



Installation and operating instructions

gas control valve SVG



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This documentation includes specifications for the relevant products but does not guarantee that they have any particular properties. We reserve the right to make changes to reflect technological advances.

Edition: 07/2025

Liability and guarantee

Schimpf Ex & Gas GmbH accepts no liability or guarantee whatsoever in the event of the improper installation or use of the control valves. The technical specifications and safety instructions provided by us must be observed.

Safety instructions for maintenance and installation



- The control valve may only be installed, maintained and commissioned by qualified specialists!



- Before installing or maintaining the control valve, all affected devices/machines/systems must be switched off! The gas supply must be disconnected!



- Before switching off devices/machines/systems, it is important to check that it is safe to do so.



- Make sure that no danger to people, the environment and devices/machines/systems can result from installation or maintenance work!



- Make sure that there is no risk of crushing between the valve housing and the valve blade!



- The control valve may only be repaired by the manufacturer.



- The maximum torque of the actuator must not exceed 50 Nm.

- Shutdowns may only be carried out after prior consultation with the plant manager, shift supervisor or safety engineer!
- Malfunctions must be reported immediately to the plant manager, shift supervisor or safety engineer in order to avoid danger!
- When installing or maintaining the control valve, the applicable safety and accident prevention regulations of the employers' liability insurance association must be observed!
- Before installing an actuating drive, check that the control valve is moving freely!
- Before installing/maintaining the control valve, make sure that the safety devices are functioning correctly!

- After completing the installation, check whether the settings on the drive correspond to the mechanical position of the control valve! This applies in particular to the end positions!
- Permissible settings for the control valve must be implemented in accordance with the operating instructions of the gas consumption device.
-  **The screw plug on the underside of the valve must not be opened or adjusted. Make sure that the sealant on the screw plug is intact. If there is visible damage to the sealant, the control valve may no longer be used and must be serviced by the manufacturer.**
-  **A leak test and function check must be carried out after any work on the control valve.**

Device safety

-  **In order to keep the control valve in a safe condition, it is imperative that installers/users strictly adhere to the manufacturer's instructions in this documentation and have the appropriate professional qualifications.**
- The control valves may only be used for their intended purpose!
- The control valve may only be operated with an actuating mechanism intended for this purpose (actuator, hand lever, etc.).
- The control valve may only be operated in accordance with the values specified in the technical specifications!
- The control valve must not be installed, commissioned or adjusted on damaged supply lines or flanged system parts! The same requirements apply to damaged actuating drives!
-  **Take care when touching the surfaces of the control valve. Danger of burns or frostbite.** Depending on the permissible media temperature, the surfaces of the control valves can become hot or very cold. **The operator must ensure that the necessary protection against contact is provided.**

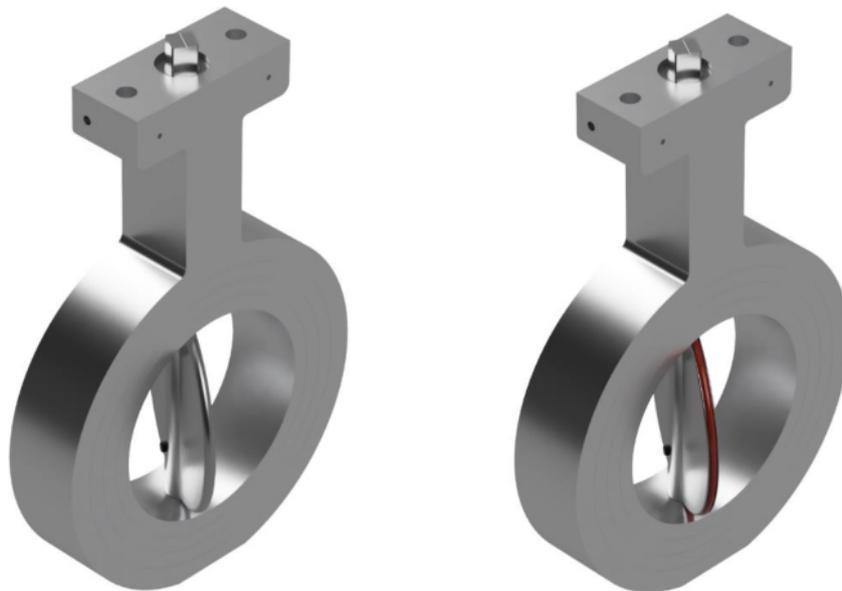
Function and intended use

The SVG gas control valves are used to adjust the gas supply to gas-consuming devices. For greater accuracy, the SVG control valves can be used with reduced nominal width (reduced by one or two nominal widths). This removes the need for reducers.

The desired flow rate is set by setting the opening angle of the valve between 0° and 90°.

The control valves contain a smooth-running, swing-through valve disc. The valve disc is also available with an optional swing-through sealing system to reduce the minimum flow rate when the valve is closed.

Important: **The control valves are not designed to securely stop the gas supply. The control valves do not have a zero shut-off!**



Gas control valve SVG without or with sealing system

Approval

EU type examination certificate no. **C5A 116408 0001** in accordance with EU Regulation 2016/426 (Regulation on appliances burning gaseous fuels)

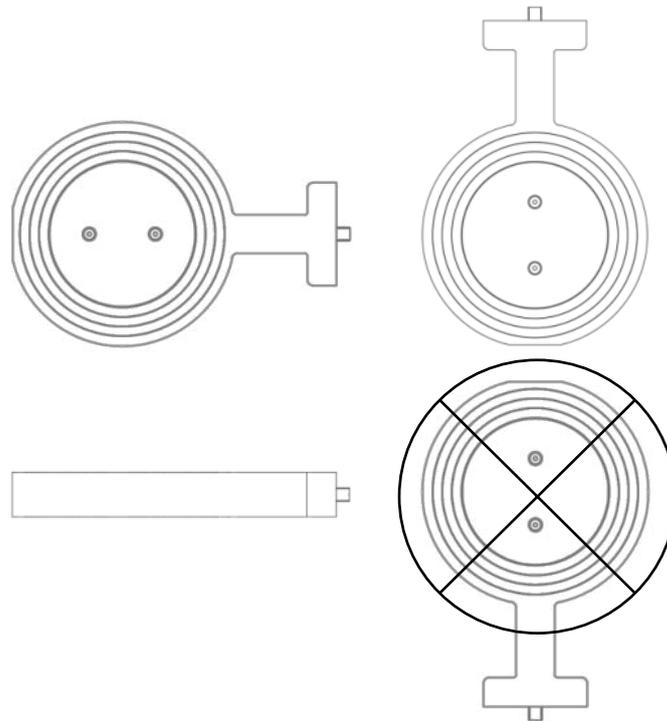
Hydrogen

According to report no. **V 1742-00/22** of 12/01/2022, carried out by "TÜV SÜD Industrie Service GmbH; Abteilung Feuerungs- und Wärmetechnik, Prüfbereich Sicherheits-, Kontroll- und Regeleinrichtungen", the butterfly valves of the SVG series are also suitable for natural gas-hydrogen mixtures and hydrogen as a flow medium under the operating conditions specified there.

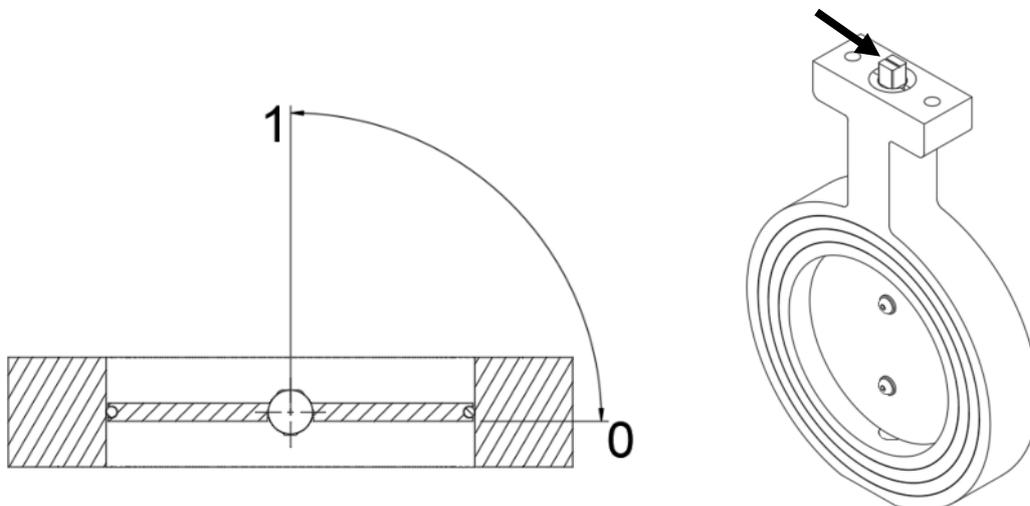
Installation

Installation hints

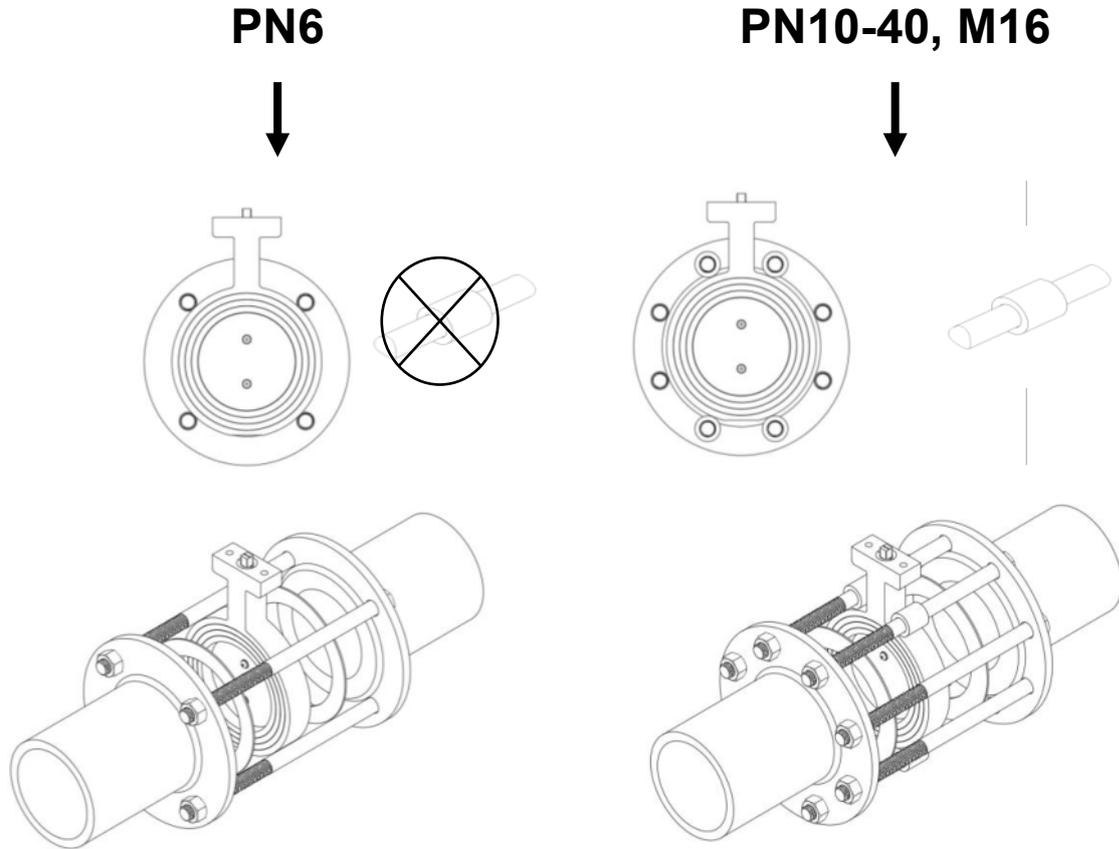
- Avoid direct contact between the control valve and masonry, concrete walls or floors.
- Make sure that the control valve is installed in a position which is not exposed to vibrations.
- The maximum torque of the actuator must not exceed 50 Nm.
- Permissible installation positions (the requirements for the actuating drive must also be observed):



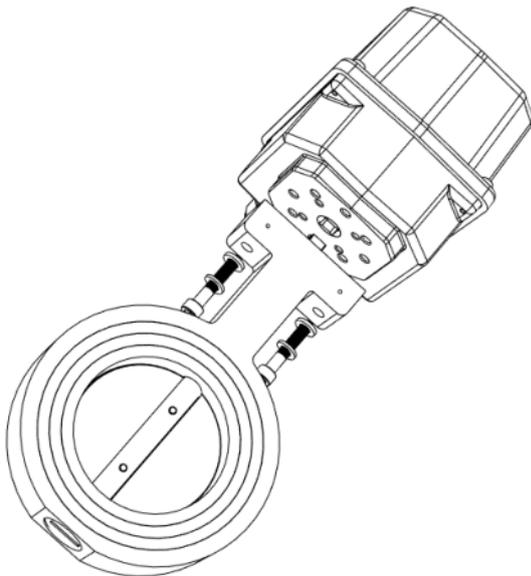
- Observe the valve position by means of the marking on the square spindle:



- Using the centring aids (plastic sleeves) (only for PN10 - PN40 and M16 screws):



- Installation of a Schimpf actuating drive:



To mount a Schimpf drive on the control valve, insert the square spindle at end of the valve shaft into the square socket of the drive. Make sure that the square socket of the drive and the square spindle of the valve are the same size. The valve is fixed in place using the two hexagon socket screws supplied with the valve. When installing, make sure that the drive is in the correct position relative to the valve (open or closed).

Steps



Important: **The “Safety instructions for maintenance and installation” and the “Installation instructions” listed in this document must be observed when installing the control valve.**

1. **Before installing the control valve, all affected devices/machines/systems must be switched off and, if necessary, disconnected from mains power! The gas supply must be disconnected!**
2. Insert lower stud bolts (PN 10-40: use plastic sleeves)
3. Insert flange gaskets
4. Insert control valve. Install in a permitted position
5. Insert remaining stud bolts
6. Tighten all bolts properly
 - Tighten bolts crosswise (select tightening torques according to the relevant standards and guidelines for flange connections)
 - Ensure the control valve is installed centrally
 - Ensure that no mechanical stress is applied during installation
 - Observe the relevant standards and guidelines for flange connections as well as the installation instructions for the flange connections/flange gaskets used.
7. A leak test and function check must be carried out after the installation of the control valve.

Follow the **instructions of the relevant manufacturer** when connecting and installing the actuating drive. The valve position must be checked.

Flow rate

Selection of the nominal size

The appropriate nominal size can be determined either by calculation using the k_v values from the following table or with the aid of the following diagrams.

The following formula should be used for the calculation (subcritical flow):

$$Q_N = 514 \cdot k_V \cdot \sqrt{\frac{\Delta p \cdot p_2}{\rho_N \cdot T}}$$

Q_N = flow rate in m³/h

k_v = flow coefficient in m³/h

Δp = differential pressure across valve in bar

p_2 = pressure after valve in bar, absolute

ρ_N = standard density of the gas in kg/ m³

T = gas temperature in kelvin

When selecting a valve, the leakage rate with the valve closed (0°) must also be taken into account. The maximum permissible parameters for operating pressure and differential pressure must also be observed. For optimum control, a differential pressure greater than 10 mbar should be maintained at maximum volume flow.

The data provided here were obtained on the basis of laboratory measurements (medium: air, 15°, 1013 mbar). Actual values may differ, depending on the on-site conditions.

k_v values

Data in m³/h

Inner diameter matches nominal diameter, non-sealing

Type	Inner-diameter (mm)	valve position									
		0°	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN40	40	0,2	1,1	3,4	8,2	14,0	23,3	36,9	55,1	68,2	75,2
DN50	50	0,3	1,7	5,5	12,8	23,9	41,0	65,0	101,1	132,9	155,0
DN65	65	0,5	2,9	10,3	22,9	43,0	73,4	115,9	183,2	250,8	305,0
DN80	80	0,8	4,4	17,1	36,9	67,3	113,1	177,3	280,9	393,5	491,1
DN100	100	1,1	6,8	29,3	61,5	107,8	177,2	275,6	435,5	622,5	795,7
DN125	125	1,5	10,4	49,6	102,0	171,3	275,4	424,7	668,0	970,8	1267,0
DN150	150	1,8	14,9	75,5	153,2	249,1	393,6	602,9	944,2	1388,2	1839,0

Inner diameter matches nominal diameter, sealing

Type	Inner-diameter (mm)	valve position									
		0°	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN40	40	0,02	0,4	3,1	6,0	11,3	19,8	32,0	49,7	62,6	69,6
DN50	50	0,02	0,7	4,1	10,6	21,8	37,7	59,5	94,6	125,2	146,3
DN65	65	0,03	1,4	7,5	20,9	41,7	70,8	110,3	175,8	240,6	292,1
DN80	80	0,04	2,2	13,2	35,0	66,6	111,1	172,5	273,6	381,8	474,7
DN100	100	0,05	3,7	24,4	59,8	107,5	176,2	273,1	430,1	610,0	775,5
DN125	125	0,06	6,1	44,0	100,4	171,1	275,8	427,5	667,5	959,5	1243,7
DN150	150	0,08	9,2	69,9	151,8	248,6	395,5	613,5	951,4	1380,4	1814,2

Single reduction in nominal width, non-sealing

Type	Inner-diameter (mm)	valve position									
		0°	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN40/32	32	0,1	1,0	2,9	5,4	10,2	16,9	24,9	32,9	38,8	42,5
DN50/40	40	0,2	1,2	3,8	7,9	17,3	29,3	42,2	53,6	61,5	66,4
DN65/50	50	0,2	1,6	5,9	14,0	30,1	49,7	70,6	89,0	101,9	109,9
DN80/65	65	0,4	2,4	9,9	29,9	57,5	90,5	127,0	162,3	187,6	203,5
DN100/80	80	0,5	4,3	21,4	53,5	94,2	143,6	200,2	259,6	303,2	331,0
DN125/100	100	0,8	8,2	45,0	97,2	158,0	233,4	323,7	426,7	504,0	553,7
DN150/125	125	1,1	12,7	68,9	123	226,6	366,3	519,9	695,8	830,0	917,0

Single reduction in nominal width, sealing

Type	Inner-diameter (mm)	valve position									
		0°	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN40/32	32	0,02	0,4	2,1	4,2	8,4	14,3	21,6	29,7	35,6	39,2
DN50/40	40	0,02	0,5	2,8	6,5	15,8	27,0	38,7	49,8	58,7	65,1
DN65/50	50	0,03	0,8	4,3	12,8	29,1	47,9	67,1	85,1	98,7	107,8
DN80/65	65	0,04	1,2	7,6	28,3	56,6	89,0	123,5	157,6	183,1	199,5
DN100/80	80	0,04	2,4	17,8	52,0	93,5	143,0	198,4	255,9	298,1	324,5
DN125/100	100	0,05	4,8	39,9	95,8	157,5	232,5	320,8	424,4	499,1	542,9
DN150/125	125	0,06	8,6	61,3	122,2	224,6	364,9	515,3	685,9	816,3	899,0

Two reductions in nominal width, non-sealing

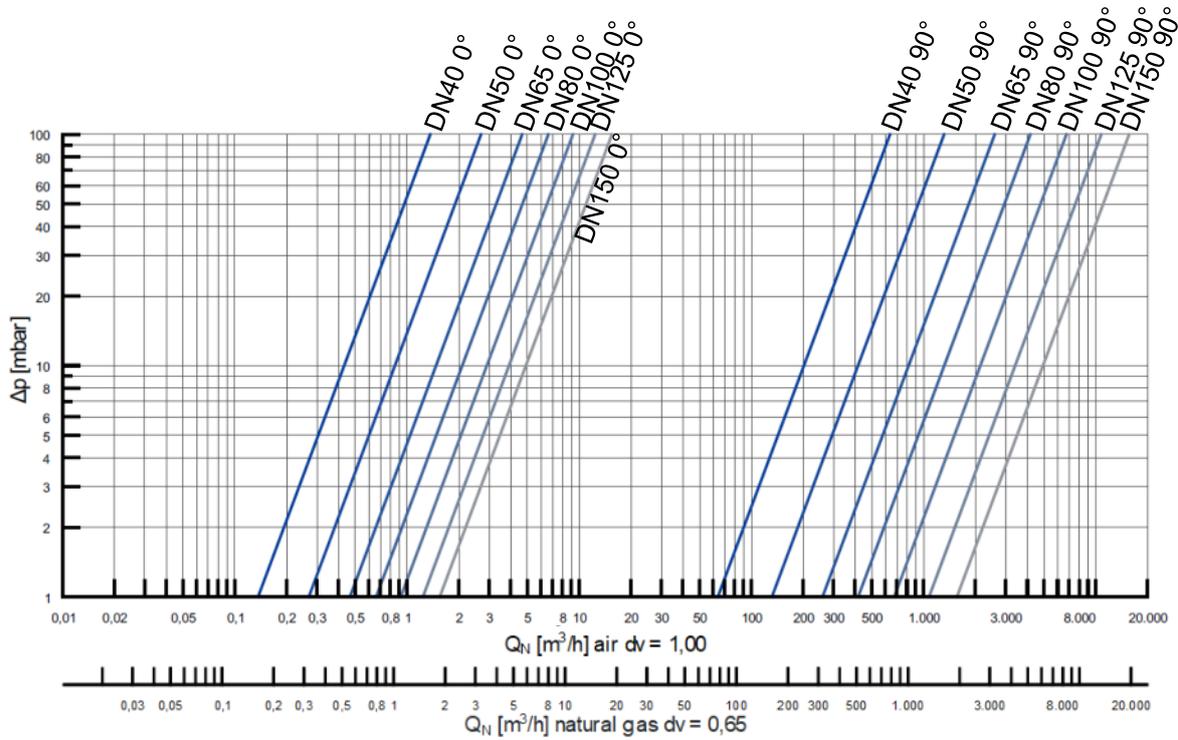
Type	Inner-diameter (mm)	valve position									
		0°	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN40/25	25	0,1	0,3	1,3	2,7	4,9	7,6	10,7	13,4	15,4	16,7
DN50/32	32	0,1	0,6	2,0	4,1	7,5	12,6	19,2	25,8	30,7	33,9
DN65/40	40	0,2	0,9	3,6	7,7	13,8	22,4	33,5	45,1	53,4	58,6
DN80/50	50	0,2	1,5	6,8	15,2	26,2	40,7	58,5	76,9	89,6	97,0
DN100/65	65	0,3	2,5	14,2	32,5	54,6	80,9	110,5	140,7	160,2	170,6
DN125/80	80	0,4	3,8	24,7	57,3	94,7	136,2	180,0	223,8	250,4	263,2
DN150/100	100	0,6	5,9	43,5	101,8	166,5	233,7	300,0	364,6	401,0	416,2

Two reductions in nominal width, sealing

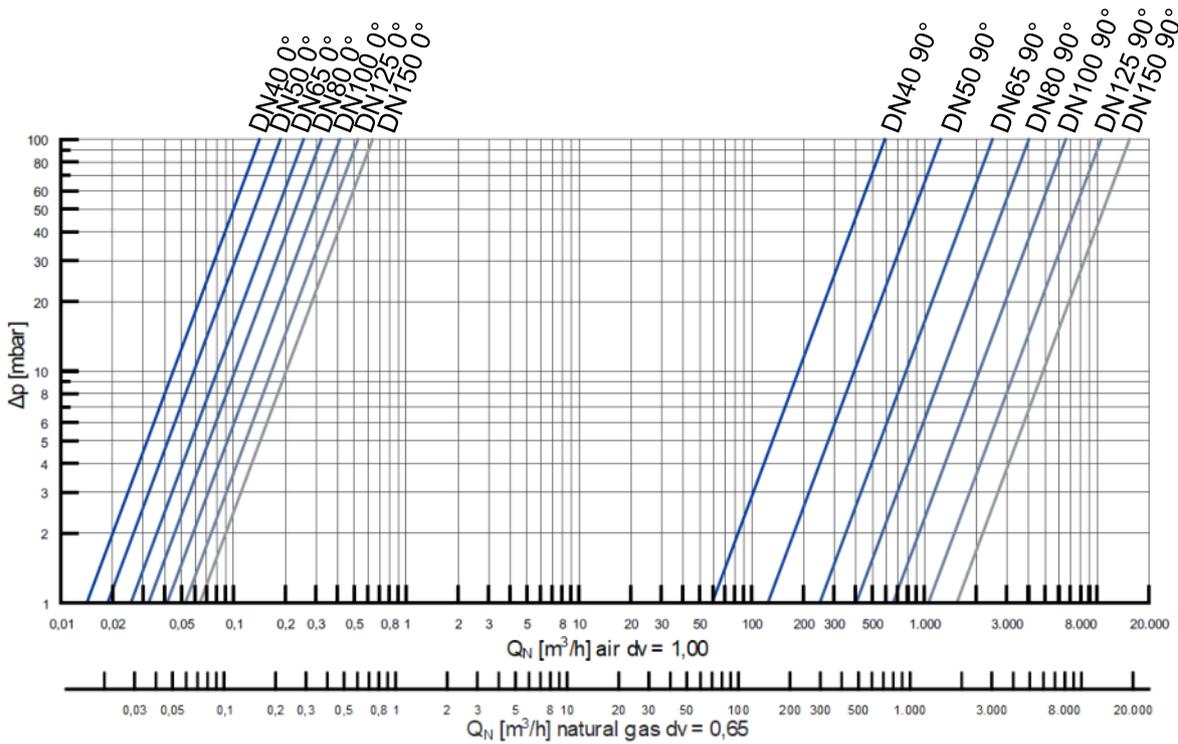
Type	Inner-diameter (mm)	valve position									
		0°	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN40/25	25	0,01	0,1	1,0	2,0	4,0	6,4	9,3	12,0	14,4	16,4
DN50/32	32	0,02	0,2	1,5	3,4	6,9	11,6	17,6	24,0	29,2	33,2
DN65/40	40	0,02	0,4	2,6	7,0	13,3	21,6	31,9	43,1	51,6	57,4
DN80/50	50	0,03	0,7	5,3	14,4	25,8	40,0	56,8	74,7	87,3	95,1
DN100/65	65	0,04	1,4	11,8	31,6	54,3	80,5	109,5	138,8	157,4	167,3
DN125/80	80	0,04	2,2	21,9	56,4	94,6	135,6	178,4	222,7	247,7	258,0
DN150/100	100	0,05	3,7	40,3	100,9	166,4	232,6	297,3	359,6	394,1	408,0

Flow curves

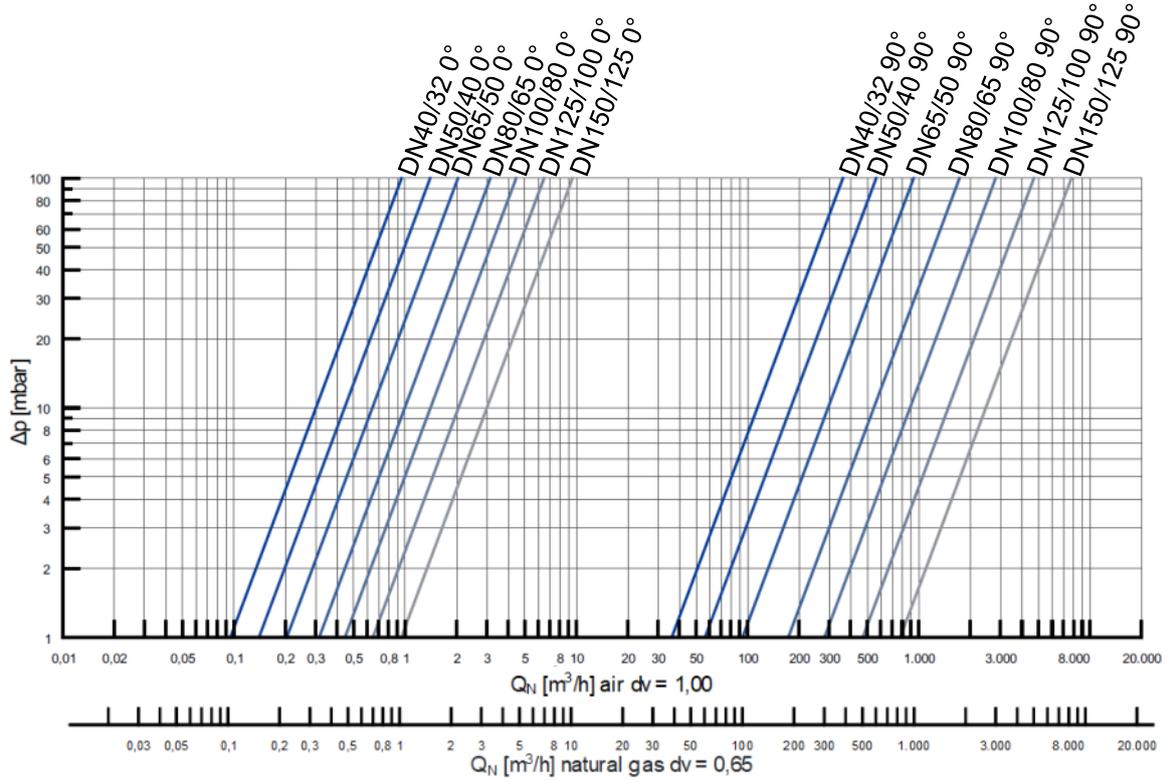
Inner diameter matches nominal size, non-sealing



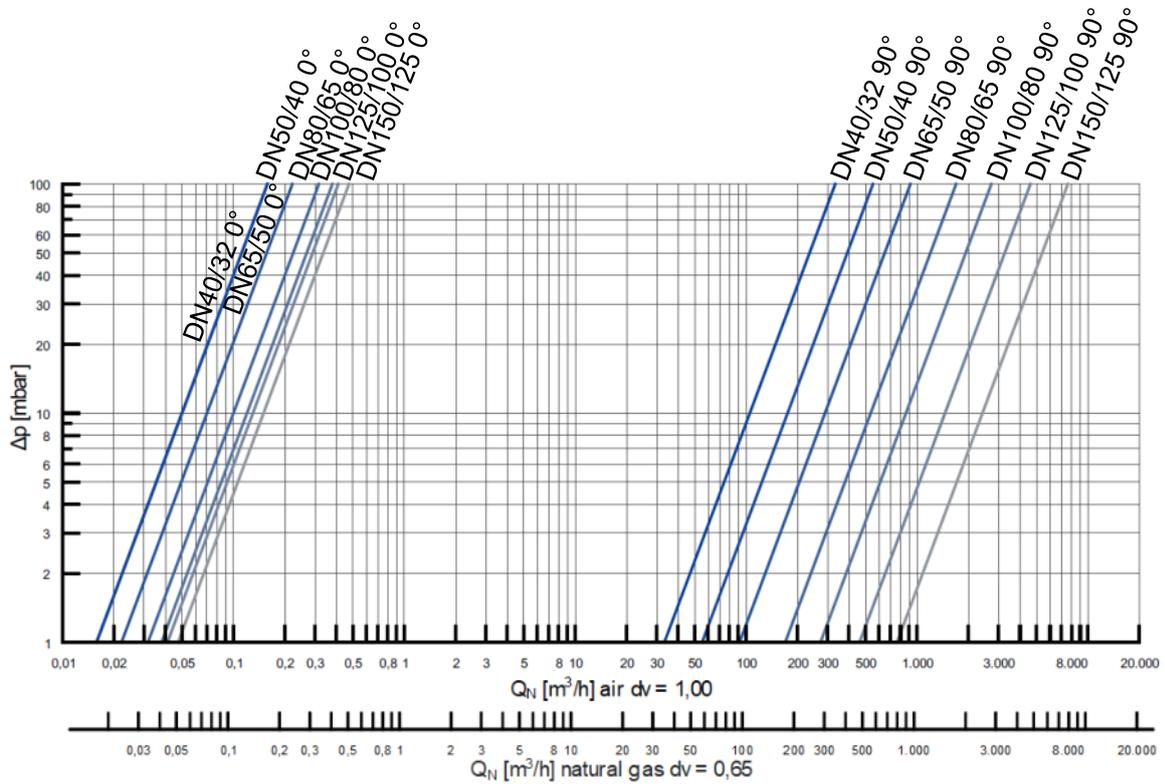
Inner diameter matches nominal diameter, sealing



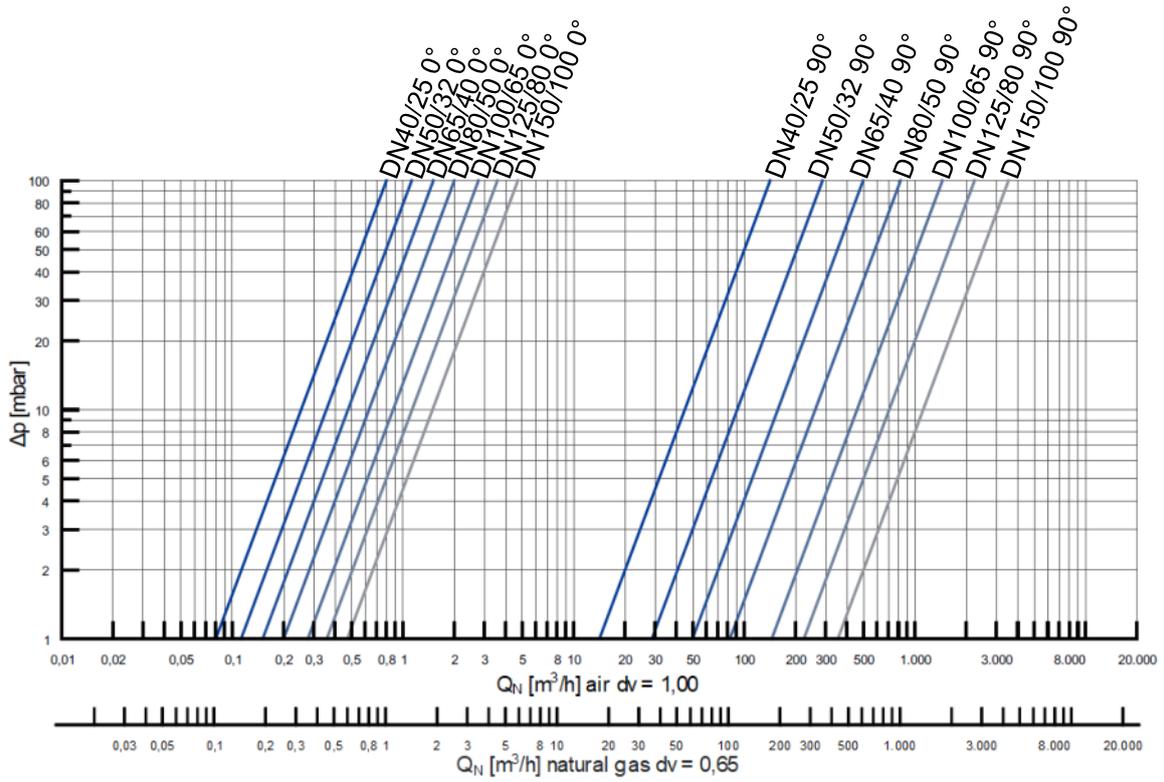
Single reduction in nominal width, non-sealing



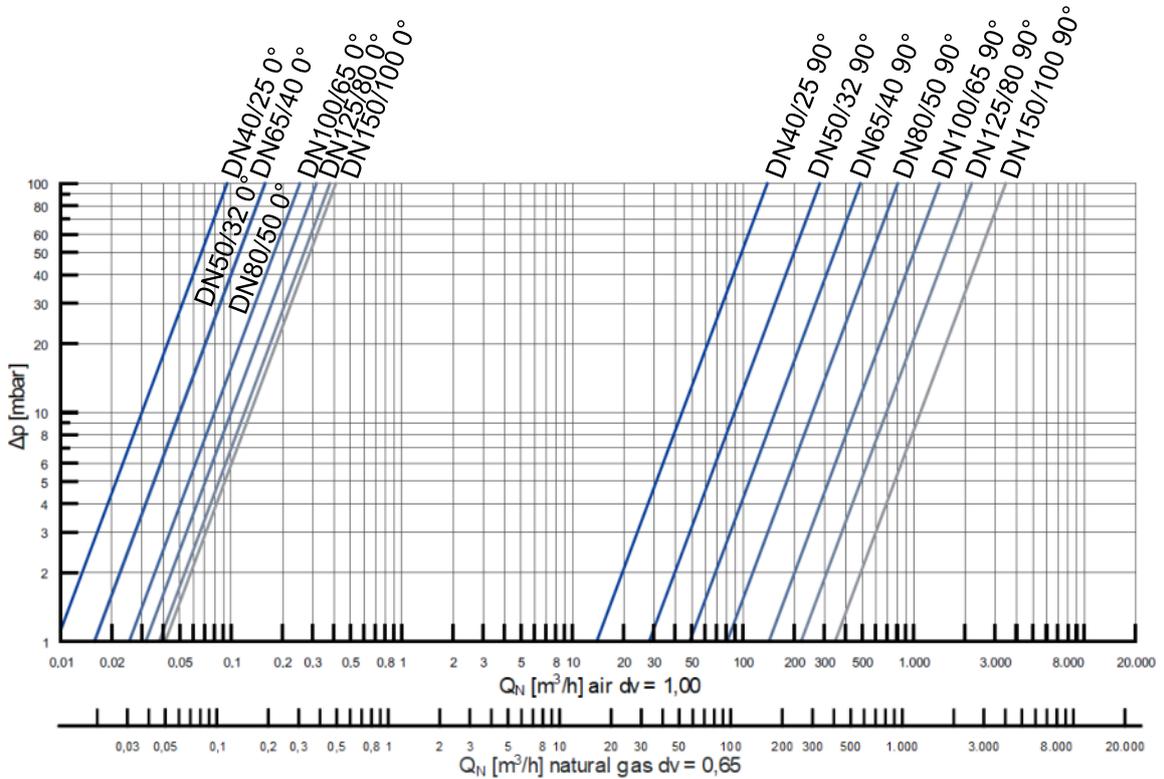
Single reduction in nominal width, sealing



Two reductions in nominal width, non-sealing



Two reductions in nominal width, sealing



Selection

Options

Valve disc

The valve disc of all valves is a swing-through type. To reduce the minimum flow rate when the valve is closed, the valve disc is also available with an integrated sealing system.

Actuation

All valves are equipped with an external square for easy mounting of a Schimpf actuator or a hand lever.

By means of an optional **hand lever**, volumetric flows of 0°-90° can be continuously adjusted and fixed. The setting angle can be read off a scale.

Customised shaft end forms and adapter sets for other actuators are also available.

Housing material

All valves are available with either aluminium or stainless-steel housings.

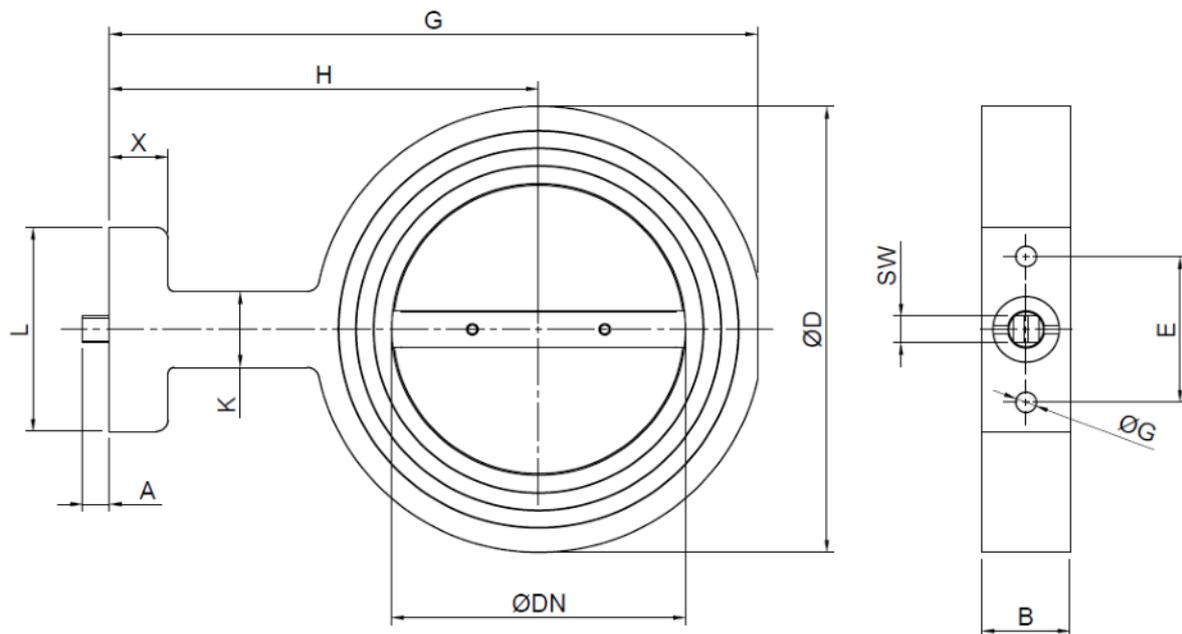
Overall length

All valves with aluminium housing are optionally available in lengths of 30 mm and 40 mm. All valves with a stainless steel housing are only possible with a length of 30 mm.

Protective earth

The valve can be supplied with a screw connection (M4) on the connector for a protective conductor.

SVG dimensions



Type	DN40 mm	DN50 mm	DN65 mm	DN80 mm	DN100 mm	DN125 mm	DN150 mm
ØDN - Inner diameter*	40 (32/25)*	50 (40/32)*	65 (50/40)*	80 (65/80)*	100 (80/65)*	125 (100/80)*	150 (125/100)*
ØD - Outer diameter	87	97	117	133	153	183	208
G - Overall height	155	165	182.5	200.5	220.5	248	273
H - Centre of fitting to top of neck	113.5	118.5	126	136	146	158.5	171
X - Connector height	20	20	20	20	20	20	20
L - Connector width	70	70	70	70	70	70	70
K - Central bar width	26	26	26	26	26	26	26
B - Overall length**	30/40	30/40	30/40	30/40	30/40	30/40	30/40
A - Height of square spindle	9	9	9	9	9	9	9
SW - Width across flats of square spindle	9	9	9	9	9	9	9
E - Hole spacing	50	50	50	50	50	50	50
ØG - Hole diameter	7	7	7	7	7	7	7

* Inner diameter can be reduced by one or two nominal diameters

** Overall length is possible in 30 or 40 mm length, stainless steel only length 30

Weight of SVG

Aluminium housing

Type	DN40 ~ kg	DN50 ~ kg	DN65 ~ kg	DN80 ~ kg	DN100 ~ kg	DN125 ~ kg	DN150 ~ kg
Standard Overall length 30 mm	0.7	0.8	1	1.2	1.45	1.9	2.3
Single reduction in nominal width Overall length 30 mm	0.75	0.82	1.1	1.3	1.55	2.05	2.5
Two reductions in nominal width Overall length 30 mm	0.8	0.85	1.15	1.3	1.6	2.15	2.7
Standard Overall length 40 mm	0.85	1	1.25	1.5	1.8	2.3	2.75
Single reduction in nominal width Overall length 40 mm	0.9	1.05	1.4	1.6	1.9	2.6	3
Two reductions in nominal width Overall length 40 mm	1	1.1	1.45	1.7	2	2.75	3.4

Stainless steel housing

Type	DN40 ~ kg	DN50 ~ kg	DN65 ~ kg	DN80 ~ kg	DN100 ~ kg	DN125 ~ kg	DN150 ~ kg
Standard Overall length 30 mm	1.75	2	2.5	3	3.4	4.4	5.2
Single reduction in nominal width Overall length 30 mm	1.8	2.1	2.8	3.25	3.85	5.2	6.1
Two reductions in nominal width Overall length 30 mm	1.95	2.2	2.9	3.5	4.2	5.8	7

Type code

Code*	Description
SVG	Control valve for gas
40-150	Nominal size DN
/25-/125	Reduced to nominal size DN
D	Sealing
E	Stainless steel housing
H	With manual adjustment
V	With square spindle
B30/B40	Overall length 30 or 40 mm

*Other supplementary code numbers are possible depending on optional customer-specific variations

Example for gas valve DN 65, reduced to DN 50, sealing with square, overall length 30 mm: **SVG 65/50 D V B30**

Maintenance and service life

Important: **The “Safety instructions for maintenance and installation” must be observed during all maintenance work.**



The SVG control valve requires little maintenance but must be checked regularly by qualified personnel to ensure it is working properly. We recommend inspecting the control valve once a year (every six months when used with biogas) to check the tightness of the seal and determine whether the valve is functioning as intended. The intervals for regular inspections must be set by the operator depending on the operating conditions.

The SVG control valve is designed to have a service life of 10 years.

When this period is over, the control valve must be inspected in detail by qualified specialists, serviced by the manufacturer or replaced.

Technical specifications

DN:	40 to 150, reduction by 2 nominal sizes possible.
Gas type:	For gases of gas families 1, 2, 3 and other neutral gaseous media. Natural gas-hydrogen mixtures and hydrogen* Biogas (stainless steel version). Suitable for gases up to max. 0.1% H ₂ S by volume. The gas must be dry under all conditions and must not condense.
Housing:	Aluminium or stainless steel
Shaft:	Stainless steel
Valve disc:	Stainless steel
Bolts (valve disc):	Stainless steel
Washers (valve disc):	Steel, galvanised
Screw plug:	Stainless steel
Seals:	NBR
Operating pressure:	Max. 50 kPa (500 mbar)
Drive adaptation:	square spindle 9*9 mm, others available on request
Flange:	EN 1092-1
Ambient temperature:	-20 to +70°C
Medium temperature:	-20 to +70°C
Maximum permissible positioning speed:	5s/90°

* According to report **no. V 1742-00/22** of 12/01/2022, carried out by " TÜV SÜD Industrie Service GmbH; Abteilung Feuerungs- und Wärmetechnik, Prüfbereich Sicherheits-, Kontroll- und Regeleinrichtungen", the butterfly valves of the SVG series are also suitable for natural gas-hydrogen mixtures and hydrogen as a flow medium under the operating conditions specified there.

EU Declaration of Conformity



EU-Konformitätserklärung

EU Declaration of Conformity
Déclaration de Conformité UE

Wir **Schimpf Ex & Gas GmbH, Bonholzstrasse 17, D-71111 Waldenbuch**
We / Nous
erklären, dass das Produkt **alle Regelklappen der Serie SVG**
declare that product / déclarons que produit

auf welche sich diese Erklärung bezieht, mit den folgenden Norm(en) übereinstimmt
to which this declaration relates conforms to the following standard(s)
sur laquelle cette déclaration se réfère, et conformément aux dispositions de la norme(s)

DIN EN 13611:2019
DIN EN 161:2013

gemäß den Bestimmungen der folgenden Richtlinie(n).
according to the provisions of the following directive(s) / conformément aux dispositions de la directive(s)

Nummer (Number / Numéro)	Text (Text / Texte)
2016/426/EU 2016/426/EU 2016/426/UE	Verordnung über Geräte zur Verbrennung gasförmiger Brennstoffe Regulation on appliances burning gaseous fuels Règlement concernant les appareils brûlant des combustibles gazeux

Das Datenblatt und gegebenenfalls die Basisdokumentation sind zu beachten.
The data sheet and basic documentation, if any, have to be considered.
La consultation de la fiche technique, et éventuellement de la documentation technique de base, est requise.

EU-Baumusterprüfung	
EU-Type Examination examen UE de type	
Zertifikatsnummer Certificate number Numéro de certificat	C5A 116408 0001
Gültigkeitsdauer Validity period Durée de validité	2032-03-29
Notifizierte Stelle Notified Body Organisme notifié (2016/426/EU)	TÜV SÜD Product Service GmbH Ridlerstraße 65 D-80339 München Notified Body number: 0123
Überwachungsverfahren Surveillance procedure Procédure de surveillance (2016/426/EU)	TÜV SÜD Product Service GmbH Ridlerstraße 65 D-80339 München Notified Body number: 0123

Anbringung der CE-Kennzeichnung: **ja**
Placing of the CE marking / L'apposition du marquage CE

Rechtsverbindliche Unterschrift
Authorized signature / Signature autorisée

Waldenbuch, 08.04.2022
N. Geiger, Geschäftsführung
Schimpf Ex & Gas GmbH
Bonholzstr. 17
71111 Waldenbuch
Telefon 07157/52756-0

EU-Type examination certificate



Product Service

EU-Type Examination Certificate

No. C5A 116408 0001 Rev. 01

Holder of Certificate: Schimpf Ex & Gas GmbH
Bonholzstraße 17
71111 Waldenbuch
GERMANY

Product: Fittings (Gas)
Throttle valve

SVG

PIN CE-0123DM1078

The Certification Body of TÜV SÜD Product Service GmbH confirms according to Annex III (Module B) that the listed product complies with the relevant provisions according to Annex I of Regulation (EU) 2016/426 on appliances burning gaseous fuels. It refers only to the sample submitted for testing and certification and on its technical documentation. For details see: www.tuvsud.com/ps-cert

Test report no.: V 1672-00/22

Valid until: 2032-03-29

Date, 2022-04-05

(Johannes Steiglechner)

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TÜV SÜD Product Service GmbH is Notified Body according to Regulation (EU) 2016/426 on appliances burning gaseous fuels with identification No. 0123.

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