIN 3394-1
DIN EN 161
DIN EN 13611
EG-Richtlinie 2009/142/EG

Prüfberichte EG-Baumusterprüfbescheinigung CE-0085CQ0516 vom 03.02.2016
DVGW CERT GmbH

Hersteller SAMSON AG
Weismüllerstraße 3
60314 Frankfurt am Main, Germany

Frankfurt am Main, 11.01.2018

i.V. Klaus Hörschken

Klaus Hörschken
Zentralabteilungsleiter
Entwicklung Ventile und Antriebe

i.V. Dr. Michael Heß

Dr. Michael Heß
Zentralabteilungsleiter
Product Management & Technical Sales

SMART IN FLOW CONTROL

SAMSON

EU-KONFORMITÄTSERKLÄRUNG
EU DECLARATION OF CONFORMITY

Modul/Module D / N° CE-PED-D-SAM 001-13-DEU

SAMSON erklärt in alleiniger Verantwortung für folgende Produkte/explaines in sole resposibility for the following products:

Geräte/Devices	Bauart/Series	Typ/Type	Ausführung/Version
Stellgerät für Heißwasser und Dampf mit Sicherheitsfunktion/Safety Accessories for Hot Water and Steam	3374 (2000 N)		mit Typ/with Type No. 2811, 2814, 2823, 3321, 3241, 3267 Zertifikat-Nr./Certificate No.: 01 202 931-B-11-0017
Sicherheitsabsperreinrichtung für Feuerungsanlagen/ Safety Accessories for Firing Plants	240	3241	3241-4362, Zertifikat-Nr./Certificate No.: 01 202 931-B-11-0018
	240	3241	3241-4364, Zertifikat-Nr./Certificate No.: 01 202 931-B-11-0019
Stellgerät für Heißwasser und Dampf mit Sicherheitsfunktion/ Safety Accessories for Hot Water and Steam	240	3241	mit/with 3271, Zertifikat-Nr./Certificate No.: 01 202 931-B-10-0006
	240, 3267	3241, 3267	mit/with 3271 und/and 3277, 240cm² Zertifikat-Nr./Certificate No.: 01 202 931-B-10-0007
	240, 3267	3241, 3267	mit/with 3271 und/and 3277, 350cm² Zertifikat-Nr./Certificate No.: 01 202 931-B-10-0008
	240	3241	auch druckentlastet/also pressure relieved mit/with 3271 und/and 3277 Zertifikat-Nr./Certificate No.: 01 202 931-B-10-0009
	3274 (1800 N)		mit/with 3241, 2423, 2823, 3267 Zertifikat-Nr./Certificate No.: 01 202 931-B-10-0027
	3274 (3000 N)		mit/with 3241, 3214, 2814 Zertifikat-Nr./Certificate No.: 01 202 931-B-10-0028
Stellgerät für Wasser und Dampf mit Sicherheitsfunktion/ Safety Accessories for Water and Steam	3222, 3213, 2488, 2489, 2487, 2491, 2494, 2495, 2423, 3214	2770	mit/with 3267, 2814, 2823, 2710, 2730 Zertifikat-Nr./Certificate No.: 01 202 931-B-09-0008
Sicherheitsabsperreinrichtung für Gasbrenner und Gasgeräte/Safety Accessories for Gas-burners and Gas-Equipment	240	3241	3241-0261 bis/to 3241-0275 Zertifikat-Nr./Certificate No.: 01 202 931-B-02-0017
Stellgerät zur Leckgasableitung für Gasbrenner und Gasgeräte/Control Valve for draining for Gas-burners and Gas-equipm.	240	3241	3241-4321 Zertifikat-Nr./Certificate No.: 01 202 931-B-02-0018

die Konformität mit nachfolgender Anforderung/we declare conformity with the demands of the:

Richtlinie des Europäischen Parlaments und des Rates zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Druckgeräten auf dem Markt/Directive of the European Parliament and oft the Council on the harmonisation of the laws of the Member States relating to the making available on the market of pressure equipmentSiehe auch Artikel 41 und 48/See also Article 41 and 48	**2014/68/EU**	**vom/of 15.05.2014**
Angewandtes Konformitätsbewertungsverfahren/ Applied Conformity Assessment Procedure für Fluide nach Art. 4 Abs. 1/for fluids acc. to Article 4, Section 1	**Modul D/ Module D**	**durch/by Bureau Veritas 0062**

Das Qualitätssicherungssystem des Herstellers wird von folgender benannten Stelle überwacht/The Manufacturer's Quality Assurance System is monitored by following Notified Body:
Bureau Veritas S. A. nr 0062 67/71, boulevard du Château, 92200 Neuilly-sur-Seine, France

Angewandte technische Spezifikation/Technical Standards used: DIN EN12516-2; DIN EN12516-3; ASME B16.34

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

Frankfurt, 19.07.2016

i.V. Klaus Hörschken

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

ppa. Günther Scherer

Günther Scherer
Zentralabteilungsleiter / Head of Central Department
Qualitätsmanagement / Total Quality Management

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SAMSON AKTIENGESELLSCHAFT
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Revison 01

CE 0085

DVGW CERT

EG-Baumusterprüfbescheinigung

EC type examination certificate

CE-0085CQ0516
Produkt-Identnummer
product identification no.

Anwendungsbereich ***field of application***	EG-Gasgeräterichtlinie (2009/142/EG) *EC Gas Appliances Directive (2009/142/EC)*
Zertifikatinhaber ***owner of certificate***	Samson AG Weismüllerstraße 3, D-60314 Frankfurt am Main
Vertreiber ***distributor***	Samson AG Weismüllerstraße 3, D-60314 Frankfurt am Main
Produktart ***product category***	Ausrüstungsteile für Gas- und Druckgeräte: Absperrventil, automatisch (4128)
Produktbezeichnung ***product description***	2/2 Wegeventil mit pneumatischem Antrieb , spannungslos durch Federkraft geschlossen
Modell ***model***	3241G
Bestimmungsländer ***countries of destination***	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MT, NL, NO, PL, PT, RO, SE, SI, SK
Prüfberichte ***test reports***	Baumusterprüfung: V-A1560-00/15 vom 14.12.2015 (TSG)
Prüfgrundlagen ***test basis***	EU/2009/142/EG (30.11.2009) DIN EN 13611 (01.12.2011) DIN EN 161 (01.04.2013)- in Anlehnung DIN 3394-1 (01.05.2004) DIN EN 16678 (Entwurf 01.10.2013)
Aktenzeichen ***file number***	15-0487-GEE

03.02.2016 Rie A-1/2
Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle
date, issued by, sheet, head of certification body

DVGW CERT GmbH ist von der DAkkS nach DIN EN ISO/IEC 17065:2013 akkreditierte und von der Deutschen Bundesregierung benannte Stelle für die Zertifizierung von Gasgeräten gemäß EG-Richtlinie 2009/142/EG.

DVGW CERT GmbH is an accredited body by DAkkS according to DIN EN ISO/IEC 17065:2013 and notified by the government of the Federal Republic of Germany for certification of gas appliances under EC Directive

DAkkS
Deutsche Akkreditierungsstelle
D-ZE-16028-01-01

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info@dvgw-cert.com

A-2/2 **CE-0085CQ0516**

Gasart *gas category*	**Bemerkung** *remarks*
Brenngase der 1., 2. und 3. Gasfamilie	

Typ *type*	**Technische Daten** *technical data*	**Bemerkungen** *remarks*
3241-1-Gas; 3247-1-Gas	Nennweite: DN 15	
3241-1-Gas; 3247-1-Gas	Nennweite: DN 20	
3241-1-Gas; 3247-1-Gas	Nennweite: DN 40	
3241-1-Gas; 3247-1-Gas	Nennweite: DN 50	
3241-1-Gas; 3247-1-Gas	Nennweite: DN 80	
3241-1-Gas; 3247-1-Gas	Nennweite: DN 100	
3241-1-Gas; 3247-1-Gas	Nennweite: DN 150	

Ausführungsvariante *type variation*	**Erläuterungen** *explanations*
3241-1-Gas	mit Stellantrieb Typ 3271
3241-7-Gas	mit Stellantrieb Typ 3277

Verwendungshinweise / Bemerkungen
hints of utilization / remarks

Anschlussart: Flanschanschluss nach DIN 2501 bzw. ISO 7005 sowie wahlweise ANSI class 300
Umgebungstemperaturbereich: -40...+60 °C
Klasse: D
max. Betriebdruck: 20 bar (Sitzdurchmesser <= 48 mm), 15 bar (Sitzdurchmesser 63 mm und 80 mm), 10 bar (Sitzdurchmesser 100 mm), 6 bar (Sitzdurchmesser 130 mm)

Zertifikat

Certificate

EG-Baumusterprüfung
nach Richtlinie 97/23/EG

EC-Type-Examination
in accordance with Directive 97/23/EC

Zertifikat Nr.: *Certificate no:*	01 202 931-B-02-0017-01
Name und Anschrift des Herstellers: *Name and address of manufacturer:*	**Samson AG** Weismüllerstraße 3 60314 Frankfurt a.M.

Hiermit wird bescheinigt, dass das unten genannte EG-Baumuster die Anforderungen der Richtlinie 97/23/EG erfüllt.

It is herewith certified that the EC-Type Example mentioned below meets the requirements of the Directive 97/23/EC.

Geprüft nach Richtlinie 97/23/EG: *Aproved according to directive 97/23/EC*	**EG-Baumusterprüfung (Modul B)** *EC Type examination (Modul B)*
EG-Baumuster-Prüfbericht Nr.: *EC -type-approval- report no.:*	**V 128 2014 B2**
Typ: *Type:*	**Baureihe 3241-0261 bis -0275** **DN 15 bis DN 150**
Beschreibung des Baumusters: *Description of the sample:*	**Sicherheitsabspereinrichtung für Gasbrenner und Gasgeräte** *Safety-shut-off device for gas-burners and gas-appliances*
Fertigungsstätte/Lieferer: *Manufacturing plant/supplier:*	Samson AG Weismüllerstraße 3 60314 Frankfurt a.M.
Gültig bis Ende: *Valid until end of:*	**13. Januar 2024**

Das CE-Zeichen darf erst am Produkt angebracht und die Konformitätserklärung erst ausgestellt werden, wenn ein korrespondierendes Konformitätsbewertungsverfahren der Richtlinie 97/23/EG bezogen auf Produktion/Produkt vollständig erfüllt ist.

CE marking must not be affixed and the Declaration of Conformity not be issued prior to completion of the corresponding conformity assessment procedure according to Directive 97/23/EC.

Köln, 13. Januar 2014 Dipl-Ing. Peters

TÜVRheinland® Notified Body 0035 Industrial Services

TÜV Rheinland-Zertifizierungsstelle
für Druckgeräte der
TÜV Rheinland Industrie Service GmbH
Benannte Stelle, Kennummer: 0035
Am Grauen Stein, D-51105 Köln

www.tuv.com

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Genau. Richtig.

Zertifikat

Certificate

EG-Baumusterprüfung
nach Richtlinie 97/23/EG

EC-Type-Examination
in accordance with Directive 97/23/EC

Zertifikat Nr.: *Certificate no:*	01 202 931-B-02-0018-01
Name und Anschrift des Herstellers: *Name and address of manufacturer:*	**Samson AG** Weismüllerstraße 3 60314 Frankfurt a.M.

Hiermit wird bescheinigt, dass das unten genannte EG-Baumuster die Anforderungen der Richtlinie 97/23/EG erfüllt.

It is herewith certified that the EC-Type Example mentioned below meets the requirements of the Directive 97/23/EC.

Geprüft nach Richtlinie 97/23/EG: *Aproved according to directive 97/23/EC*	**EG-Baumusterprüfung (Modul B)** *EC Type examination (Modul B)*
EG-Baumuster-Prüfbericht Nr.: *EC -type-approval- report no.:*	**V 438 2014 B1**
Typ: *Type:*	**Type 3241-4321**
Beschreibung des Baumusters: *Description of the sample:*	**Stellgerät zur Leckgasableitung (Zwischenentlüftung) für Gasbrenner und Gasgeräte** *Actuator for fuel-gas-discharge (intermediate rinse) between a gas-burner and a gas-appliance*
Fertigungsstätte/Lieferer: *Manufacturing plant/supplier:*	Samson AG Weismüllerstraße 3 60314 Frankfurt a.M.
Gültig bis Ende: *Valid until end of:*	**13. Januar 2024**

Das CE-Zeichen darf erst am Produkt angebracht und die Konformitätserklärung erst ausgestellt werden, wenn ein korrespondierendes Konformitätsbewertungsverfahren der Richtlinie 97/23/EG bezogen auf Produktion/Produkt vollständig erfüllt ist.

CE marking must not be affixed and the Declaration of Conformity not be issued prior to completion of the corresponding conformity assessment procedure according to Directive 97/23/EC.

Köln, 13. Januar 2014

Dipl-Ing. Peters

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für Druckgeräte der
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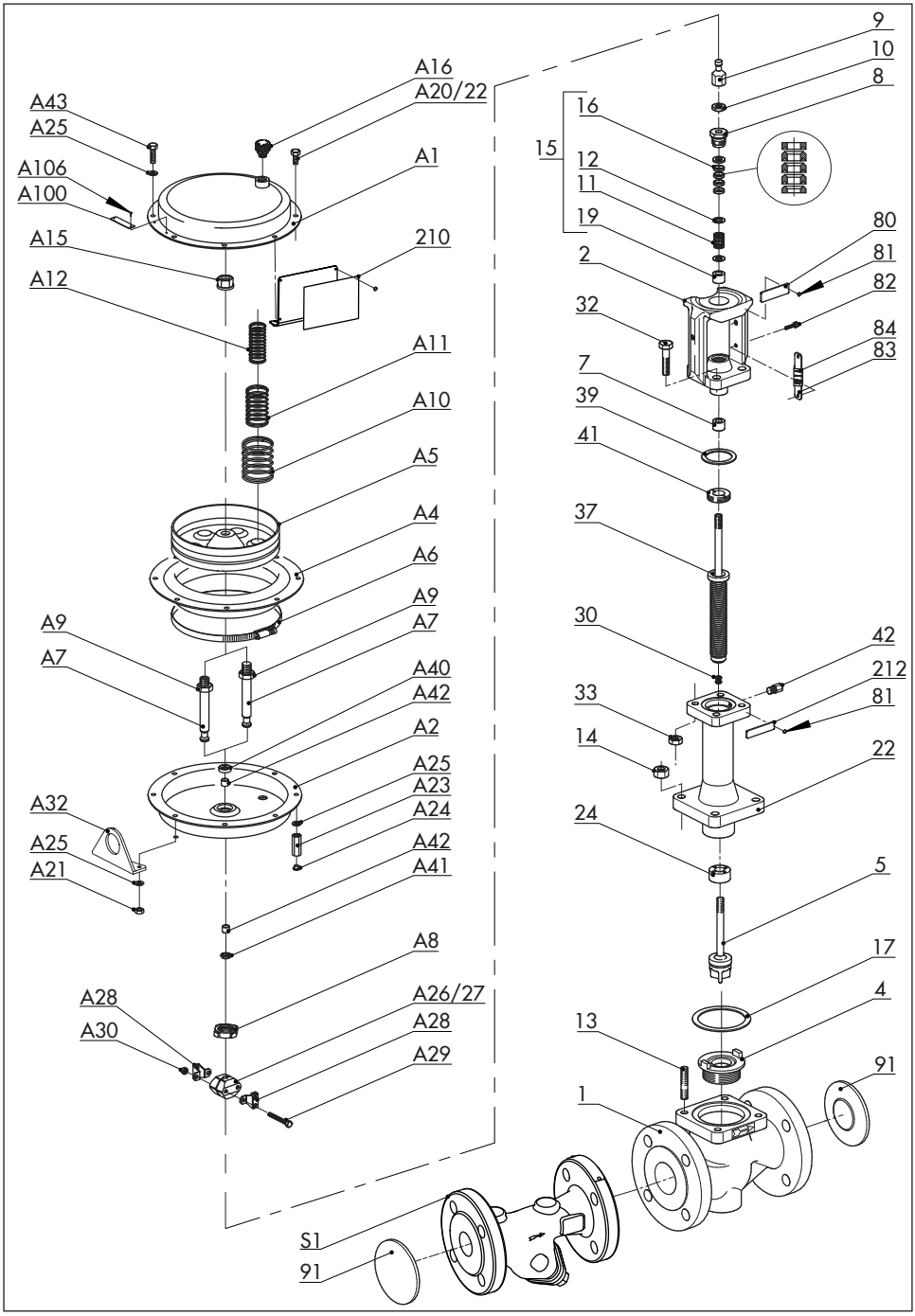
10.3 Spare parts

1	Body (valve)
2	Flange
4	Seat
5	Plug (with plug stem)
7	Guide bushing (flange)
8	Threaded bushing (packing nut)
9	Stem connector nut
10	Lock nut
11	Spring
12	Washer
13	Stud bolt
14	Body nut
15	Packing
16	V-ring packing
17	Body gasket
19	Bushing
22	Bellows seal
24	Guide bushing
27	Flange
28	Clamping ring
29	Plug for version with bellows seal
30	Retaining washers
31	Washer
32	Screw
33	Nut
34	Bolt
37	Plug stem with metal bellows
39	Gasket
41	Nut
42	Screw plug with seal
80	Valve nameplate
81	Grooved pin
82	Screw
83	Hanger
84	Travel indicator scale
91	Protective cap
210	Nameplate for gas version
212	Plate with DVGW register number
S1	Body (strainer)
A1	Top diaphragm case
A2	Bottom diaphragm case
A4	Diaphragm
A5	Diaphragm plate
A6	Hose clamp
A7	Actuator stem
A8	Ring nut
A9	Hex nut
A10/ 11/12	Spring
A15	Collar nut
A16	Vent plug
A20	Hex bolt
A21	Hex nut
A22	Hex bolt (preloading)
A23	Hex nut (preloading)
A24	Blanking plug
A25	Shim
A26/27	Stem connector clamp
A28	Bracket
A29	Hex bolt
A30	Hex nut
A32	Hanger
A40	Radial shaft seal
A41	Wiper ring
A42	Dry bearing
A43	Hex bolt
A100	Nameplate
A106	Grooved pin

Note

The exploded diagram shows a Type 3241G with a Type 3271 Pneumatic Actuator with 350 cm² actuator area. Other exploded diagrams, e.g. with other actuator sizes, are available at ▶ www.samsongroup.com > Service & Support > Downloads > Documentation.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