

GEMÜ C60 CleanStar

Pneumatically operated diaphragm valve

EN

Operating instructions



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1 General information

1.1 Information

- The descriptions and instructions apply to the standard versions. For special versions not described in this document the basic information contained herein applies in combination with any additional special documentation.
- Correct installation, operation, maintenance and repair work ensure faultless operation of the product.
- Should there be any doubts or misunderstandings, the German version is the authoritative document.
- Contact us at the address on the last page for staff training information.

1.2 Symbols used

The following symbols are used in this document:

Symbol	Meaning
●	Tasks to be performed
►	Response(s) to tasks
–	Lists

1.3 Definition of terms

Working medium

The medium that flows through the GEMÜ product.

Control function

The possible actuation functions of the GEMÜ product.

Control medium

The medium whose increasing or decreasing pressure causes the GEMÜ product to be actuated and operated.

1.4 Warning notes

Wherever possible, warning notes are organized according to the following scheme:

SIGNAL WORD	
Possible symbol for the specific danger	Type and source of the danger ►Possible consequences in case of non-compliance ●Measures for avoiding danger

Warning notes are always labelled with a signal word and sometimes also with a symbol for the specific danger.

The following signal words and danger levels are used:

 DANGER	
	Imminent danger! ► Non-observance can cause death or severe injury

 WARNING	
	Potentially dangerous situation! ► Non-observance can cause death or severe injury

 CAUTION	
	Potentially dangerous situation! ► Non-observance can cause moderate to light injury

NOTICE	
	Potentially dangerous situation! ► Non-observance can cause damage to property

The following symbols for the specific dangers can be used within a warning note:

Symbol	Meaning
	Danger of explosion!
	The equipment is subject to pressure!
	Corrosive chemicals!
	Hot plant components!
	Maximum permissible pressure exceeded!
	Vapour fumes from PFA welding can cause health related issues!
	Corrosive chemicals.
	Leakage!

2 Safety information

The safety information in this document refers only to an individual product. Potentially dangerous conditions can arise in combination with other plant components, which need to be considered on the basis of a risk analysis. The operator is responsible for the production of the risk analysis and for compliance with the resulting precautionary measures and regional safety regulations.

The document contains fundamental safety information that must be observed during commissioning, operation and maintenance. Non-compliance with these instructions may cause:

- Personal hazard due to electrical, mechanical and chemical effects
- Hazard to nearby equipment
- Failure of important functions
- Hazard to the environment due to the leakage of dangerous materials

The safety information does not take into account:

- Unexpected incidents and events, which may occur during installation, operation and maintenance
- Local safety regulations which must be adhered to by the operator and by any additional installation personnel

Prior to commissioning:

1. Transport and store the product correctly.
2. Do not paint the bolts and plastic parts of the product.
3. Carry out installation and commissioning using trained personnel.
4. Provide adequate training for installation and operating personnel.
5. Ensure that the contents of the document have been fully understood by the responsible personnel.
6. Define the areas of responsibility.
7. Observe the safety data sheets.
8. Observe the safety regulations for the media used.

During operation:

1. Keep this document available at the place of use.
2. Observe the safety information.
3. Operate the product in accordance with this document.
4. Operate the product in accordance with the specifications.
5. Maintain the product correctly.
6. Do not carry out any maintenance work and repairs not described in this document without consulting the manufacturer first.

In cases of uncertainty:

1. Consult the nearest GEMÜ sales office.

3 Product description

3.1 Construction



No.	Name	Materials
1	Stroke limiter and optical position indicator	
2	Actuator	PVDF (body)
3	Pneumatic connections	
4	Actuator union nut	PVDF or ECTFE
5	Union nut connections	PVDF, PFA or CPFA
6	Lifting lugs	
7	Leak detection hole	
8	Valve body	PVDF, PFA or PP-R, natural
	Diaphragms (internal)	PTFE (media wetted)/EPDM

3.2 Description

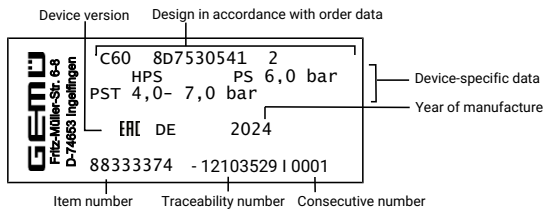
The ultra pure 2/2-way diaphragm valve GEMÜ C60 CleanStar® has a plastic piston actuator and is pneumatically operated. A stroke limiter (not with AG 4) and an optical position indicator are integrated as standard. All media wetted parts are produced from PFA or PTFE (HPW version). For the HPS version, there is a choice of valve bodies made of PP-R, natural or PVDF. This High Purity version of the CleanStar® series complies with the strictest purity standards and boasts high chemical resistance. It can also be used with high media temperatures. As such, it is often used at the supply and distribution level in semiconductor factories.

3.3 Function

The GEMÜ CleanStar® C60 diaphragm valve has been designed for installation in piping systems. It can be closed or opened by a control medium, which is how it controls the flow.

3.4 Product label

The product label is located on the actuator. Product label data (example):



The month of manufacture is encoded in the traceability number and can be obtained from GEMÜ. The product was manufactured in Germany.

The operating pressure stated on the product label applies to a media temperature of 20 °C. The product can be used up to the maximum stated media temperature. You can find the pressure/temperature correlation in the technical data.

4 Correct use

DANGER

Danger of explosion!

- ▶ Risk of death or severe injury
- Do **not** use the product in potentially explosive zones.

WARNING

Improper use of the product!

- ▶ Risk of severe injury or death
- ▶ Manufacturer liability and guarantee will be void.
- Only use the product in accordance with the operating conditions specified in the contract documentation and in this document.

The product is designed for installation in piping systems and for controlling a working medium.

The product is not intended for use in potentially explosive areas.

- The pressure equipment has been designed, manufactured and tested in compliance with sound engineering practice in accordance with Article 4, Paragraph 3 of the Pressure Equipment Directive 2014/68/EU. The specified areas of use (see the information on working media, operating temperature and operating pressure in the "Technical data" chapter) must be complied with.

5 Order data C60 PFA

5.1 Order data - body configuration - 2/2-way body (code D)

Order codes

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

1 Type	Code
Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter (for actuator size 1–3 only)	C60

2 SpaceSaver position	Code
Without	
Flare connection in position X, butt weld spigot in position Z	K
SpaceSaver for X+ Z position	S
SpaceSaver for Z position	Z

3 Connection size	Code
1/4", international code: 4	4
3/8", international code: 6	6
1/2", international code: 8	8
3/4", international code: 12	12
1", international code: 16	16
1 1/4", international code: 20	20
1 1/2", international code: 24	24
2", international code: 32	32

4 Housing configuration	Code
2/2-way body	D

5 Connection type	Code
Tube	
Flare connection with CPFA union nut	73
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77
Nexus Connect connection with PFA union nut	NX
PrimeLock connection	PL
Tube spigot	T3
Pipe	
Spigot – inch, for welding or solvent cementing, depending on the body material	30

6 Valve body material	Code
PFA, perfluoroalkoxy	30

7 Diaphragm material	Code
PTFE/EPDM one-piece	54
PTFE/EPDM two-piece	5M

8 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2

9 Actuator version	Code
Standard version	
Actuator size 1	1
Actuator size 2	2
Actuator size 3	3
Actuator size 4	4
Standard version with ECTFE union nut	
Actuator size 1, with ECTFE union nut	1E
Actuator size 2, with ECTFE union nut	2E
Actuator size 3, with ECTFE union nut	3E
Actuator size 4, with ECTFE-union nut, maximum operating temperature 60 °C	4E
High Flow design	
Actuator size 2 High Flow	2 F
Actuator size 3 High Flow	3 F
High Flow design with ECTFE union nut	
Actuator size 2 High Flow, with ECTFE union nut	2EF
Actuator size 3 High Flow, with ECTFE union nut	3EF

10 Type of design	Code
Without	
CleanStar with welded-on Nexus Connect fitting	2591
C60, spring, PFA-coated (on request)	7030

11 High Purity version	Code
High Purity, white	HPW

Order example

Ordering option	Code	Description
1 Type	C60	Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter (for actuator size 1–3 only)
2 SpaceSaver position	Z	SpaceSaver for Z position
3 Connection size	8	1/2", international code: 8
4 Housing configuration	D	2/2-way body
5 Connection type	75	Flare connection with PVDF union nut
6 Valve body material	30	PFA, perfluoroalkoxy
7 Diaphragm material	54	PTFE/EPDM one-piece
8 Control function	1	Normally closed (NC)
9 Actuator version	2	Actuator size 2
10 Type of design		Without
11 High Purity version	HPW	High Purity, white

5.2 Order data - body configuration - T body (code T)

Order codes

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

1 Type	Code
Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter (for actuator size 1–3 only)	C60

2 SpaceSaver position	Code
Without	
SpaceSaver for Y position	Y

3 Connection size	Code
Position Y	
1/4", international code: 4	4
3/8", international code: 6	6
1/2", international code: 8	8
3/4", international code: 12	12
1", international code: 16	16
1 1/4", international code: 20	20

4 Housing configuration	Code
T body	T

5 Connection type	Code
Tube	
Flare connection with CPFA union nut	73
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77
Pipe	
Spigot – inch, for welding or solvent cementing, depending on the body material	30

6 Valve body material	Code
PFA, perfluoroalkoxy	30

7 Diaphragm material	Code
PTFE/EPDM one-piece	54

8 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2

9 Actuator version	Code
Standard version	
Actuator size 1	1
Actuator size 2	2
Actuator size 3	3
Standard version with ECTFE union nut	
Actuator size 1, with ECTFE union nut	1E
Actuator size 2, with ECTFE union nut	2E

9 Actuator version	Code
Actuator size 3, with ECTFE union nut	3E

10 SpaceSaver 2 position	Code
SpaceSaver for X position	X
SpaceSaver for Z position	Z
SpaceSaver for X+ Z position	S

11 Connection size 2	Code
Position X and Z	
1/4", international code-2: 4	4
3/8", international code-2: 6	6
1/2", international code-2: 8	8
3/4", international code-2: 12	12
1", international code-2: 16	16
1 1/4", international code-2: 20	20

12 Connection type, spigot 2	Code
Tube	
Flare connection with CPFA union nut	73
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77
Pipe	
Spigot – inch, for welding or solvent cementing, depending on the body material	30

13 Type of design	Code
Without	
C60, spring, PFA-coated (on request)	7030

14 High Purity version	Code
High Purity, white	HPW

Order example

Ordering option	Code	Description
1 Type	C60	Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter (for actuator size 1–3 only)
2 SpaceSaver position	Y	SpaceSaver for Y position
3 Connection size	8	1/2", international code: 8
4 Housing configuration	T	T body
5 Connection type	75	Flare connection with PVDF union nut
6 Valve body material	30	PFA, perfluoroalkoxy
7 Diaphragm material	54	PTFE/EPDM one-piece
8 Control function	1	Normally closed (NC)
9 Actuator version	2	Actuator size 2
10 SpaceSaver 2 position	Z	SpaceSaver for Z position
11 Connection size 2	8	1/2", international code-2: 8
12 Connection type, spigot 2	75	Flare connection with PVDF union nut
13 Type of design		Without
14 High Purity version	HPW	High Purity, white

6 Technical data C60 PFA

6.1 Medium

Working medium: Gaseous and liquid media (specified in the table below based on nominal size) – in particular high-purity media – which have no negative impact on the physical and chemical properties of the body and diaphragm material. Inert gases are excluded.

Categorisation

Max. permissible operating pressure (PS)	Permissible working media/fluids acc. to nominal size			
	Group 1 fluids (hazardous)		Group 2 fluids (other)	
	Gases (diagram 6)	Liquids (diagram 8)	Gases (diagram 7)	Liquids (diagram 9)
6 bar	Up to max. 1"/DN25	> 1"/DN25		

6.2 Temperature

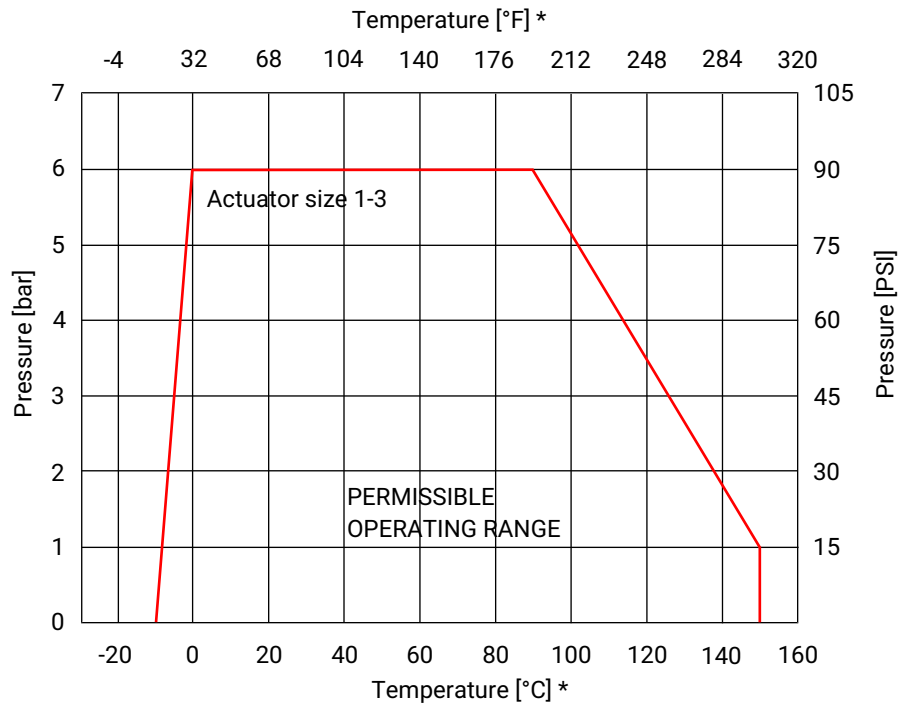
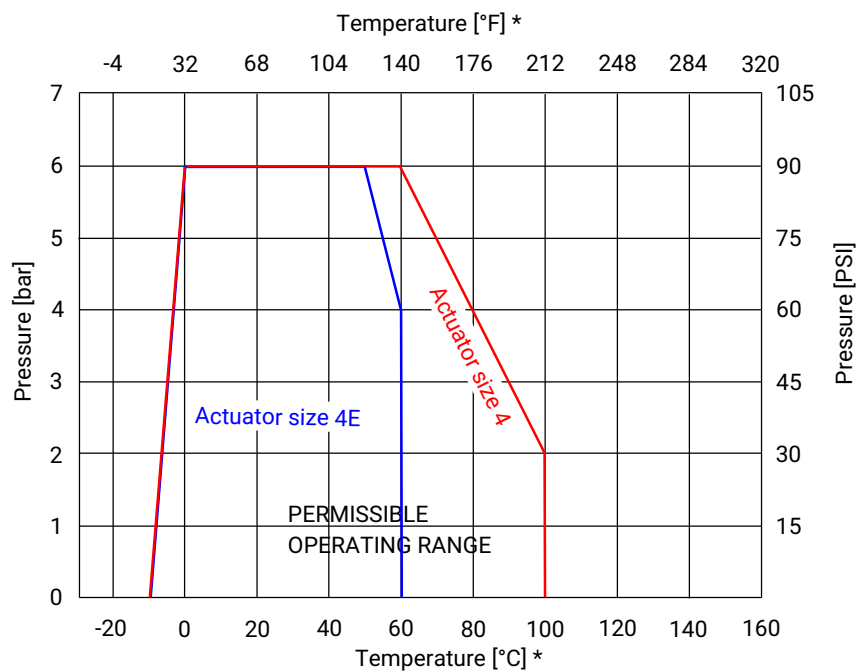
Media temperature: PFA valve body material (code 30): -10 – 150 °C
Observe pressure/temperature diagram

Ambient temperature: 0 – 60 °C

Storage temperature: 0 – 40 °C

6.3 Pressure

Operating pressure: 0 – 6 bar
applied upstream

Pressure/temperature diagram:**Valve body material: PFA (code 30), actuator sizes 1, 2 and 3****Valve body material: PFA (code 30), actuator sizes 4, 4E**

*** Note:** The temperature/pressure diagram is only an aid. The data refers to water as a working medium. A change of operating conditions or other media may result in deviations. In case of doubt, it is advisable to test the behaviour of the material under the definitive operating conditions in a test installation. Temperatures below 0 °C can have a negative influence on the actuation speed. The pressure-bearing valve bodies are designed to maintain their functionality unchanged for a theoretical time period of 25 years. Continuously rising medium temperatures would change this time period as follows:

- 24.4 years at 110 °C
- 8.2 years at 120 °C
- 3.4 years at 130 °C
- 1.4 years at 140 °C
- 1.0 year at 150 °C

Kv values:**Body configuration – 2/2-way body (code D)**

Actuator size (code)	Connection size X, Z	Connection	
		On both sides	
		Tube connectors moulded on	Pipe connection
1, 1E	1/4"	4.0	15.0
	3/8"	15.0	-
2, 2E	1/2"	35.0	68.0
	3/4"	68.0	68.0
3, 3E	3/4"	68.0	126.0
	1"	158.0	175.0
	1 1/4"	170.0	-
4, 4E	1 1/2"	-	1225.0
	2"	-	1225.0

Kv values in l/min

If the 2/2-way body has a tube and pipe connection, the Kv values of the tube connection are used.

Body configuration - 2/2-way body (code D) – High Flow design

Actuator size (code)	Connection size X, Z	Connection	
		On both sides	
		Tube connectors moulded on	Pipe connection
2 F, 2EF	1/2"	-	115.0
	3/4"	115.0	115.0
	1"	123.0	123.0
3 F, 3EF	1"	316.0	316.0
	1 1/4"	325.0	-

Kv values in l/min

Body configuration – 2/2-way body (code D) – Nexus Connect® connection type (code NX)

Actuator size (code)	Connection size X, Z	Connection	
		On both sides	
		Connection welded on	SpaceSaver
1	1/4"	7.82	-
	3/8"	13.0	13.3
2	1/2"	48.1	35.2
	3/4"	66.3	-
2F	3/4"	-	110.0
3	1"	142.0	-
	1 1/4"	142.0	-
3F	1"	-	255.0
4, 4E	1 1/2"	800.0	-

Kv values in l/min

Kv values:**Body configuration - T body (code T)**

Actuator size (code)	Connection size		Connection		
			On both sides at main pipe (X, Z) and branch (Y)		One side
	Main pipe X, Z	Branch Y	Tube connection	Pipe connection	Pipe/tube connection
1, 1E	1/4"	1/4"	-	17.0	-
	3/8"	1/4"	4.0	-	-
	3/8"	3/8"	13.0	-	-
	1/2"	1/4"	-	18.0	-
	1/2"	3/8"	17.0	-	-
	3/4"	3/8"	18.0	-	-
2, 2E	1/2"	1/2"	28.0	62.0	36.0
	3/4"	1/4"	-	35.0	-
	3/4"	1/2"	35.0	38.0	38.0
	3/4"	3/4"	62.0	71.0	-
	1"	1/2"	38.0	101.0	-
	1"	3/4"	71.0	-	-
3, 3E	1"	1"	137.0	135.0	145.0
	1"	1/2"	-	101.0	42.0
	1"	3/4"	-	130.0	-
	1¼"	1/2"	53.0	-	-
	1¼"	3/4"	117.0	-	-
	1¼"	1"	150.0	-	-
	1¼"	1¼"	170.0	-	-

At branch Y

Kv values in l/min

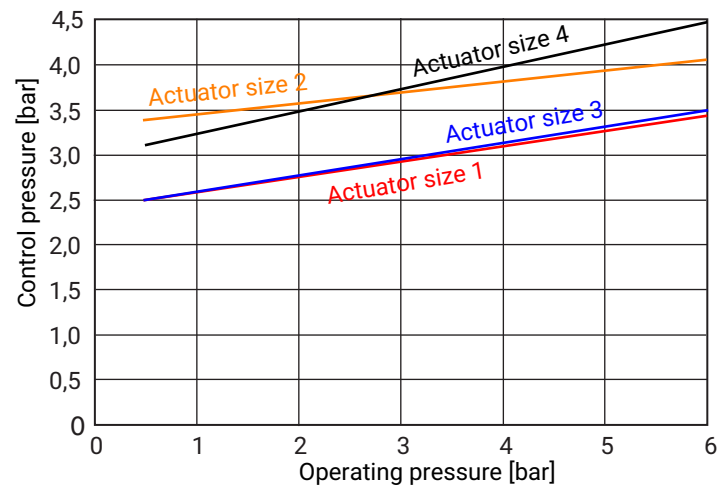
Vacuum:

400 mbar absolute

The service life of the valve may be affected if exposed to a greater vacuum or when valves are installed on the pump suction side.

Pneumatic actuator**Control pressure:**

Control function	Actuator size	Control pressure
1	1, 1E	4.5–7 bar
	2, 2E, 2 F, 2EF	4–7 bar
	3, 3E, 3 F, 3EF	4.5–7 bar
	4, 4E	5–7 bar
2	1, 1E, 2, 2E, 2 F, 2EF, 3, 3E, 3 F, 3EF	Max. 5 bar
	4, 4E	Max. 4.5 bar

Control pressure / operating pressure characteristics:**Control function 2 – normally open (NO)****Filling volume:**

Actuator size	Control function	
	Normally closed (NC)	Normally open (NO)
1, 1E	18.0	15.0
2, 2E, 2 F, 2EF	29.0	42.5
3, 3E, 3 F, 3EF	63.0	95.0
4, 4E	146.0	794.0

Filling volume in cm³

6.4 Product conformities

Machinery Directive: 2006/42/EC

Food: FDA

EAC: The product is certified according to EAC.

Pressure Equipment Directive: Categorisation in accordance with 2014/68/EU Article 4 and Annex II
Max. category **GIP** (sound engineering practice)

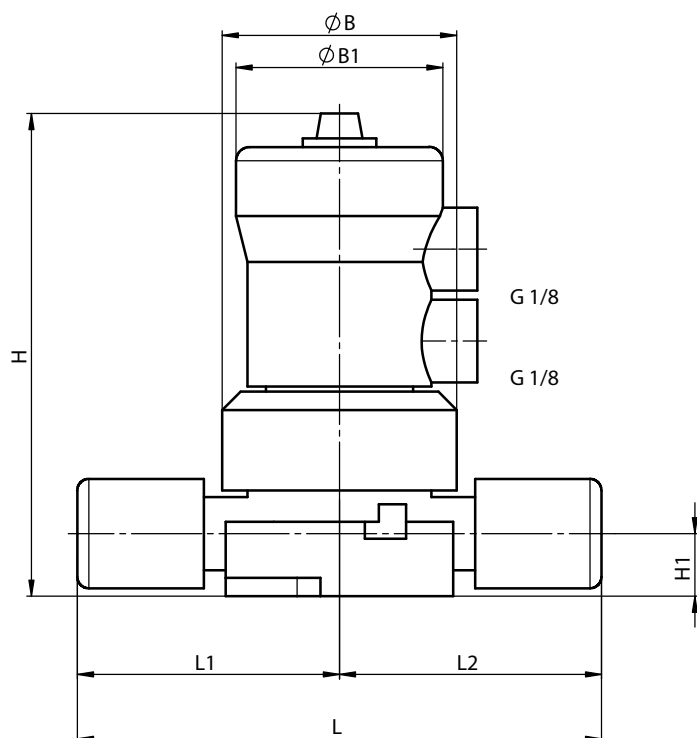
6.5 Mechanical data

Flow direction: Optional

7 Dimensions C60 PFA

7.1 2/2-way valves (code D)

7.1.1 Flare connection (code 73, 75, 77)



Actuator size ¹⁾	Connection size	SpaceSaver position ²⁾	ØB	ØB1	H	H1	L	L1	L2
1, 1E	1/4"	-	51.4	45.0	105.0	13.6	112.8	56.4	56.4
1, 1E	1/4"	Z	51.4	45.0	105.0	13.6	120.1	56.4	63.7
1, 1E	3/8"	-	51.4	45.0	105.0	13.6	114.0	57.0	57.0
1, 1E	3/8"	Z	51.4	45.0	105.0	13.6	119.4	57.0	62.4
2, 2E	1/2"	K	64.0	64.7	126.5	19.0	133.4	65.9	67.5
2, 2E	1/2"	-	64.0	64.7	120.5	16.0	131.8	65.9	65.9
2, 2E	1/2"	S	64.0	64.7	120.5	16.0	142.0	71.0	71.0
2, 2E	1/2"	Z	64.0	64.7	120.5	16.0	136.9	65.9	71.0
2, 2E	3/4"	K	64.0	64.7	126.5	19.0	134.4	66.9	67.5
2, 2E	3/4"	-	64.0	64.7	126.5	19.0	133.8	66.9	66.9
2, 2E	3/4"	S	64.0	64.7	126.5	19.0	156.8	78.4	78.4
2, 2E	3/4"	Z	64.0	64.7	126.5	19.0	145.3	66.9	78.4
3, 3E	3/4"	-	80.0	86.8	166.5	25.0	165.8	82.9	82.9
3, 3E	3/4"	K	80.0	86.0	166.5	25.0	165.9	82.9	83.0
3, 3E	1"	K	80.0	86.8	166.5	25.0	172.5	89.5	83.0
3, 3E	1"	-	80.0	86.8	166.5	25.0	179.0	89.5	89.5
3, 3E	1"	S	80.0	86.8	166.5	25.0	188.9	89.5	99.4
3, 3E	1"	Z	80.0	86.8	166.5	25.0	188.9	89.5	99.4
3, 3E	1 1/4"	-	80.0	86.8	166.5	25.0	238.4	119.2	119.2
2 F, 2EF	3/4"	-	64.0	64.7	126.5	19.0	133.8	66.9	66.9
2 F, 2EF	3/4"	S	64.0	64.7	126.5	19.0	156.8	78.4	78.4
2 F, 2EF	3/4"	Z	64.0	64.7	126.5	19.0	145.3	66.9	78.4
2 F, 2EF	1"	-	64.0	64.7	126.5	19.0	160.0	74.0	74.0

Actuator size ¹⁾	Connection size	SpaceSaver position ²⁾	ØB	ØB1	H	H1	L	L1	L2
3 F, 3EF	1"	-	80.0	86.8	166.5	25.0	179.0	89.5	89.5
3 F, 3EF	1"	S	80.0	86.8	166.5	25.0	198.8	99.4	99.4
3 F, 3EF	1"	Z	80.0	86.8	166.5	25.0	188.9	89.5	99.4
3 F, 3EF	1¼"	-	80.0	86.8	166.5	25.0	197.4	119.2	119.2

Dimensions in mm

1) **Actuator version**

Code 1: Actuator size 1

Code 1E: Actuator size 1, with ECTFE union nut

Code 2: Actuator size 2

Code 2 F: Actuator size 2 High Flow

Code 2E: Actuator size 2, with ECTFE union nut

Code 2EF: Actuator size 2 High Flow, with ECTFE union nut

Code 3: Actuator size 3

Code 3 F: Actuator size 3 High Flow

Code 3E: Actuator size 3, with ECTFE union nut

Code 3EF: Actuator size 3 High Flow, with ECTFE union nut

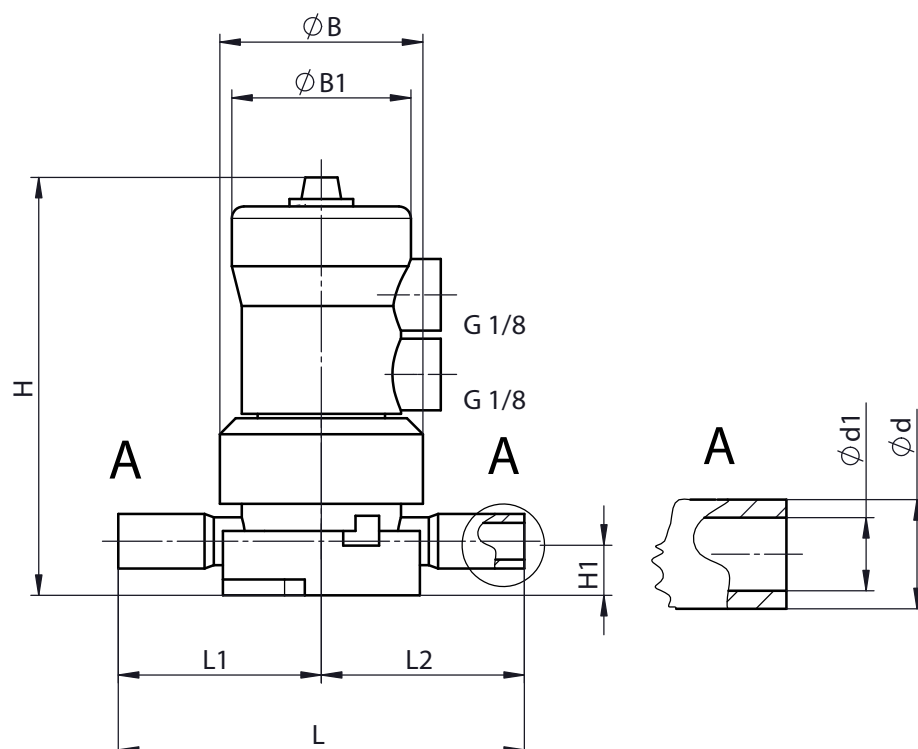
2) **SpaceSaver position**

Code K: Flare connection in position X, butt weld spigot in position Z

Code S: SpaceSaver for X+ Z position

Code Z: SpaceSaver for Z position

7.1.2 Butt weld spigot (code 30)



Actuator size ¹⁾	Connection size	SpaceSaver position ²⁾	$\varnothing B$	$\varnothing B1$	H	$H1$	L	$L1$	$L2$	Spigot (A)	
										$\varnothing d$	$\varnothing d1$
1, 1E	1/4"	-	51.4	45.0	105.0	13.6	100.5	50.3	50.3	13.7	9.2
2, 2E	1/2"	-	64.0	64.7	126.5	19.0	135.0	67.5	67.5	21.3	15.8
2, 2E	3/4"	-	64.0	64.7	126.5	19.0	135.0	67.5	67.5	26.7	20.3
3, 3E	3/4"	-	80.0	86.8	166.0	25.0	165.5	82.8	82.8	26.7	20.3
3, 3E	1"	-	80.0	86.8	166.0	25.0	163.5	81.8	81.8	33.4	26.6
4, 4E	1 1/2"	-	132.3	153.0	349.6	40.0	194.0	97.0	97.0	48.3	40.9
4, 4E	2"	-	132.3	153.0	349.6	40.0	224.0	112.0	112.0	60.3	52.3
High Flow											
2 F, 2EF	1/2"	-	64.0	64.7	126.5	19.0	136.5	68.3	68.3	21.3	15.8
2 F, 2EF	3/4"	-	64.0	64.7	126.5	19.0	135.0	67.5	67.5	26.7	20.3
2 F, 2EF	1"	-	64.0	64.7	126.5	19.0	147.5	73.8	73.8	33.4	26.6
3F, 3EF	1"	-	80.0	86.8	166.0	25.0	166.0	83.0	83.0	33.4	26.6

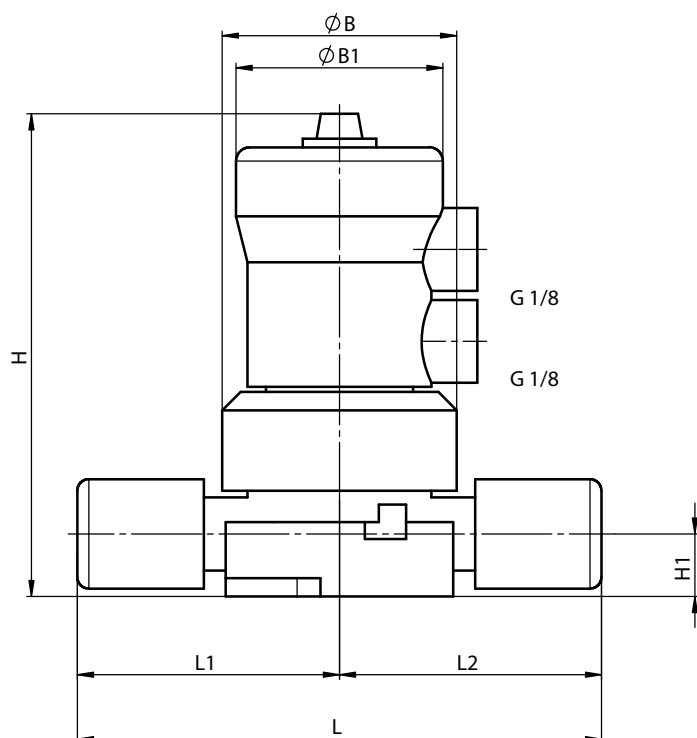
Dimensions in mm

1) Actuator version

- Code 1: Actuator size 1
- Code 1E: Actuator size 1, with ECTFE union nut
- Code 2: Actuator size 2
- Code 2 F: Actuator size 2 High Flow
- Code 2E: Actuator size 2, with ECTFE union nut
- Code 2EF: Actuator size 2 High Flow, with ECTFE union nut
- Code 3: Actuator size 3
- Code 3 F: Actuator size 3 High Flow
- Code 3E: Actuator size 3, with ECTFE union nut
- Code 3EF: Actuator size 3 High Flow, with ECTFE union nut
- Code 4: Actuator size 4

2) SpaceSaver position

- Code K: Flare connection in position X, butt weld spigot in position Z
- Code S: SpaceSaver for X+ Z position
- Code Z: SpaceSaver for Z position

7.1.3 PrimeLock® connection (code PL)

Actuator size ¹⁾	Connection size	SpaceSaver position ²⁾	ØB	ØB1	H	H1	L	L1	L2
1, 1E	1/4"	-	51.4	45.0	107.0	15.0	113.0	57.0	57.0
1, 1E	3/8"	-	51.4	45.0	107.0	15.0	117.0	59.0	59.0
2, 2E	1/2"	-	64.0	64.7	126.5	16.0	141.0	71.0	71.0
2 F, 2EF	3/4"	-	64.0	64.7	126.5	19.0	156.0	79.0	79.0
2 F, 2EF	1"	-	64.0	64.7	126.5	19.0	169.0	85.0	85.0
3 F, 3EF	1"	-	80.0	86.8	185.0	25.0	185.0	94.0	94.0
3 F, 3EF	1 1/4"	-	80.0	86.8	209.0	25.0	209.0	105.0	105.0

Dimensions in mm

1) Actuator version

Code 1: Actuator size 1

Code 1E: Actuator size 1, with ECTFE union nut

Code 2: Actuator size 2

Code 2 F: Actuator size 2 High Flow

Code 2E: Actuator size 2, with ECTFE union nut

Code 2EF: Actuator size 2 High Flow, with ECTFE union nut

Code 3: Actuator size 3

Code 3 F: Actuator size 3 High Flow

Code 3E: Actuator size 3, with ECTFE union nut

Code 3EF: Actuator size 3 High Flow, with ECTFE union nut

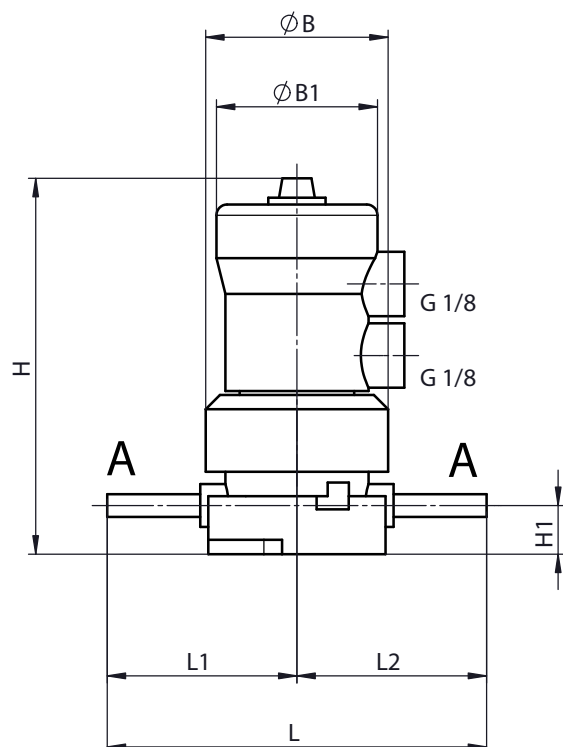
2) SpaceSaver position

Code K: Flare connection in position X, butt weld spigot in position Z

Code S: SpaceSaver for X+ Z position

Code Z: SpaceSaver for Z position

7.1.4 Tube spigot (code T3)



Actuator size ¹⁾	Connection size	SpaceSaver position ²⁾	ØB	ØB1	H	H1	L	L1	L2	Spigot (A)	
										ød	ød1
1, 1E	3/8"	-	51.4	45.0	107.0	13.6	106.0	53.0	53.0	9.5	6.6
2, 2E	1/2"	-	64.0	64.7	120.5	16.0	122.0	61.0	61.0	12.7	9.7
2, 2E	3/4"	-	64.0	64.7	126.5	19.0	135.0	67.5	67.5	19.05	15.9
3, 3E	1"	-	80.0	86.0	166.5	25.0	165.8	82.5	82.5	25.4	22.2
2 F, 2EF	3/4"	-	64.0	64.7	126.5	19.0	135.0	67.5	67.5	19.05	15.9
2 F, 2EF	1"	-	64.0	64.7	126.5	19.0	148.0	74.0	74.0	25.4	22.2
3 F, 3EF	1"	-	80.0	86.8	166.5	25.0	165.0	82.5	82.5	25.4	22.2
3 F, 3EF	1 1/4"	-	80.0	86.8	166.5	25.0	176.0	88.0	88.0	31.75	28.2

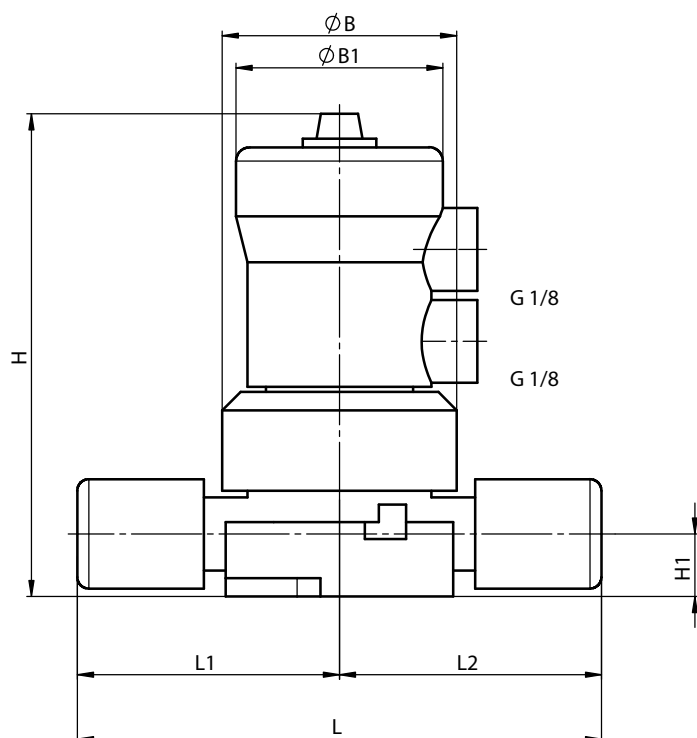
Dimensions in mm

1) Actuator version

- Code 1: Actuator size 1
- Code 1E: Actuator size 1, with ECTFE union nut
- Code 2: Actuator size 2
- Code 2 F: Actuator size 2 High Flow
- Code 2E: Actuator size 2, with ECTFE union nut
- Code 2EF: Actuator size 2 High Flow, with ECTFE union nut
- Code 3: Actuator size 3
- Code 3 F: Actuator size 3 High Flow
- Code 3E: Actuator size 3, with ECTFE union nut
- Code 3EF: Actuator size 3 High Flow, with ECTFE union nut

2) SpaceSaver position

- Code K: Flare connection in position X, butt weld spigot in position Z
- Code S: SpaceSaver for X+ Z position
- Code Z: SpaceSaver for Z position

7.1.5 Nexus Connect® (code NX)**Nexus Connect®, welded**

Actuator size ¹⁾	Connection size	SpaceSaver position ²⁾	ØB	ØB1	H	H1	L	L1	L2
1	1/4"	-	51.4	45.0	107.0	13.6	140.5	70.3	70.3
1	3/8"	-	51.4	45.0	107.0	13.6	147.7	73.9	73.9
2	1/2"	-	64.0	64.7	126.5	19.0	153.0	76.5	76.5
2	3/4"	-	64.0	64.7	126.5	19.0	179.1	89.6	89.6
2F	3/4"	-	64.0	64.7	126.5	19.0	178.4	89.2	89.2
3, 3E	1"	-	80.0	86.8	166.5	25.0	205.0	102.5	102.5
3, 3E, 3F, 3EF	1 1/4"	-	80.0	86.8	166.5	25.0	306.0	153.0	153.0
3F	1"	-	80.0	86.8	166.5	25.0	222.4	111.2	111.2
4, 4E	1 1/2"	-	132.3	153.0	349.6	40.0	378.7	189.4	189.4

Dimensions in mm

1) Actuator version

Code 1: Actuator size 1

Code 2: Actuator size 2

Code 2 F: Actuator size 2 High Flow

Code 3: Actuator size 3

Code 3E: Actuator size 3, with ECTFE union nut

Code 3EF: Actuator size 3 High Flow, with ECTFE union nut

Code 3 F: Actuator size 3 High Flow

Code 4: Actuator size 4

Code 4E: Actuator size 4, with ECTFE-union nut, maximum operating temperature 60 °C

2) SpaceSaver position

Code S: SpaceSaver for X+ Z position

Nexus Connect[®], SpaceSaver

Actuator size ¹⁾	Connection size	SpaceSaver position ²⁾	ØB	ØB1	H	H1	L	L1	L2
1	3/8"	S	51.4	45.0	105.0	13.6	112.4	56.2	56.2
2	1/2"	S	64.0	64.7	120.5	16.0	131.6	65.8	65.8
2F	3/4"	S	64.0	64.7	126.5	19.0	145.1	72.6	72.6
2F	1"	S	64.0	64.7	126.5	19.0	162.0	81.0	81.0
3F	1"	S	80.0	86.8	166.5	25.0	176.3	88.2	88.2

Dimensions in mm

1) Actuator version

Code 1: Actuator size 1

Code 2: Actuator size 2

Code 2 F: Actuator size 2 High Flow

Code 3: Actuator size 3

Code 3 F: Actuator size 3 High Flow

2) SpaceSaver position

Code S: SpaceSaver for X+ Z position

Nexus Connect[®], moulded on (Standard 1, 2, 3, High Flow design 3F)

Actuator size ¹⁾	Connection size	SpaceSaver position ²⁾	ØB	ØB1	H	H1	L	L1	L2
1, 1E	1/4"	-	51.4	45.0	107.0	13.6	98.8	49.4	49.4
1, 1E	3/8"	-	51.4	45.0	107.0	13.6	108.4	54.2	54.2
2, 2E	1/2"	-	64.0	64.7	120.5	16.0	134.9	67.5	67.5
2, 2E	3/4"	-	64.0	64.7	126.5	16.0	142.9	71.5	71.5
3F, 3EF	3/4"	-	80.0	86.8	166.5	25.0	161.6	80.8	80.8
3F, 3EF	1"	-	80.0	86.8	166.5	25.0	171.4	85.7	85.7

Dimensions in mm

1) Actuator version

Code 1: Actuator size 1

Code 1E: Actuator size 1, with ECTFE union nut

Code 2: Actuator size 2

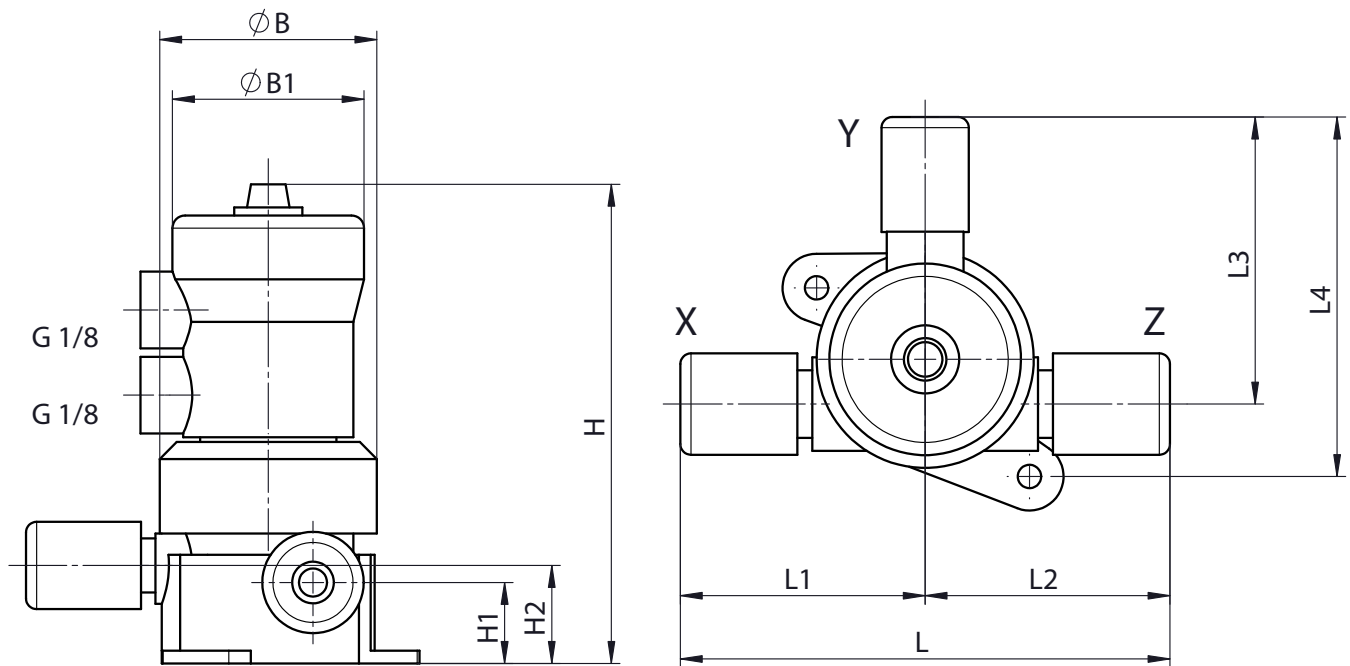
Code 2E: Actuator size 2, with ECTFE union nut

Code 3 F: Actuator size 3 High Flow

Code 3EF: Actuator size 3 High Flow, with ECTFE union nut

2) SpaceSaver position

Code S: SpaceSaver for X+ Z position

7.2 T body (code T)**7.2.1 Flare connection (code 73, 75, 77)**

Actuator size ¹⁾	Connection size		SpaceSaver position ²⁾		ϕB	$\phi B1$	H	H1	H2	L	L1	L2	L3	L4
	Pos. (X, Z)	Pos. (Y)	Pos. (X, Z)	Pos. (Y)										
1, 1E	3/8"	1/4"	-	-	51.4	45.0	115.0	19.0	23.0	115.0	57.5	57.5	67.4	84.4
1, 1E	3/8"	3/8"	-	-	51.4	45.0	115.0	19.0	23.0	115.0	57.5	57.5	68.0	85.0
1, 1E	1/2"	3/8"	-	-	51.4	45.0	115.0	19.0	23.0	120.8	60.4	60.4	68.0	85.0
1, 1E	1/2"	3/8"	Z	-	51.4	45.0	115.0	19.0	23.0	131.9	60.4	71.5	68.0	85.0
1, 1E	3/4"	3/8"	-	-	51.4	45.0	115.0	19.0	23.0	125.8	62.9	62.9	68.0	85.0
1, 1E	3/4"	3/8"	Z	-	51.4	45.0	115.0	19.0	23.0	135.3	62.9	72.4	68.0	85.0
2, 2E	1/2"	1/2"	-	-	64.0	64.7	126.5	19.0	19.0	131.8	65.9	65.9	80.4	98.4
2, 2E	1/2"	1/2"	Z	-	64.0	64.7	126.5	19.0	19.0	136.0	65.9	70.1	80.4	98.4
2, 2E	1/2"	1/2"	-	Y	64.0	64.7	126.5	19.0	19.0	131.8	65.9	65.9	85.5	103.5
2, 2E	3/4"	1/2"	-	-	64.0	64.7	126.5	19.0	19.0	133.8	66.9	66.9	80.4	98.4
2, 2E	3/4"	1/2"	S	-	64.0	64.7	126.5	19.0	19.0	156.8	78.4	78.4	80.4	98.4
2, 2E	3/4"	1/2"	X	-	64.0	64.7	126.5	19.0	19.0	145.3	66.9	78.4	80.4	98.4
2, 2E	3/4"	1/2"	Z	-	64.0	64.7	126.5	19.0	19.0	145.3	66.9	78.4	80.4	98.4
2, 2E	3/4"	1/2"	-	Y	64.0	64.7	126.5	19.0	19.0	133.8	66.9	66.9	85.5	103.5
2, 2E	3/4"	3/4"	-	-	64.0	64.7	126.5	19.0	19.0	133.8	66.9	66.9	81.4	99.4
2, 2E	3/4"	3/4"	X	-	64.0	64.7	126.5	19.0	19.0	145.3	78.4	66.9	81.4	99.4
2, 2E	3/4"	3/4"	Z	-	64.0	64.7	126.5	19.0	19.0	145.3	66.9	78.4	81.4	99.4
2, 2E	3/4"	3/4"	-	Y	64.0	64.7	126.5	19.0	19.0	133.8	66.9	66.9	92.4	110.4
3, 3E	1"	1"	-	-	80.0	86.8	170.0	25.0	25.0	168.0	84.0	84.0	110.5	133.0
3, 3E	1"	1"	X	-	80.0	86.8	170.0	25.0	25.0	177.9	93.9	84.0	110.5	133.0
3, 3E	1 1/4"	1/2"	-	-	80.0	86.8	170.0	25.0	25.0	238.4	119.2	119.2	99.9	122.4
3, 3E	1 1/4"	1"	-	-	80.0	86.8	170.0	25.0	25.0	238.4	119.2	119.2	110.5	133.0

Actuator size ¹⁾	Connection size		SpaceSaver position ²⁾		ØB	ØB1	H	H1	H2	L	L1	L2	L3	L4
	Pos. (X, Z)	Pos. (Y)	Pos. (X, Z)	Pos. (Y)										
3, 3E	1¼"	1¼"	-	-	80.0	86.8	170.0	25.0	25.0	238.4	119.2	119.2	143.2	165.7

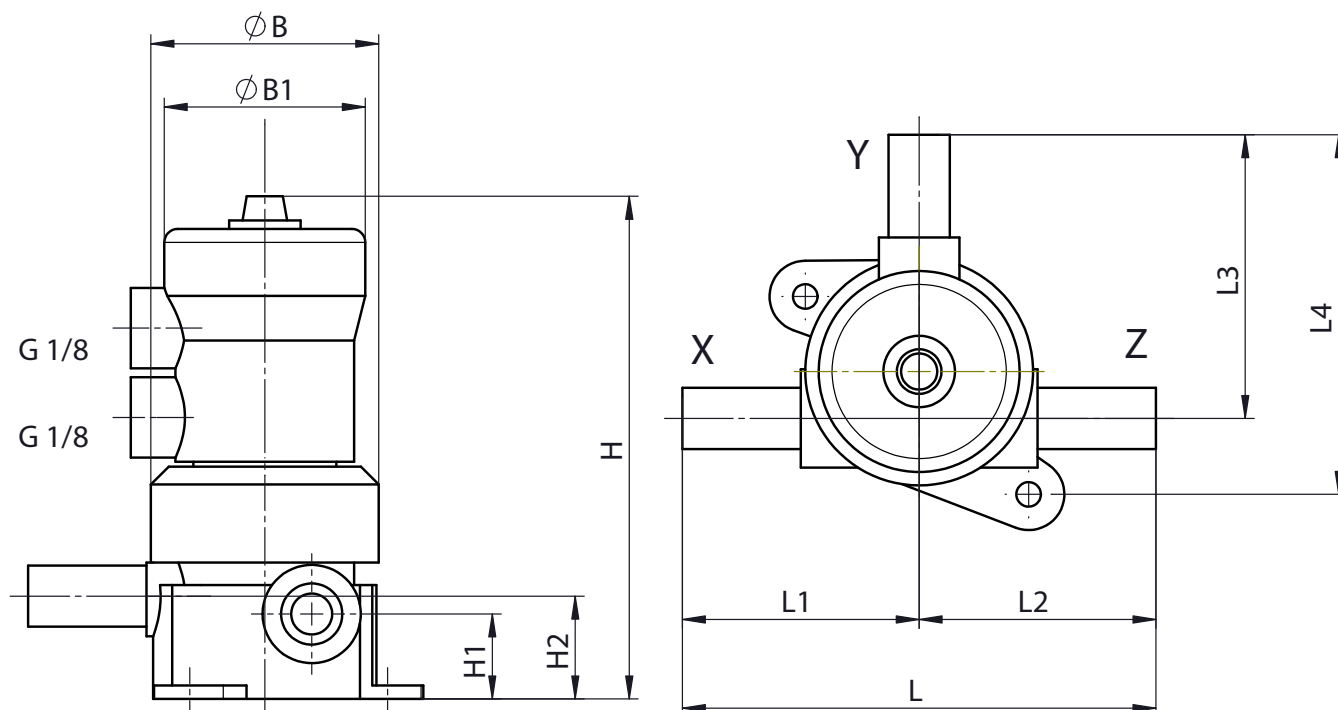
Dimensions in mm

1) **Actuator version**

Code 1: Actuator size 1
 Code 1E: Actuator size 1, with ECTFE union nut
 Code 2: Actuator size 2
 Code 2 F: Actuator size 2 High Flow
 Code 2E: Actuator size 2, with ECTFE union nut
 Code 2EF: Actuator size 2 High Flow, with ECTFE union nut
 Code 3: Actuator size 3
 Code 3 F: Actuator size 3 High Flow
 Code 3E: Actuator size 3, with ECTFE union nut
 Code 3EF: Actuator size 3 High Flow, with ECTFE union nut

2) **SpaceSaver position**

Code X: SpaceSaver for X position
 Code Y: SpaceSaver for Y position
 Code Z: SpaceSaver for Z position

7.2.2 Butt weld spigot (code 30)

Dimensions: Spigot (A) (see "Butt weld spigot (code 30)", page 19)

Actuator size ¹⁾	Connection size		SpaceSaver position ²⁾	Connection ³⁾	$\varnothing B$	$\varnothing B1$	H	$H1$	$H2$	L	$L1$	$L2$	$L3$	$L4$
	Pos. (X, Z)	Pos. (Y)												
1, 1E	1/4"	1/4"	-	30	51.4	45.0	115.0	19.0	23.0	106.0	53.0	53.0	63.5	80.5
1, 1E	1/2"	1/4"	-	30	51.4	45.0	115.0	19.0	23.0	106.0	53.0	53.0	63.5	80.5
2, 2E	1/2"	1/2"	-	30	64.0	64.7	126.5	19.0	19.0	122.0	61.0	61.0	75.5	93.5
2, 2E	3/4"	1/4"	-	30	64.0	64.7	135.9	25.0	28.5	140.0	70.0	70.0	76.5	96.0
3, 3E	1"	1/2"	-	30	80.0	86.8	170.0	25.0	25.0	163.0	81.5	81.5	102.0	124.5
3, 3E	1"	1/2"	-	73, 75, 77	80.0	86.8	170.0	25.0	25.0	163.0	81.5	81.5	99.9	122.4
3, 3E	1"	3/4"	-	30	80.0	86.8	170.0	25.0	25.0	163.0	81.5	81.5	102.0	124.5
3, 3E	1"	1"	-	30	80.0	86.8	170.0	25.0	25.0	163.0	81.5	81.5	103.5	126.0

Actuator size ¹⁾	Connection size		SpaceSaver position ²⁾	Connection ³⁾	ØB	ØB1	H	H1	H2	L	L1	L2	L3	L4
	Pos. (X, Z)	Pos. (Y)												
3, 3E	1"	1"	-	73, 75, 77	80.0	86.8	170.0	25.0	25.0	163.0	81.5	81.5	110.5	133.0

Dimensions in mm

1) **Actuator version**

Code 1: Actuator size 1
 Code 1E: Actuator size 1, with ECTFE union nut
 Code 2: Actuator size 2
 Code 2 F: Actuator size 2 High Flow
 Code 2E: Actuator size 2, with ECTFE union nut
 Code 2EF: Actuator size 2 High Flow, with ECTFE union nut
 Code 3: Actuator size 3
 Code 3 F: Actuator size 3 High Flow
 Code 3E: Actuator size 3, with ECTFE union nut
 Code 3EF: Actuator size 3 High Flow, with ECTFE union nut

2) **SpaceSaver position**

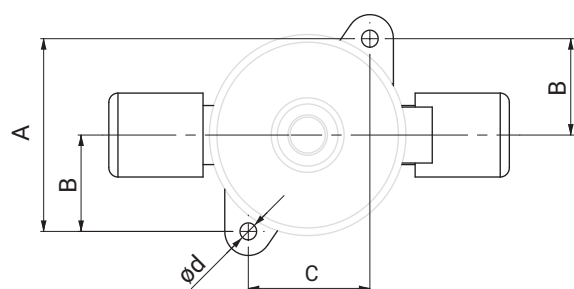
Code X: SpaceSaver for X position
 Code Y: SpaceSaver for Y position
 Code Z: SpaceSaver for Z position

3) **Connection type**

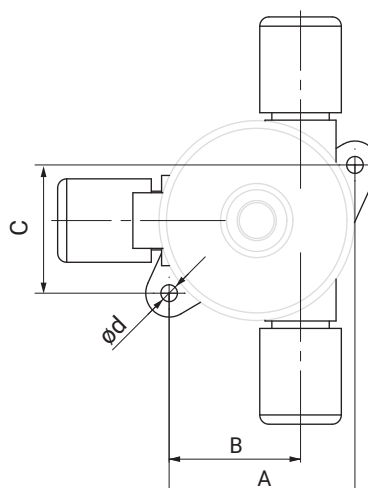
Code 30: Spigot – inch, for welding or solvent cementing, depending on the body material
 Code 73: Flare connection with CPFA union nut
 Code 75: Flare connection with PVDF union nut
 Code 77: Flare connection with PFA union nut

7.3 Mounting dimensions

2/2-way valve (code D)



T valve (code T)



2/2-way valves (code D)

Actuator size	Ød	A	B	C
1, 1E	5.5	50.5	25.25	33.5
2, 2E, 2 F, 2EF	5.5	61.5	31.0	40.0
3, 3E, 3 F, 3EF	6.5	78.0	39.0	56.0
4, 4E	9.0	124.0	62.0	94.0

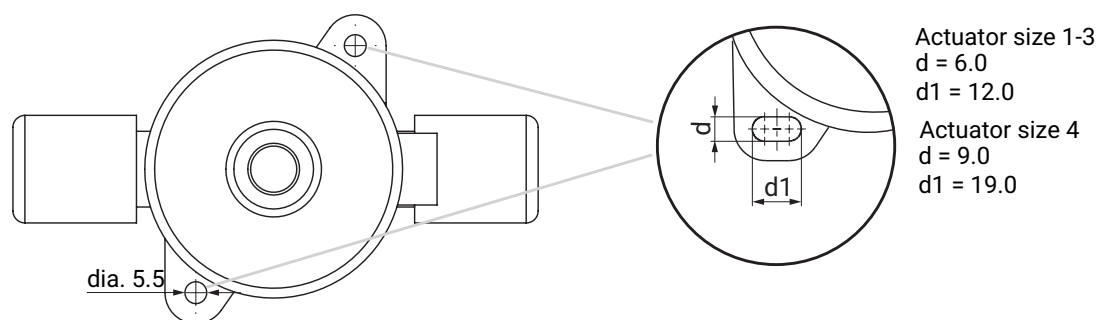
Dimensions in mm

T valve (code T)

Actuator size	Ød	A	B	C
1, 1E	5.5	44.3	27.3	50.0
2, 2E, 2 F, 2EF	5.5	61.5	43.5	41.5
3, 3E, 3 F, 3EF	6.5	79.5	57.0	52.5

Dimensions in mm

7.3.1 Mounting holes, round and slotted hole



Dimensions in mm

Dear customers,

In order to simplify installation, we are switching over the mounting holes to slotted holes for all valve sizes.

Due to the gradual changeover in manufacturing, you may therefore receive valve bodies with new slotted holes and also with the old, round boreholes during this phase.

We ask for your understanding in this matter.

8 Order data C60 PFA 3/5-way

Order codes

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Provisionally only designs with the same nominal sizes in all positions

1 Type	Code
C60 - valve 1 (between X - Y)	
Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter (for actuator size 1–3 only)	C60
C67 - valve 1 (between X - Y)	
Diaphragm valve, manually operated, plastic handwheel, seal adjuster	C67

2 SpaceSaver position	Code
Without	
SpaceSaver for X+ Z position	S
SpaceSaver for X position	X
SpaceSaver for Y position	Y
SpaceSaver for Z position	Z

3 Connection size	Code
Position Y	
1/2", international code: 8	8
3/4", international code: 12	12

4 Housing configuration	Code
Multi-port body V-form	V

5 Connection type	Code
Tube	
Flare connection with CPFA union nut	73
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77

6 Valve body material	Code
PFA, perfluoroalkoxy	30

7 Diaphragm material	Code
PTFE/EPDM one-piece	54

8 Control function	Code
C60 / C60	
Normally closed (NC)	1
Normally open (NO)	2
Normally closed, normally open	D
Normally open, normally closed	G

8 Control function	Code
C60 / C67	
Normally closed, manually operated	F
Normally open, manually operated	K
C67 / C60	
Manually operated, normally closed	A
Manually operated, normally open	B
C67 / C67	
Manually operated	0

9 Actuator version	Code
Standard version	
Actuator size 2	2
Standard version with ECTFE union nut	
Actuator size 2, with ECTFE union nut	2E

10 Type of design	Code
Without	
C60, spring, PFA-coated (on request)	7030

11 SpaceSaver 2 position	Code
Without	
SpaceSaver for X+ Z position	S
SpaceSaver for X position	X
SpaceSaver for Y position	Y
SpaceSaver for Z position	Z

12 Connection size 2	Code
Position X and Z	
1/2", international code-2: 8	8
3/4", international code-2: 12	12

13 Connection type, spigot 2	Code
Position X and Z	
Tube	
Flare connection with CPFA union nut	73
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77

14 High Purity version	Code
High Purity, white	HPW

Order example

Ordering option	Code	Description
1 Type	C60	Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter (for actuator size 1–3 only)
2 SpaceSaver position	Y	SpaceSaver for Y position
3 Connection size	8	1/2", international code: 8
4 Housing configuration	V	Multi-port body V-form
5 Connection type	75	Flare connection with PVDF union nut
6 Valve body material	30	PFA, perfluoroalkoxy
7 Diaphragm material	54	PTFE/EPDM one-piece
8 Control function	F	Normally closed, manually operated
9 Actuator version	2	Actuator size 2
10 Type of design		Without
11 SpaceSaver 2 position	S	SpaceSaver for X+ Z position
12 Connection size 2	8	1/2", international code-2: 8
13 Connection type	75	Flare connection with PVDF union nut
14 High Purity version	HPW	High Purity, white

9 Technical data C60 PFA 3/5-way

9.1 Medium

Working medium: Gaseous and liquid media (specified in the table below based on nominal size) – in particular high-purity media – which have no negative impact on the physical and chemical properties of the body and diaphragm material. Inert gases are excluded.

Categorisation

Max. permissible operating pressure (PS)	Permissible working media/fluids acc. to nominal size			
	Group 1 fluids (hazardous)		Group 2 fluids (other)	
	Gases (diagram 6)	Liquids (diagram 8)	Gases (diagram 7)	Liquids (diagram 9)
6 bar	Up to max. 1"/DN25	> 1"/DN25		

9.2 Temperature

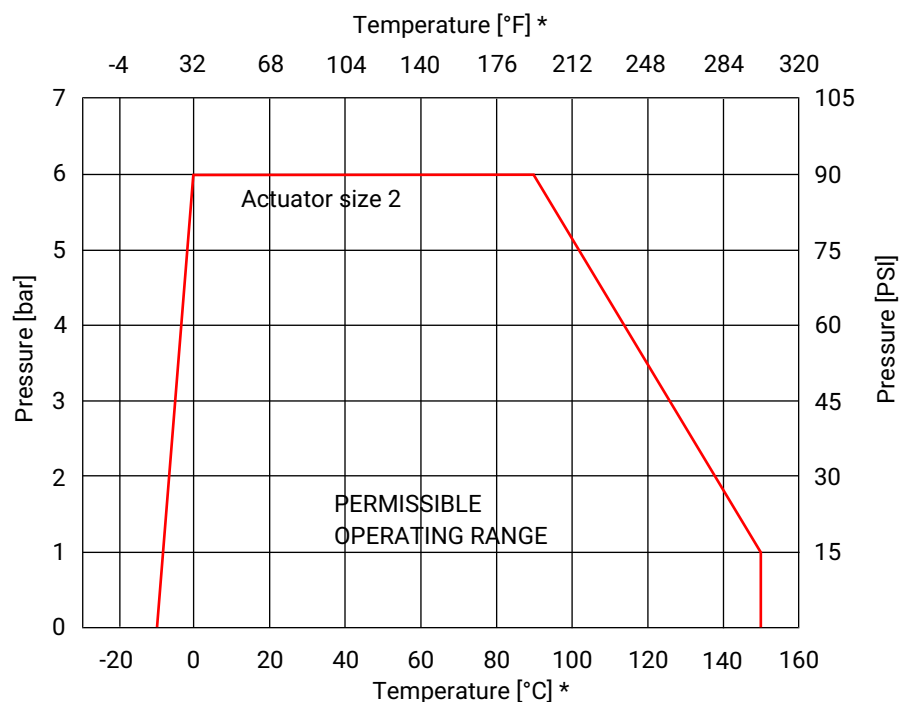
Media temperature: PFA valve body material (code 30): -10 – 150 °C
Observe pressure/temperature diagram

Ambient temperature: 0 – 60 °C

Storage temperature: 0 – 40 °C

9.3 Pressure

Operating pressure: 0 – 6 bar
applied upstream

Pressure/temperature diagram:**Valve body material: PFA, 3/5-way (code 30), actuator size 2**

*** Note:** The temperature/pressure diagram is only an aid. The data refers to water as a working medium. A change of operating conditions or other media may result in deviations. In case of doubt, it is advisable to test the behaviour of the material under the definitive operating conditions in a test installation.

Temperatures below 0 °C can have a negative influence on the actuation speed.

The pressure-bearing valve bodies are designed to maintain their functionality unchanged for a theoretical time period of 25 years. Continuously rising medium temperatures would change this time period as follows:

- 24.4 years at 110 °C
- 8.2 years at 120 °C
- 3.4 years at 130 °C
- 1.4 years at 140 °C
- 1.0 year at 150 °C

Kv values:

Actuator size	Body configuration	Connection size	Connection
		X, Y, Z	Tube
2	V	1/2"	28.0
		3/4"	53.0

Kv values in l/min

If the 2/2-way body has a tube and pipe connection, the Kv values of the tube connection are used.

Vacuum:

400 mbar absolute

The service life of the valve may be affected if exposed to a greater vacuum or when valves are installed on the pump suction side.

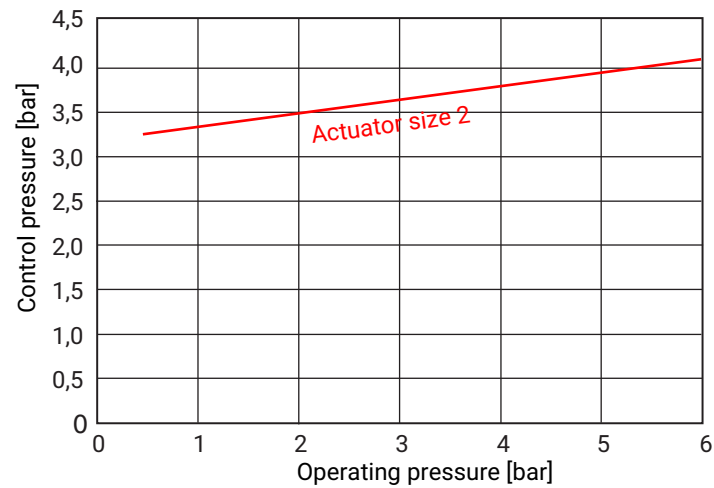
Pneumatic actuator

Control pressure:

Control function	Actuator size	Control pressure
1	2	4 - 7 bar
2	2	Max. 5 bar

Control pressure / operating pressure characteristics:

Control function 2 – normally open (NO)



Filling volume:

Actuator size	Control function	
	Normally closed (NC)	Normally open (NO)
2	29.0	42.5

Filling volume in cm³

9.4 Product conformities

Machinery Directive: 2006/42/EC

Food: FDA

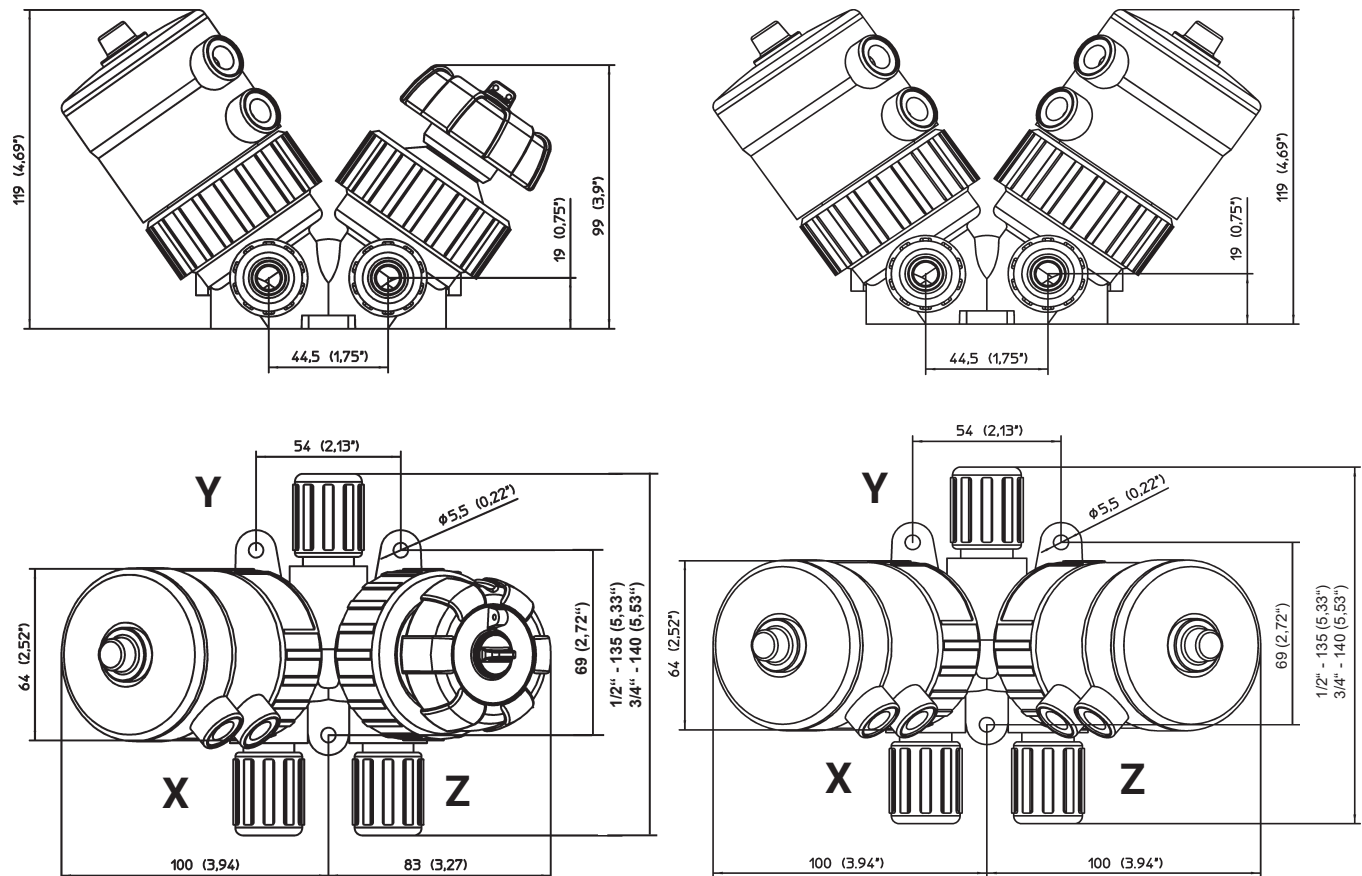
EAC: The product is certified according to EAC.

Pressure Equipment Directive: Categorisation in accordance with 2014/68/EU Article 4 and Annex II
Max. category **GIP** (sound engineering practice)

9.5 Mechanical data

Flow direction: Optional

10 Dimensions C60 PFA 3/5-way



Dimensions in mm/inch

11 Order data C60 PVDF

Order codes

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

1 Type	Code	5 Valve body material	Code
Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter	C60	PVDF	20
2 DN	Code	6 Diaphragm material	Code
DN 15	15	PTFE/EPDM one-piece	54
3 Body configuration	Code	7 Control function	Code
2/2-way body	D	Normally closed (NC)	1
		Normally open (NO)	2
4 Connection type	Code	8 Actuator version	Code
Union end with insert (socket) – DIN	7	Actuator size 2	2
Union end with insert (for IR butt welding) – DIN	78	9 High Purity version	Code
		Without	
		High Purity white	HPW

Order example

Ordering option	Code	Description
1 Type	C60	Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter
2 DN	15	DN 15
3 Body configuration	D	2/2-way body
4 Connection type	78	Union end with insert (for IR butt welding) – DIN
5 Valve body material	20	PVDF
6 Diaphragm material	54	PTFE/EPDM one-piece
7 Control function	1	Normally closed (NC)
8 Actuator version	2	Actuator size 2
9 High Purity version	HPW	High Purity white

12 Technical data C60 PVDF

12.1 Medium

Working medium:

Gaseous and liquid media (specified in the table below based on nominal size) – in particular high-purity media – which have no negative impact on the physical and chemical properties of the body and diaphragm material. Inert gases are excluded.

Categorisation

Max. permissible operating pressure (PS)	Permissible working media/fluids acc. to nominal size			
	Group 1 fluids (hazardous)		Group 2 fluids (other)	
	Gases (diagram 6)	Liquids (diagram 8)	Gases (diagram 7)	Liquids (diagram 9)
6 bar	Up to max. 1"/DN25	> 1"/DN25		

12.2 Temperature

Media temperature:

Valve body material PVDF (code 20): -10 – 120 °C
Observe pressure/temperature diagram

Ambient temperature:

0 – 60 °C

Storage temperature:

0 – 40 °C

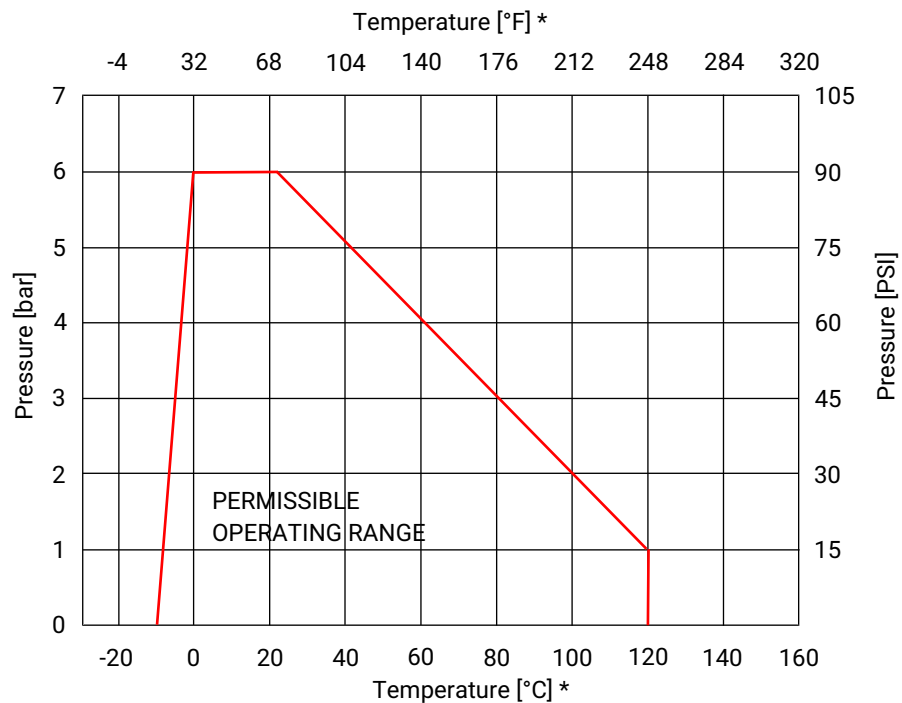
12.3 Pressure

Operating pressure:

0 – 6 bar
applied upstream

Pressure/temperature diagram:

Valve body material: PVDF (code 20)



*** Note:** The temperature/pressure diagram is only an aid. The data refers to water as a working medium. A change of operating conditions or other media may result in deviations. In case of doubt, it is advisable to test the behaviour of the material under the definitive operating conditions in a test installation. Temperatures below 0 °C can have a negative influence on the actuation speed.

Kv values:

Actuator size	DN	Connection size	Connection
		Pipe	Union end
2	15	1/2"	68.0

Kv values in l/min

Vacuum:

400 mbar absolute

The service life of the valve may be affected if exposed to a greater vacuum or when valves are installed on the pump suction side.

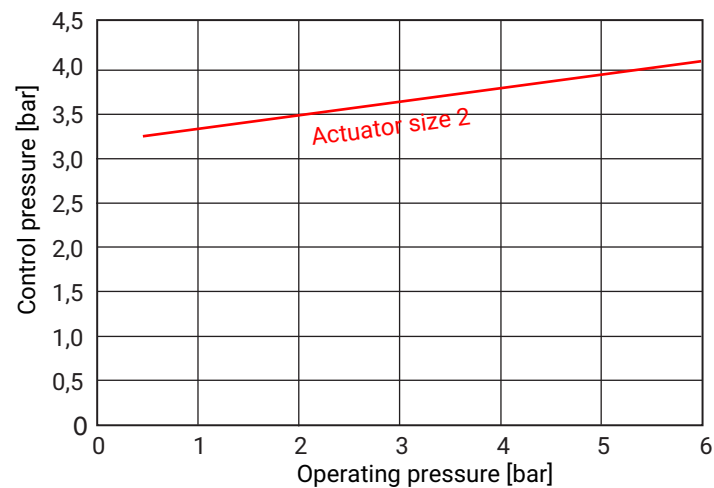
Pneumatic actuator

Control pressure:

Control function	Actuator size	Control pressure
1	2	4 - 7 bar
2	2	Max. 5 bar

Control pressure / operating pressure characteristics:

Control function 2 – normally open (NO)



Filling volume:

Actuator size	Control function	
	Normally closed (NC)	Normally open (NO)
2	29.0	42.5

Filling volume in cm³

12.4 Product conformities

Machinery Directive: 2006/42/EC

Food: FDA

EAC: The product is certified according to EAC.

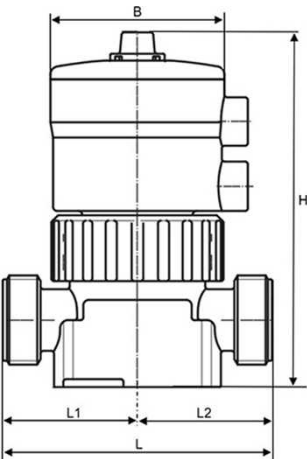
Pressure Equipment Directive: Categorisation in accordance with 2014/68/EU Article 4 and Annex II
Max. category **GIP** (sound engineering practice)

12.5 Mechanical data

Flow direction: Optional

13 Dimensions C60 PVDF

13.1 Union end (code 7, 78)

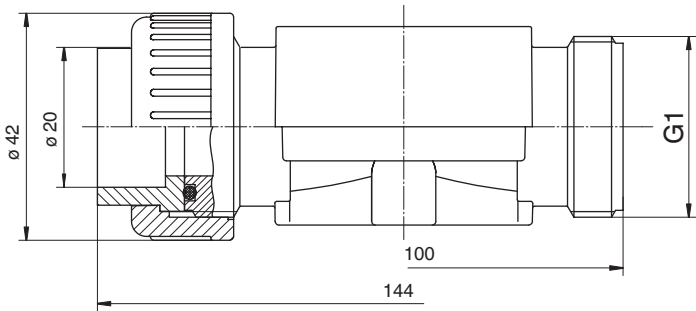


Actuator size	DN	B	H	L	L1	L2
2	15	65.0	133.0	see connection dimensions		

Dimensions in mm

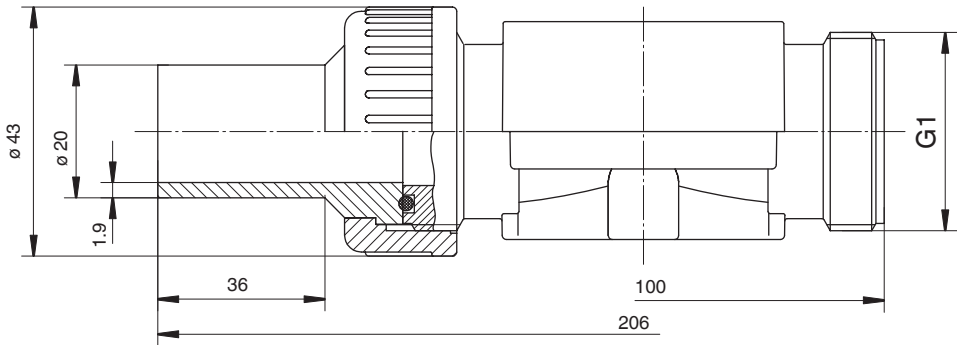
13.2 Connection dimensions

13.2.1 Union end (code 7)



Dimensions in mm

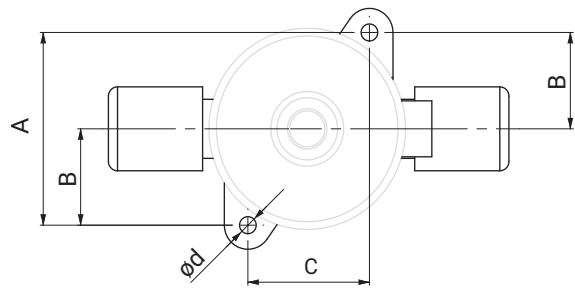
13.2.2 Union end (code 78)



Dimensions in mm

13.3 Mounting dimensions

2/2-way valve (code D)

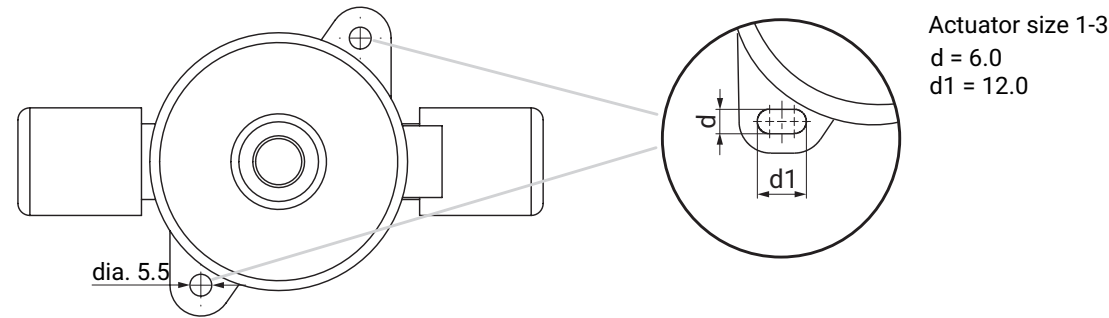


2/2-way valves (code D)

Actuator size	ød	A	B	C
2, 2E, 2 F, 2EF	5.5	61.5	31.0	40.0

Dimensions in mm

13.3.1 Mounting holes, round and slotted hole



Dimensions in mm

Dear customers,

In order to simplify installation, we are switching over the mounting holes to slotted holes for all valve sizes.

Due to the gradual changeover in manufacturing, you may therefore receive valve bodies with new slotted holes and also with the old, round boreholes during this phase.

We ask for your understanding in this matter.

14 Order data C60 SmartLine

Order codes

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

1 Type	Code
Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter (for actuator size 1–3 only)	C60

2 Connection size	Code
1/2", international code: 8	8
DN 15	15
3/4", international code: 12	12
DN 20	20
1", international code: 16	16
DN 25	25
1 1/4", international code: 20	20
DN 32	32

3 Housing configuration	Code
2/2-way body	D

4 Connection type	Code
Spigot for IR butt welding	20

4 Connection type	Code
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77
Union end with DIN insert (for IR butt welding)	78

5 Valve body material	Code
PP-R, natural	R5

6 Diaphragm material	Code
PTFE/EPDM one-piece	54

7 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2

8 Actuator version	Code
Actuator size 2	2
Actuator size 3	3

9 High Purity version	Code
Without	
Smart Line	HPS

Order example

Ordering option	Code	Description
1 Type	C60	Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator, stroke limiter (for actuator size 1–3 only)
2 Connection size	8	1/2", international code: 8
3 Housing configuration	D	2/2-way body
4 Connection type	78	Union end with DIN insert (for IR butt welding)
5 Valve body material	R5	PP-R, natural
6 Diaphragm material	54	PTFE/EPDM one-piece
7 Control function	1	Normally closed (NC)
8 Actuator version	2	Actuator size 2
9 High Purity version	HPS	Smart Line

15 Technical data C60 SmartLine

15.1 Medium

Working medium: Gaseous and liquid media (specified in the table below based on nominal size) – in particular high-purity media – which have no negative impact on the physical and chemical properties of the body and diaphragm material. Inert gases are excluded.

Categorisation

Max. permissible operating pressure (PS)	Permissible working media/fluids acc. to nominal size			
	Group 1 fluids (hazardous)		Group 2 fluids (other)	
	Gases (diagram 6)	Liquids (diagram 8)	Gases (diagram 7)	Liquids (diagram 9)
6 bar	Up to max. 1"/DN25	> 1"/DN25		

15.2 Temperature

Media temperature: Valve body material: PP-R, natural (code R5): -10 – 80 °C
Observe pressure/temperature diagram

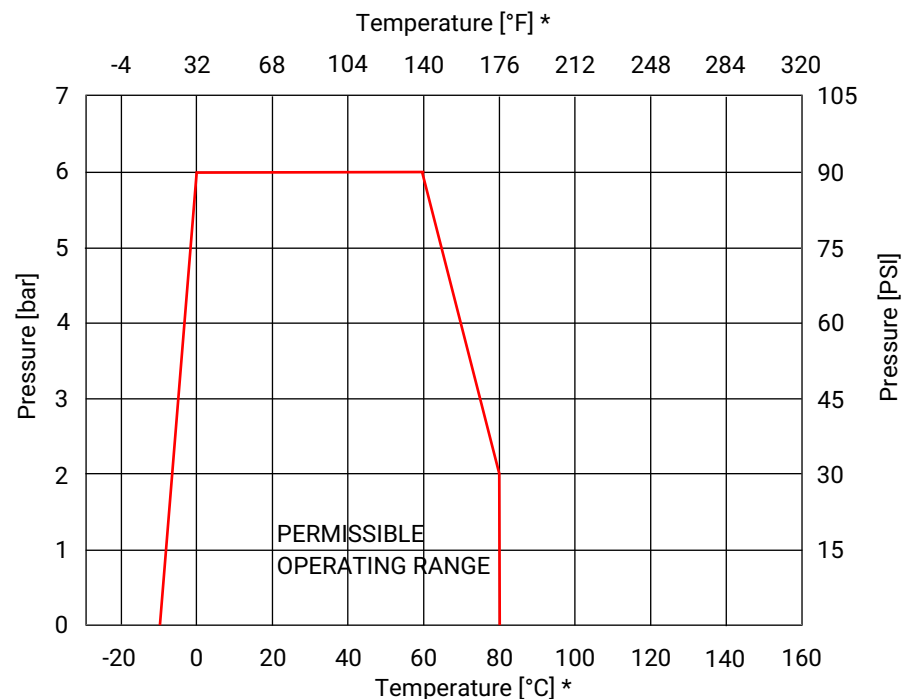
Ambient temperature: 0 – 60 °C

Storage temperature: 0 – 40 °C

15.3 Pressure

Operating pressure: 0 – 6 bar
applied upstream

Pressure/temperature diagram: **Valve body material: SmartLine (code R5)**



*** Note:** The temperature/pressure diagram is only an aid. The data refers to water as a working medium. A change of operating conditions or other media may result in deviations. In case of doubt, it is advisable to test the behaviour of the material under the definitive operating conditions in a test installation. Temperatures below 0 °C can have a negative influence on the actuation speed.

Kv values:

Actuator size	Connection size	DN	Connection type	Connection	
	X, Z		Code	Tube	Pipe
2	1/2"	10	75, 77	34.2	-
		15	20	-	82.5
	3/4"	15	75	86.7	-
		20	20	-	83.7
		20	20	-	171.7
3	1"	20	75, 77	93.3	-
		25	20	-	94.0
		20	75, 77	183.3	-
		25	20	-	233.3
		25	78	-	233.3
	1 1/4"	25	75, 77	238.3	-
		32	20	-	238.3

Kv values in l/min

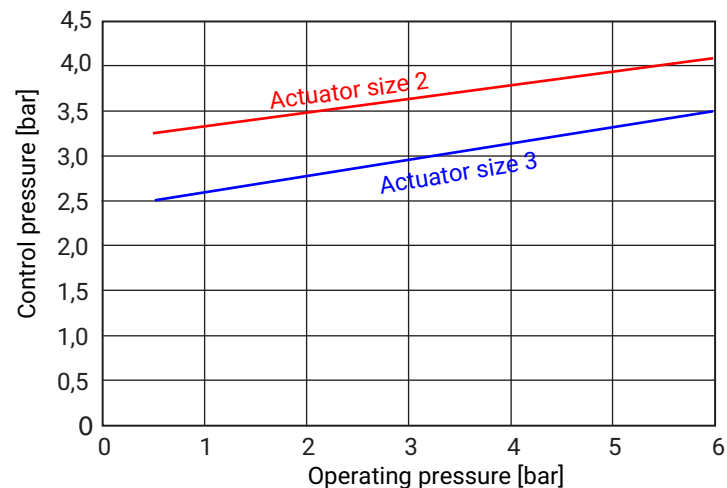
Vacuum:

400 mbar absolute

The service life of the valve may be affected if exposed to a greater vacuum or when valves are installed on the pump suction side.

Pneumatic actuator**Control pressure:**

Control function	Actuator size	Control pressure
1	2	4 - 7 bar
	3	4.5–7 bar
2	2, 3	Max. 5 bar

Control pressure / operating pressure characteristics:**Control function 2 – normally open (NO)****Filling volume:**

Actuator size	Control function	
	Normally closed (NC)	Normally open (NO)
2	29.0	42.5
3	63.0	95.0

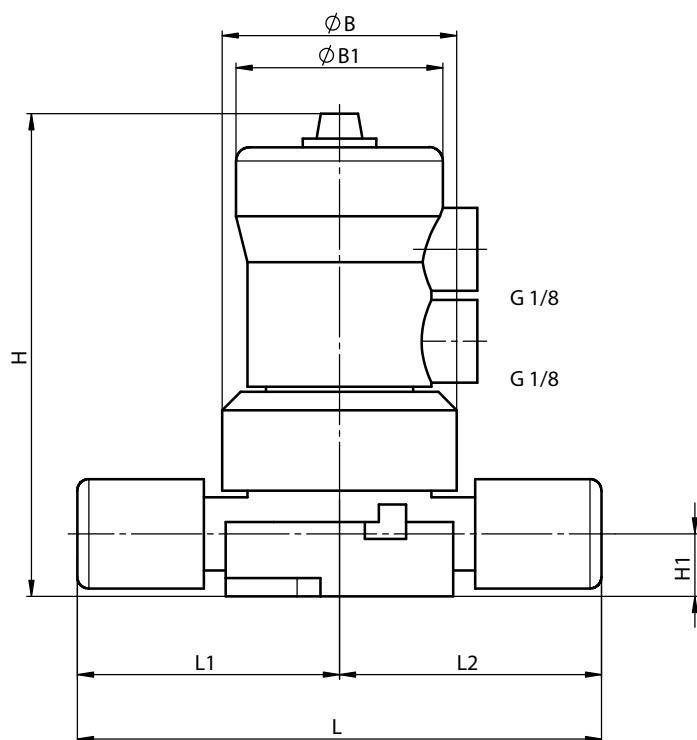
Filling volume in cm³

15.4 Product conformities

Machinery Directive:	2006/42/EC
Food:	FDA
EAC:	The product is certified according to EAC.
Pressure Equipment Directive:	Categorisation in accordance with 2014/68/EU Article 4 and Annex II Max. category GIP (sound engineering practice)

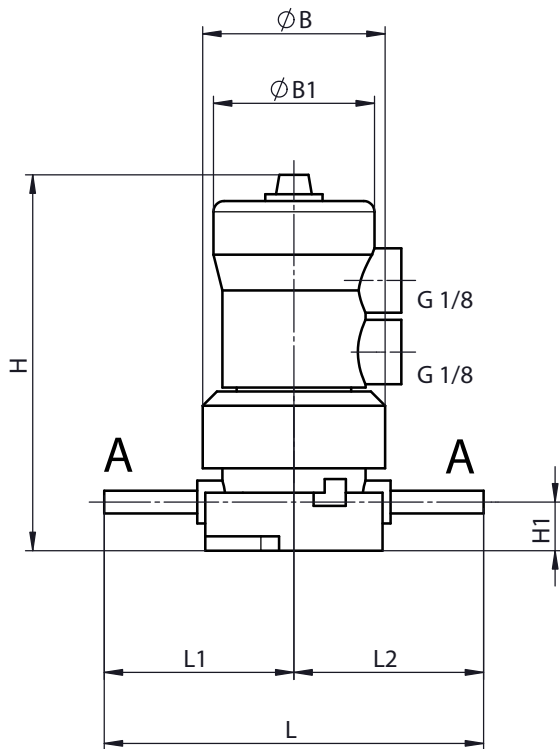
15.5 Mechanical data

Flow direction:	Optional
------------------------	----------

16 Dimensions C60 SmartLine**16.1 Flare connection (code 75, 77)**

Actuator size	Connection size	ØB	ØB1	H	H1	L	L1	L2
2	1/2"	64.0	64.7	120.5	16.0	131.8	65.9	65.9
	3/4"	64.0	64.7	133.5	19.0	133.8	66.9	66.9
	1"	64.0	64.7	133.5	25.0	160.0	80.0	80.0
3	1"	80.0	86.0	162.5	25.0	180.0	90.0	90.0
	1 1/4"	80.0	86.0	162.5	25.0	192.0	96.0	96.0

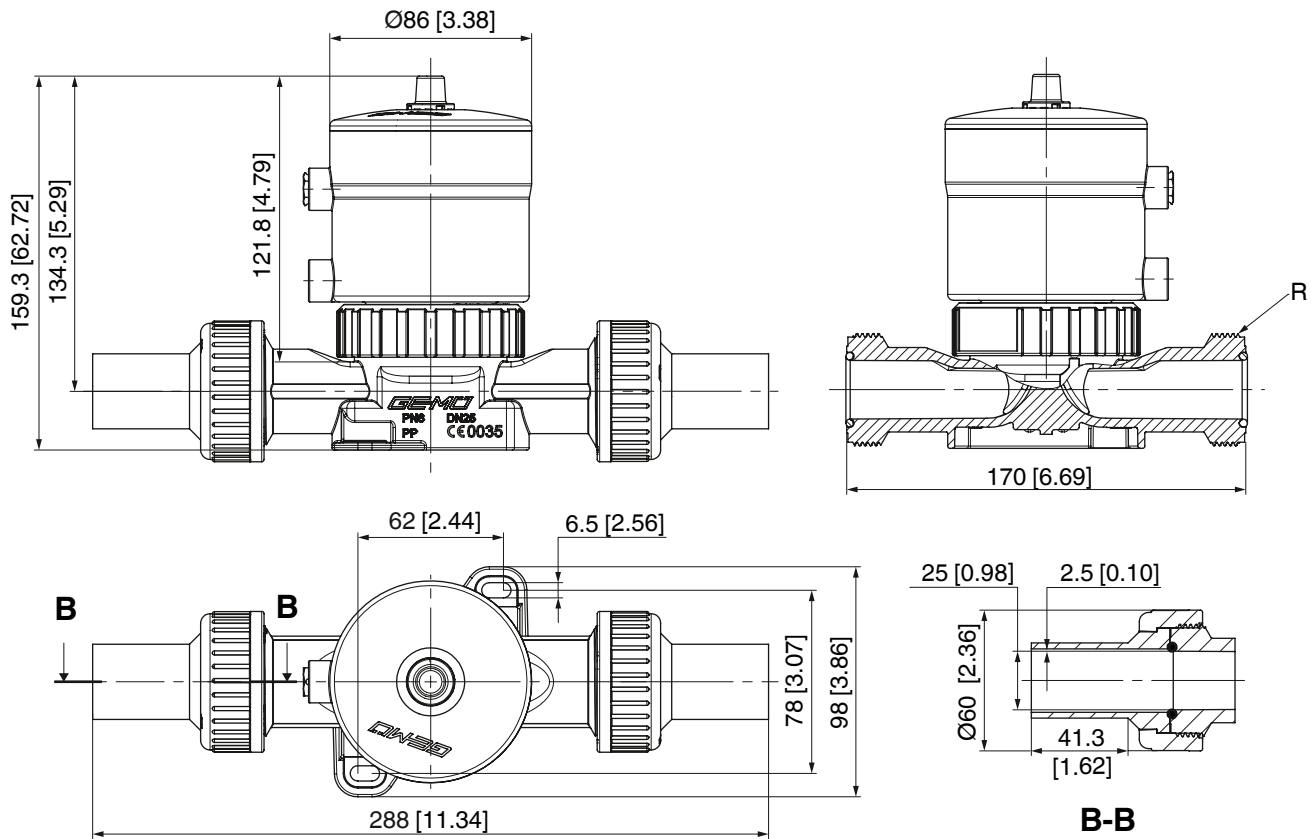
Dimensions in mm

16.2 Butt weld spigot (code 20)

Actuator size	Conne- tion size	$\varnothing B$	$\varnothing B1$	H	$H1$	L	$L1$	$L2$	Spigot (A)	
	DN								$\varnothing d$	$\varnothing d1$
2	15	64.0	64.7	133.5	19.0	131.0	65.5	65.5	20.0	16.2
	20	64.0	64.7	133.5	19.0	131.0	65.5	65.5	25.0	20.4
	25	64.0	64.7	133.5	19.0	145.0	72.5	72.5	32.0	26.0
3	20	80.0	86.0	162.5	25.0	166.0	83.0	83.0	25.0	20.4
	25	80.0	86.0	162.5	25.0	166.0	83.0	83.0	32.0	26.0
	32	80.0	86.0	162.5	25.0	172.0	86.0	86.0	40.0	32.6

Dimensions in mm

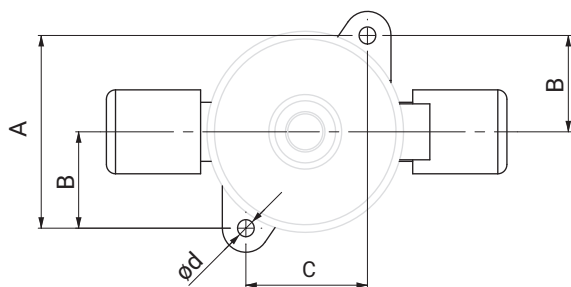
16.3 Union end (code 78)



Dimensions in mm/inch

16.4 Mounting dimensions

2/2-way valve (code D)

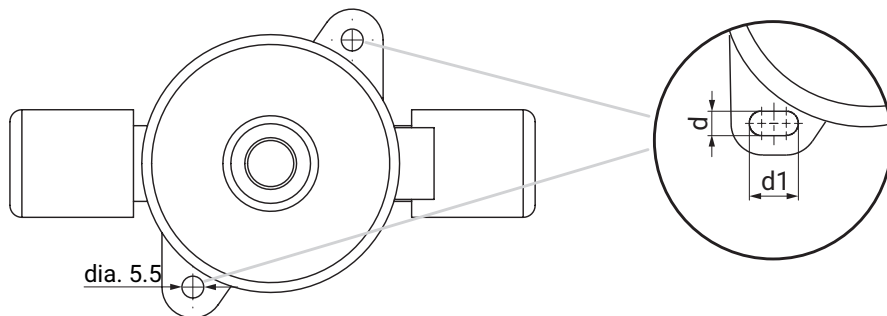


2/2-way valves (code D)

Actuator size	ød	A	B	C
2, 2E, 2 F, 2EF	5.5	61.5	31.0	40.0
3, 3E, 3 F, 3EF	6.5	78.0	39.0	56.0

Dimensions in mm

16.4.1 Mounting holes, round and slotted hole



Actuator size 1-3
d = 6.0
d1 = 12.0

Dimensions in mm

Dear customers,

In order to simplify installation, we are switching over the mounting holes to slotted holes for all valve sizes.

Due to the gradual changeover in manufacturing, you may therefore receive valve bodies with new slotted holes and also with the old, round boreholes during this phase.

We ask for your understanding in this matter.

17 Manufacturer's information

17.1 Delivery

- Check that all parts are present and check for any damage immediately upon receipt.

The product's performance is tested at the factory. The scope of delivery is apparent from the dispatch documents and the design from the order number.

Control function	Function	Condition as supplied to customer
1	Normally closed (NC)	closed
2	Normally open (NO)	open

17.2 Transport

1. Only transport the product by suitable means. Do not drop. Handle carefully.
2. After the installation dispose of transport packaging material according to relevant local or national disposal regulations / environmental protection laws.

17.3 Storage

1. Store the product free from dust and moisture in its original packaging.
2. Avoid UV rays and direct sunlight.
3. Do not exceed the maximum storage temperature (see chapter "Technical data").
4. Do not store solvents, chemicals, acids, fuels or similar fluids in the same room as GEMÜ products and their spare parts.
5. Close the compressed air connections with protection caps or sealing plugs.

17.4 Tools

NOTICE

Incorrect tool.

- Contamination risk.
- Only use tools suitable for cleanrooms.

1. The tools required for installation and assembly are not included in the scope of delivery.
2. Use appropriate, functional and safe tools.

17.5 Opening the packaging

The product is sealed in one plastic bag (HPS version) or in two plastic bags (HPW version) and packaged in a box.

CAUTION

Avoid tearing open the box and the outer plastic bag.

- Contamination risk.
- Reduces product purity.
- Open the box carefully and outside the cleanroom. Do not use a knife or sharp object.
- Only open the internal Nylon-PE plastic bag in the cleanroom immediately prior to installation.

18 Installation in piping

CAUTION

Fixing with suitable media resistant plastic bolts (not included in the scope of delivery)

- Corrosion and contamination when using metal bolts.

18.1 Preparing for installation

WARNING



The equipment is subject to pressure!

- Risk of severe injury or death
- Depressurize the plant or plant component.
- Completely drain the plant or plant component.

WARNING



Corrosive chemicals!

- Risk of caustic burns
- Wear appropriate protective gear.
- Completely drain the plant.

CAUTION



Hot plant components!

- Burns
- Only work on plant that has cooled down.
- Wear protective gear.

CAUTION



Maximum permissible pressure exceeded!

- Damage to the product!
- Provide for precautionary measures against exceeding the maximum permissible pressure that may be caused by pressure surges (water hammer).

CAUTION

Use as step!

- Damage to the product
- Risk of slipping-off
- Choose the installation location so that the product cannot be used as a foothold.
- Do not use the product as a step or a foothold.

NOTICE

Suitability of the product!

- The product must be appropriate for the piping system operating conditions (medium, medium concentration, temperature and pressure) and the prevailing ambient conditions.

NOTICE**Tools!**

- The tools required for installation and assembly are not included in the scope of delivery.
- Use appropriate, functional and safe tools.

1. Ensure the product is suitable for the relevant application.
2. Check the technical data of the product and the materials.
3. Keep appropriate tools ready.
4. Wear appropriate protective gear, as specified in the plant operator's guidelines.
5. Observe appropriate regulations for connections.
6. Have installation work carried out by trained personnel.
7. Shut off plant or plant component.
8. Secure plant or plant component against recommissioning.
9. Depressurize the plant or plant component.
10. Completely drain the plant (or plant component) and let it cool down until the temperature is below the media vaporization temperature and cannot cause scalding.
11. Decontaminate, rinse and ventilate the plant or plant component properly.
12. Lay piping so that the product is protected against transverse and bending forces, and also from vibrations and tension.
13. Only mount the product between matching aligned pipes (see following chapters).
14. Flow direction and installation position are optional.

18.2 Installation with butt weld spigots**DANGER****Vapour fumes from PFA welding can cause health related issues!**

- Risk of damage to respiratory tracts, caustic burning/poisoning.
- Weld PFA components in a well-ventilated area.
- Only use approved welding equipment.
- Wear protective gear (we recommend additional breathing protection).
- Only have welding work carried out by qualified trained personnel.

NOTICE**Overheating of the product!**

- Damage, leakage and deformation of the product.
- Carry out welding in such a way that damage (e.g. due to overheating of the product) is ruled out.

1. Carry out installation preparation work (see chapter "Preparing for installation").
2. Adhere to good welding practices.
3. Observe appropriate regulations for connections.

18.3 Installation with flare connection**NOTICE****Fittings!**

- For preparation and connection of the flare connections, please refer to the GEMÜ FlareStar® brochure and the GEMÜ flare and assembly instructions.
- Depending on the ambient conditions, use resistant and suitable connection fittings.

1. Carry out preparations for installation (see chapter "Preparing for installation").
2. Push the flared PFA tubing onto the flare fitting body.
3. Screw the union nut over it.
4. Re-attach or reactivate all safety and protective devices.

18.4 Installation with PrimeLock® connection

1. Carry out installation preparation work (see chapter "Preparing for installation").
2. Prepare the tube by installing the sleeve (follow the manufacturer's instructions: www.entegrisfluidhandling.com/Product.aspx?G=1905).
3. Assemble the PrimeLock® connection with prepared tube.
4. Tighten the PrimeLock® union nut.

18.5 Installation with Nexus Connect® connection

1. Carry out preparation for installation (see chapter "Preparing for installation").
2. Prepare the tube by installing the sleeve (follow the FitLine Global's instructions, a video about this is available on request).
3. Connect the Nexus Connect® connection with the prepared tube.
4. Tighten the Nexus Connect® union nut.

18.6 Installation with union ends

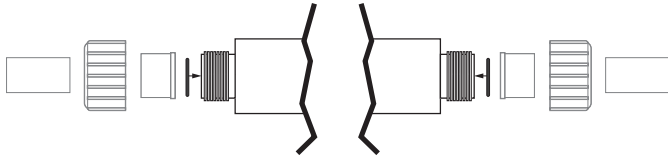


Fig. 1: Union end with insert

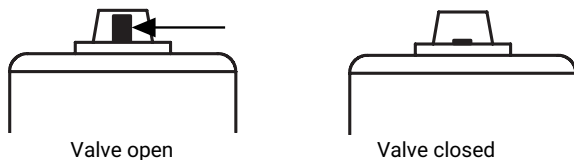
1. Carry out preparation for installation (see chapter "Preparing for installation").
2. Depending on the application, adhere to good welding practices.
3. Screw the threaded connections into the piping in accordance with valid standards.
4. Unscrew the union nut from the product body.
5. Reinsert the O-ring if necessary.
6. Push the union nut over the piping.
7. Connect the insert with the piping by welding.
8. Screw the union nut back onto the product body.
9. Connect the other side of the product body with the piping in the same way.
10. Re-attach or reactivate all safety and protective devices.

18.7 After the installation

- Re-attach or reactivate all safety and protective devices.

18.8 Operation

Optical position indicator



18.9 Adjusting the stroke limiter

The stroke limiter reduces the opening stroke and thereby sets a preselected flow rate.

The stroke is 1 mm/revolution for all actuator sizes.

Tools required:

Actuator size 1: Size 8 socket wrench

Actuator size 2: Size 9 socket wrench

Actuator size 3: Size 10 socket wrench

Stroke limiter default state:

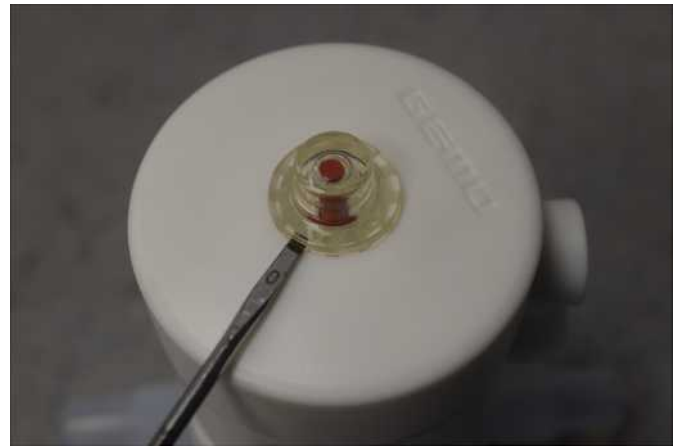
The stroke limiter is fully open, i.e. the stroke limiter is not active.

NOTICE

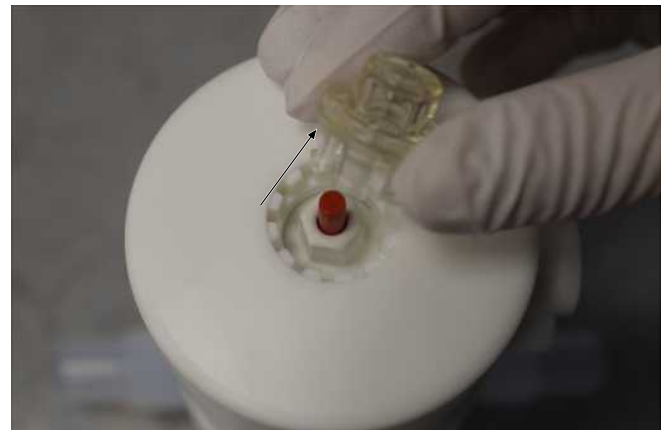
- The stroke limiter is not available for actuator size 4.

Procedure

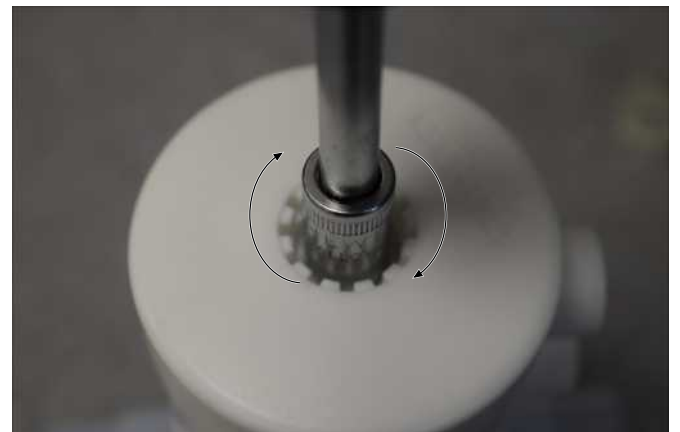
1. Carefully remove the transparent cap: Either by prying it upwards after inserting the tip of a 2.5 mm screw driver in the prefabricated grooves under the transparent cap



2. Or simply pulling it up and off by hand.



3. Use a suitable socket wrench to turn the hexagon nut located below the transparent cap clockwise and set the required dimension.



4. Then reattach the transparent cap.



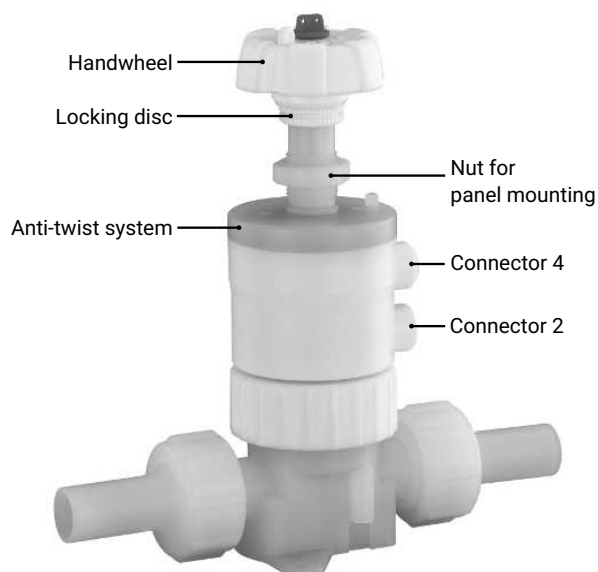
18.9.1 Version with integrated handwheel (only for HPW version)

NOTICE

The version with a handwheel was designed for panel mounting.

- Where necessary, separate instructions for setting the stroke limiter/operating the handwheel is available via the address on the last page.

The special version in actuator size 2 is equipped with an extended stroke limiter. In this special version, the stroke limiter can be set from the outside using the handwheel. In control function 1, the open valve can be closed using the handwheel. When the valve is closed, the opening stroke is reduced and thereby sets a preselected flow rate.



Adjusting the stroke limiter



Disengaging the lock



Fixing the lock

✓ The handwheel is locked in the normal state.

1. Pull the handwheel upwards (disengage the lock) and operate it.
2. After operating the handwheel, press it back down above the locking disc (fix the lock).

19 Pneumatic connections

19.1 Control function

The following control functions are available:

Control function 1

Normally closed (NC):

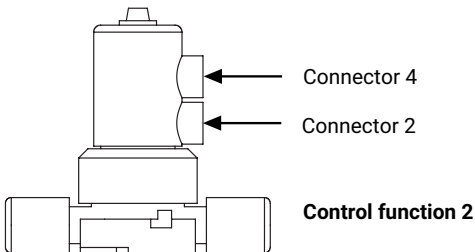
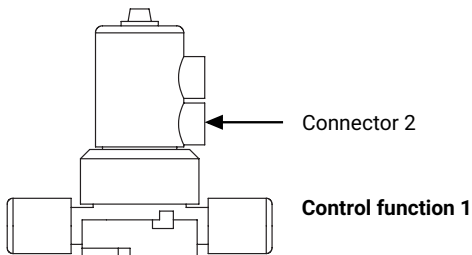
Valve resting position: Closed by spring force. Activation of the actuator (connector 2) opens the valve. When the actuator is vented, the valve is closed by spring force.

Control function 2

Normally open (NO):

Valve resting position: Opened by spring force. Activation of the actuator (connector 4) closes the valve. When the actuator is vented, the valve is opened by spring force.

Control function	Connections	
	2	4
1 (NC)	+	-
2 (NO)	-	+
+ = available / - = not available (see figures for connectors 2/4)		



19.2 Connecting the control medium

1. Use suitable connectors.
2. Connect the control medium lines tension-free and without any bends or knots.

Thread size of the control medium connectors: G1/8

Control function		Connections
1	Normally closed (NC)	2: Control medium (open)
2	Normally open (NO)	4: Control medium (close)
See images for connector 2/4 in the "Control function" chapter		

20 Commissioning

⚠ WARNING



Corrosive chemicals.

- Risk of caustic burns
- Check the tightness of the media connections prior to commissioning.
- Use only the appropriate protective gear when performing the tightness check.

⚠ CAUTION



Leakage!

- Emission of dangerous materials
- Provide for precautionary measures against exceeding the maximum permissible pressure that may be caused by pressure surges (water hammer).

⚠ CAUTION

Cleaning agent!

- Damage to the GEMÜ product
- The plant operator is responsible for selecting the cleaning material and performing the procedure.

1. Check the tightness and the function of the product (close and reopen the product).
2. Flush the piping system for new plants and after repair work (the product must be fully open).
 - ⇒ Harmful foreign matter has been removed.
 - ⇒ The product is ready for use.
3. Commission the product.
4. Commission the actuators in accordance with the enclosed instructions.

21 Troubleshooting

Error	Error cause	Troubleshooting
Control medium is escaping from connector 4* (control function NC) or from connector 2* (control function NO) (see the "Control functions" chapter)	Piston seal leaking	Replace the product
Control medium escaping from leak detection hole* (only with NC control function)	Spindle seal leaking	Replace product and check control medium for impurities
Working medium escaping from leak detection hole*	Shut off diaphragm is defective	Replace product
The product does not open or does not open fully	Control pressure too low (for control function NC)	Operate the product with the control pressure specified in the datasheet
	Pilot valve faulty	Check and replace pilot valve
	Control medium not connected	Connect control medium
	The stroke limiter** is incorrectly adjusted	Readjust stroke limiter
The product doesn't open or doesn't open fully	Bottom spindle seal or piston seal leaking	Replace the product
	Actuator spring faulty (for control function NO)	Replace the product
The product is leaking downstream (does not close or does not close fully)	Operating pressure too high	Operate the product with operating pressure specified in datasheet
	Control pressure too low (for control function NO and control function DA)	Operate the product with the control pressure specified in the datasheet
	Valve body weir leaking or damaged	Check valve body weir for damage, replace valve if necessary
The product is leaking downstream (doesn't close or doesn't close fully)	Foreign matter between shut-off diaphragm and valve body weir	Replace the product
	Shut-off diaphragm is defective	Replace the product
	Actuator spring faulty (for control function NC)	Replace the product
Connection between valve body and piping leaking	Incorrect installation	Check installation of valve body in piping
	Union nuts loose	Tighten the union nuts
Control medium escaping from transparent cap** (with NO control function)	Upper spindle seal leaking	Replace the product

* see the "Construction" chapter

** see the "Adjusting the stroke limiter" chapter

22 Inspection and maintenance

⚠ WARNING	
	The equipment is subject to pressure! ▶ Risk of severe injury or death ● Depressurize the plant or plant component. ● Completely drain the plant or plant component.

⚠ CAUTION	
	Hot plant components! ▶ Burns ● Only work on plant that has cooled down. ● Wear protective gear.

NOTICE
Use of incorrect spare parts! ▶ Damage to the GEMÜ product ▶ The manufacturer liability and guarantee will be void. ● Use only genuine parts from GEMÜ.

NOTICE
Exceptional maintenance work! ▶ Damage to the GEMÜ product ● Any maintenance work and repairs not described in these operating instructions must not be performed without consulting the manufacturer first.

The operator must carry out regular visual examination of the GEMÜ products dependent on the operating conditions and the potential danger in order to prevent leakage and damage.

The product also must be disassembled and checked for wear in the corresponding intervals.

1. Have servicing and maintenance work performed by trained personnel.
2. Wear appropriate protective gear as specified in plant operator's guidelines.
3. Shut off plant or plant component.
4. Secure the plant or plant component against recommissioning.
5. Depressurize the plant or plant component.
6. Actuate GEMÜ products which are always in the same position four times a year.

23 Removal from piping

NOTICE
Removing the actuator and the valve body. ▶ Danger of leakage or defect. ▶ Manufacturer liability and guarantee will be void. ● Do not remove the actuator and valve body.

1. Remove in reverse order to installation.
2. Deactivate the control medium.
3. Disconnect the control medium line(s).
4. Disassemble the product. Observe warning notes and safety information.

24 Disposal

1. Flush the product before disposing of it.
2. Look for adhered residual material and gas diffusion from penetrated media.
3. Dispose of all parts according to relevant local or national disposal regulations/environmental protection laws.

25 Returns

Legal regulations for the protection of the environment and personnel require that the completed and signed return delivery note is included with the dispatch documents. Returned goods can be processed only when this note is completed. If no return delivery note is included with the product, GEMÜ cannot process credits or repair work but will dispose of the goods at the operator's expense.

1. Clean the product.
2. Request a return delivery note from GEMÜ.
3. Complete the return delivery note.
4. Send the product with a completed return delivery note to GEMÜ.

26 EU Declaration of Incorporation

Version 1.0

GEMÜ

Original EU-Einbauerklärung

EU Declaration of Incorporation

Wir, die Firma

We, the company

GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Gert-Müller-Platz 1
74635 Kupferzell
Deutschland

erklären hiermit in alleiniger Verantwortung, dass die nachfolgend bezeichneten Produkte den Vorschriften der genannten Richtlinien entspricht.

hereby declare under our sole responsibility that the below-mentioned products complies with the regulations of the mentioned Directives.

Produkt: GEMÜ C60**Product:** GEMÜ C60**Produktname:** Pneumatisch betätigtes Membranventil**Product name:** Pneumatically operated diaphragm valve

Inbetriebnahme der unvollständigen Maschine ist nur zulässig, wenn die Gesamtmaschine den Anforderungen der Maschinenrichtlinie 2006/42/EG entspricht.

Commissioning of the incomplete machine is only permitted if the complete machine complies with the requirements of the Machinery Directive 2006/42/EC.

Richtlinien/Verordnungen:**Directives/Regulations:**MD 2006/42/EG¹⁾

Folgende harmonisierte Normen (oder Teile hieraus) wurden angewandt:

The following harmonized standards (or parts thereof) have been applied:

EN ISO 12100:2010

Folgende grundlegenden Sicherheits- und Gesundheitsschutzanforderungen der EG-Maschinenrichtlinie 2006/42/EG, Anhang I wurden angewandt und eingehalten:

Folgende grundlegenden Sicherheits- und Gesundheitsschutzanforderungen der EG-Maschinenrichtlinie 2006/42/EG, Anhang I wurden angewandt und eingehalten:

1.1.2.; 1.1.3.; 1.1.5.; 1.3.2.; 1.3.3.; 1.3.4.; 1.3.7.; 1.5.13.; 1.5.3.; 1.5.4.; 1.5.5.; 1.6.1.; 1.6.3.; 1.7.1.; 1.7.1.1.; 1.7.2.; 1.7.3.; 1.7.4.; 1.7.4.1.; 1.7.4.2.; 1.7.4.3.; 2.1.1.

¹⁾ MD 2006/42/EG**Bemerkungen:**

Ferner wird erklärt, dass die speziellen technischen Unterlagen gemäß Anhang VII Teil B erstellt wurden.

Der Hersteller verpflichtet sich, einzelstaatlichen Stellen auf begründetes Verlangen die speziellen technischen Unterlagen zu der unvollständigen Maschine zu übermitteln. Diese Übermittlung erfolgt elektronisch.

Die gewerblichen Schutzrechte bleiben hiervon unberührt!

¹⁾ MD 2006/42/EG**Remarks:**

It is also declared that the specific technical documentation has been prepared in accordance with Annex VII, Part B.

The manufacturer undertakes to provide national authorities with the specific technical documentation relating to the partly completed machinery upon reasoned request. This documentation shall be provided electronically.

Industrial property rights remain unaffected by this.!



i.V. M. Barghoorn
Leiter Globale Technik
Kupferzell, 27.03.2026

GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Gert-Müller-Platz 1, 74635 Kupferzell, Deutschland

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27 Manufacturer's declaration in accordance with the Pressure Equipment Directive 2014/68/EU



Version 1.0



Herstellererklärung im Sinne der Druckgeräterichtlinie 2014/68/EU
Manufacturer's declaration in accordance with the Pressure Equipment Directive 2014/68/EU

Wir, die Firma
GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Gert-Müller-Platz 1
74635 Kupferzell
Deutschland

We, the company

erklären, dass das nachfolgend bezeichnete Produkt gemäß Artikel 4, Absatz 3 der Druckgeräterichtlinie (DGRL) 2014/68/EU in Übereinstimmung mit der guten Ingenieurspraxis ausgelegt und hergestellt ist.

Produkt: GEMÜ C60
Produktname: Pneumatisch betätigtes Membranventil

Das Produkt wurde entwickelt und produziert nach GEMÜ eigenen Verfahrensanweisungen und Qualitätsstandards, welche die Forderungen der ISO 9001 und der ISO 14001 erfüllen. Das Produkt darf gemäß Artikel 4, Absatz 3 der Druckgeräterichtlinie 2014/68/EU keine CE Kennzeichnung tragen.

Richtlinien/Verordnungen:

PED 2014/68/EU¹⁾

declare that the product described below has been designed and manufactured in accordance with Article 4, Paragraph 3 of the Pressure Equipment Directive (PED) 2014/68/EU and in accordance with good engineering practice.

Product: GEMÜ C60
Product name: Pneumatically operated diaphragm valve

The product has been developed and manufactured in accordance with GEMÜ's own process instructions and quality standards, which meet the requirements of ISO 9001 and ISO 14001. In accordance with Article 4, Paragraph 3 of the Pressure Equipment Directive 2014/68/EU, the product may not bear a CE marking.

Directives/Regulations:

¹⁾ PED 2014/68/EU

Kategorisierung

Max. zulässiger Betriebsdruck (PS)	Zulässige Betriebsmedien / Fluide nach Nennweiten			
	Fluide der Gruppe 1 (gefährlich)		Fluide der Gruppe 2 (andere)	
	Gase (Diagramm 6)	Flüssigkeiten (Diagramm 8)	Gase (Diagramm 7)	Flüssigkeiten (Diagramm 9)
6 bar	Bis maximal 1" / DN25	> 1" / DN25		

¹⁾ PED 2014/68/EU

Categorization

Maximum permissible operating pressure (PS)	Permissible operating media/fluids according to nominal sizes			
	Group 1 fluids (dangerous)		Group 2 fluids (others)	
	Gases (Diagram 6)	Liquids (Diagram 8)	Gases (Diagram 7)	Liquids (Diagram 9)
6 bar	Up to a maximum of 1" / DN25	> 1" / DN25		

i.V. M. Barghoorn
Leiter Globale Technik
Kupferzell, 27.03.2026

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