GEMÜ P40

Pneumatically operated tank bottom valve

EN **Operating instructions**



webcode: GW-P40

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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 medium

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

Control function

The possible actuation functions of the GEMÜ product.

PD

Plug diaphragm
Sealing material based on diaphragm seat technology

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!
	Risk of crushing due to moving parts when the valve is not installed!
	Risk of crushing between diaphragm (PD) and valve seat!
	Risk of crushing due to uncontrolled movement of the valve spring when the control pressure drops!
	Corrosive chemicals!
	Risk of scalding due to hot residual medium!
	Risk of leaking liquids!
	Hot plant components!

Symbol	Meaning
	Cold valve surface!
	Maximum permissible pressure exceeded!
	Leakage!
	Use as an end-of-line valve!

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:

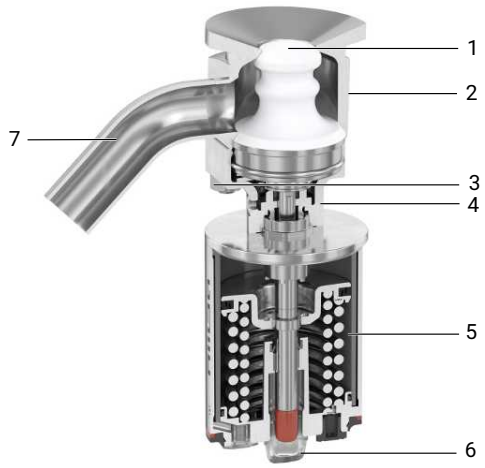
1. Keep this document available at the place of use.
2. Observe the safety information.
3. Operate the product in accordance with this document.
4. Operate the product in accordance with the specifications.
5. Maintain the product correctly.
6. Do not carry out any maintenance work and repairs not described 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



Position	Name	Materials
1	Plug diaphragm (PD)*	PTFE
2	Valve body*	1.4435 (316L), block material 1.4435 (BN2), block material, Δ Fe < 0.5% 1.4539/UNS N08904, block material 1.4547, block material 2.4602, block material alloy 22, (NiCr21Mo14W) 2.4605, block material alloy 59, (NiCr23Mo16Al) AL-6XN, block material alloy 1.4410, block material 1.4529, block material 2.4819, block material 1.4529, UNS N08367, block material
3	Screw connection kit*	
4	Distance piece with leak detection hole	1.4404/1.4408
5	Actuator*	1.4308/1.4301
6	Transparent cap	PC
7	Pipe bend/pipe section	1.4435 (316L), block material 1.4435 (BN2), block material 1.4539/UNS N08904, block material 2.4602, block material alloy 22, (NiCr21Mo14W)

*These components are available as spare parts (see the “Spare parts” chapter in the operating instructions).

3.2 Description

The pneumatically operated **GEMÜ P40** PD tank bottom valve is designed for use in sterile applications. The sealing concept of the valve is based on the GEMÜ PD design comprising a radial sealing PTFE diaphragm, whereby the actuator is hermetically separated from the medium. All actuator parts (except the seals and design elements) are made from stainless steel. It is available with a “Normally closed” control function (further control functions possible on request). The valve has an optical position indicator with a transparent cap as standard.

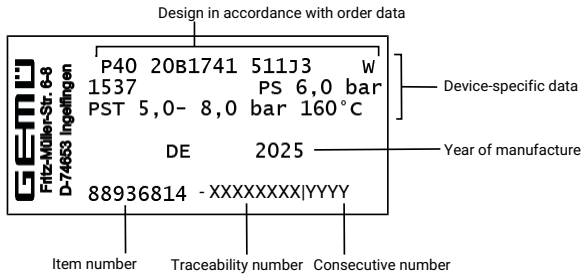
3.3 Function

The product controls a flowing medium by being closed or opened by a control medium.

The product has an optical position indicator as standard. The optical position indicator indicates the OPEN and CLOSED positions.

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 GEMÜ CONEXO

The interaction of valve components that are equipped with RFID chips and an associated IT infrastructure actively increase process reliability.



Thanks to serialization, every valve and every relevant valve component such as the body, actuator or diaphragm, and even automation components, can be clearly traced and read using the CONEXO pen RFID reader. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves the "installation qualification" process, but also makes the maintenance process much more transparent and easier to document. The app actively guides the maintenance technician through the maintenance schedule and directly provides him with all the information assigned to the valve, such as test reports, testing documentation and maintenance histories. The CONEXO portal acts as a central element, helping to collect, manage and process all data.

For further information on GEMÜ CONEXO please visit:
www.gemu-group.com/conexo

5 Intended use

⚠ DANGER



Danger of explosion!
- ▶ Risk of severe injury or death
- ● If there is no corresponding declaration of conformity, the product must not be used in potentially explosive atmospheres!
- ● Only use the product in potentially explosive zones confirmed in the declaration of conformity.

⚠ 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.

1. Use the product in accordance with the technical data.
2. Please note the flow direction on the valve body.

5.1 Product without special function X

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

5.2 Product with special function X

With the special version X order option, the product is intended for use in potentially explosive areas in zone 1 with gases, mists or vapours and zone 21 with combustible dusts in accordance with EU Directive 2014/34/EU (ATEX).

The product has the following explosion protection marking:

ATEX

Gas: II 2 G Ex h IIC T6 ... T3 Gb X

Dust: II -/2 D Ex h -/IIIC T150 °C -/Db X

The product has been developed in compliance with the following harmonised standards:

- EN 1127-1:2019
- EN IEC 80079-36 authorization 1:2024
- EN IEC 80079-36:2016
- EN IEC 80079-37:2016

For use in potentially explosive areas, the following conditions or operation limits must be observed:

- Temperature class depending on the temperature of the conveyed medium and the clock frequency (for T6, do not clock faster than once per second).
- For liquids and gases or gas compounds (free of aerosols and particulates). If gases or gas compounds are not free of aerosols and particulates (hybrid mixtures), the operator must take special measures for compliance with explosion protection.
- For the ambient temperature range, see technical data.
- For products with a Conexo RFID chip, see the supplement “Special conditions for products with a RFID chip”.
- Only suitable for use in earthed metal piping.

6 Order data

The order data provide an overview of standard configurations.

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

Order codes

1 Type	Code
Tank valve, pneumatically operated, stainless steel piston actuator	P40

2 DN, outlet connection 1	Code
DN 6	6
DN 8	8
DN 10	10
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50
DN 65	65

3 Body configuration	Code
Tank valve body	B

4 Valve body connection type, outlet connection type 1	Code
Spigot	
Spigot EN 10357 series A/DIN 11866 series A	17
Spigot SMS 3008	37
Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C	59
Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/ DIN 11866 series B	60
Clamp only in conjunction with "11 adaptor, pipe bend"	
Clamp DIN 32676 series B	82
Clamp DIN 32676, for pipe DIN 11866 series A	86
Clamp ASME BPE, for pipe ASME BPE	88

5 Valve body material	Code
1.4435 (316L), block material	41
1.4435 (BN2), block material, Δ Fe < 0.5%	43
1.4539/UNS N08904, block material	44
1.4547, block material	49
2.4602, block material alloy 22, (NiCr21Mo14W)	A3
2.4605, block material alloy 59, (NiCr23Mo16Al)	A5
AL-6XN, block material alloy, without CE according to PED, AL-6XN is not a material for pressure equipment in line with 2014/68/EU	A6
1.4410, block material	A7
1.4529, block material	A8
2.4819, block material	E1

5 Valve body material	Code
1.4529, UNS N08367, block material	E3

6 Seat seal	Code
PTFE	5

7 Control function	Code
Normally closed (NC)	1
Further control functions on request	

8 Actuator spring set	Code
Standard spring set	1

9 Seat size	Code
15 mm	G
25 mm	J
40 mm	M
60 mm	P

10 Actuator size	Code
Actuator size 2	2
Actuator size 3	3
Actuator size 5	5
Actuator size 6	6

11 Adaptor, outlet connection 1	Code
Without	
Pipe bend	B
Pipe section	P

12 Bracket, adaptor, outlet connection 1	Code
45	45

13 Tank connection type	Code
Butt weld connection	W

14 Type of design	Code
Ra ≤ 0.25 µm for media wetted surfaces, in accordance with DIN 11866 HE5, electropolished internal/external	1516
Ra ≤ 0.25 µm for media wetted surfaces, in accordance with DIN 11866 H5, mechanically machined internal	1527
Ra ≤ 0.4 µm for media wetted surfaces, in accordance with DIN 11866 H4, mechanically machined internal	1536
Ra ≤ 0.4 µm for media wetted surfaces, in accordance with DIN 11866 HE4, electropolished internal/external	1537
Ra max. 0.51 µm (20 µin.) for media wetted surfaces, in accordance with ASME BPE SF1, mechanically machined internal	SF1

14 Type of design	Code
Ra max. 0.38 µm (15 µin.) for media wetted surfaces, in accordance with ASME BPE SF4, electropolished internal/external	SF4

15 Special function	Code
ATEX marking	X

Order example

Ordering option	Code	Description
1 Type	P40	Tank valve, pneumatically operated, stainless steel piston actuator
2 DN, outlet connection 1	25	DN 25
3 Body configuration	B	Tank valve body
4 Valve body connection type, outlet connection type 1	88	Clamp ASME BPE, for pipe ASME BPE
5 Valve body material	41	1.4435 (316L), block material
6 Seat seal	5	PTFE
7 Control function	1	Normally closed (NC)
8 Actuator spring set	1	Standard spring set
9 Seat size	J	25 mm
10 Actuator size	3	Actuator size 3
11 Adaptor, outlet connection 1	B	Pipe bend
12 Union elbow, adaptor, outlet connection 1	45	45
13 Tank connection type	W	Butt weld connection
14 Valve body surface	1536	Ra ≤ 0.4 µm for media wetted surfaces, in accordance with DIN 11866 H4, mechanically machined internal
15 Special version	X	ATEX marking

7 Technical data

7.1 Medium

Working medium: Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the respective valve body and seal material.

Control medium: Inert gases

7.2 Temperature

Media temperature: -20 — 160 °C

Valve body material 1.4539 / UNS N08904, block material (code 44): -10 to 160 °C

Clamp connections (according to standard 32676): -10 — 140 °C

Ambient temperature: -20 — 80 °C

Valve body material 1.4539 / UNS N08904, block material (code 44): -10 to 80 °C

Control medium temperature: 0 — 60 °C

Sterilization temperature: max. 160 °C

Storage temperature: -30 — 60 °C

7.3 Pressure

Operating pressure: 0 — 6 bar

Actuator size	Operating pressure
2, 3, 5, 6	0 to 6.0 bar

Suitable for vacuum up to 0.05 mbar (a) as standard

All pressures are bar – gauge pressure. Operating pressure values were determined with static operating pressure applied on one side of a closed valve. Sealing at the valve seat and atmospheric sealing is ensured for the given values.

Information on operating pressures applied on both sides and for high purity media on request.

Control pressure: Control function 1: 5.0 to 8.0 bar

Pressure rating: PN 16

Leakage rate: Leakage rate A to P11/P12 EN 12266-1

Filling volume:

Actuator size	Seat size	Filling volume [dm³]
		Control function 1
2	**G**	0.064
3	**J**	0.094
5	**M**	0.385
6	**P**	0.622

Control function 1 = filling volume in open position

Kv values:

Actuator size	DN	Stroke	Seat size	Connection type code			
				17, 86	37	59, 88	60, 82
2	**6**	**3**	**G**	1.13	-	-	1.51
	8			1.93	-	0.66	2.85
	10			2.74	-	1.82	4.02
	15			4.40	-	2.50	-
	20			-	-	4.39	-
3	**15**	**6**	**J**	-	-	-	8.4
	20			9.3	-	-	10.9
	25			-	10.5	10.3	-
5	**25**	**6**	**M**	17.0	-	-	19.5
	32			20.7	20.4	-	22.9
	40			22.8	22.5	22.2	-
6	**40**	**7**	**P**	-	-	-	38.0
	50			40.5	39.9	39.8	42.6
	65			-	44.2	43.5	-

Kv values in m^3/h
Kv values determined acc.to DIN EN 60534.
Stroke in mm

7.4 Product compliance

Machinery Directive: 2006/42/EC

Pressure Equipment Directive: 2014/68/EU

Food:
Regulation (EC) No. 1935/2004
Regulation (EC) No. 10/2011
FDA
USP Class VI

Explosion protection: ATEX (2014/34/EU), order code Special version X

ATEX marking:
Gas: II 2 G Ex h IIC T6 ... T3 Gb X
Dust: II -/2 D Ex h -/IIIC T150 °C -/Db X

7.5 Mechanical data

Weight:

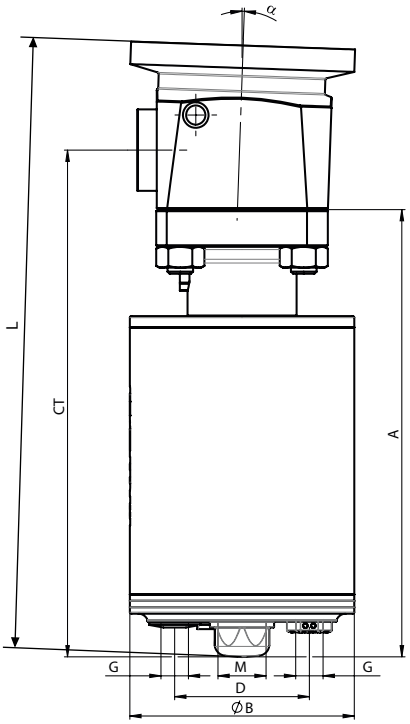
Actuator size	Actuator	Body
2	1.25	0.34
3	1.90	0.62
5	6.57	1.57
6	10.78	3.38

Weights in kg

Flow direction: from the tank

8 Dimensions

8.1 Overall dimensions

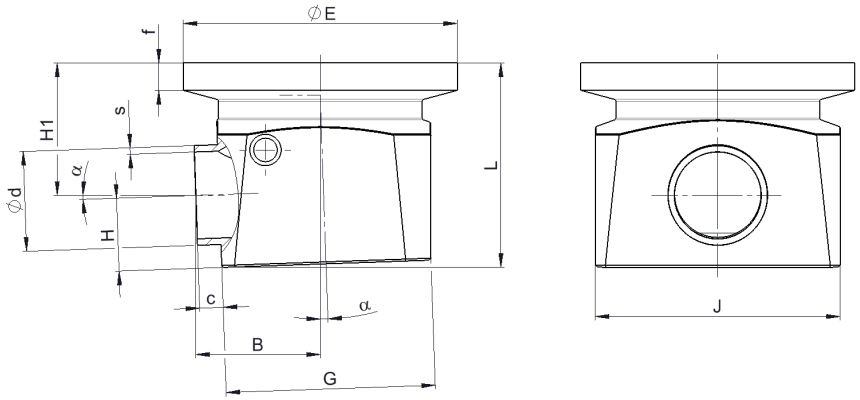


Seat size	AG	A	ØB	D	G	M	L
G	**2**	140.8	65.0	42.0	G1/8	M16x1	185.2
J	**3**	145.0	70.0	42.0	G1/8	M16x1	196.0
M	**5**	218.5	114.3	61.0	G1/4	M26x1.5	287.4
P	**6**	230.3	139.7	61.0	G1/4	M26x1.5	328.0

Dimensions in mm
AG = actuator size
* CT = A + H1 (see body dimensions)

8.2 Body dimensions

8.2.1 Spigot without adapter



Seat size	DN	Connection type code 59, material code 41, 43, 44, A3											
		L	G	J	ØE	f	H	H1	B	ød	s	c	α
G	6	45.2	40.3	47.0	50.9	7.0	8.5	36.9	26.5	3.18	0.56	6.0	2.0
	8	45.2	40.3	47.0	50.9	7.0	9.7	35.6	26.5	6.35	0.89	6.0	2.0
	10	45.2	40.3	47.0	50.9	7.0	11.3	34.0	26.6	9.53	0.89	6.0	2.0
	15	45.2	40.3	47.0	50.9	7.0	12.2	33.2	26.6	12.7	0.89	6.0	2.0
	20	45.2	40.3	47.0	50.9	7.0	15.3	30.0	26.7	19.05	1.65	6.0	2.0
J	25	50.2	53.3	62.5	69.9	7.0	18.5	33.7	32.7	25.4	1.65	6.0	2.0
M	40	70.4	84.0	84.0	97.9	7.0	25.4	45.3	47.8	38.1	1.65	6.0	2.0
P	50	99.7	110.0	110.0	125.9	7.0	36.7	63.2	60.4	50.8	1.65	6.0	2.0
	65	99.7	110.0	110.0	125.9	7.0	43.1	56.8	60.6	63.5	1.65	6.0	2.0

Seat size	DN	Connection type code 17, material code 41, 43, 44, A3											
		L	G	J	ØE	f	H	H1	B	ød	s	c	α
G	6	45.2	40.3	47.0	50.9	7.0	10.5	34.9	26.5	8.0	1.0	6.0	2.0
	8	45.2	40.3	47.0	50.9	7.0	11.5	33.9	26.6	10.0	1.0	6.0	2.0
	10	45.2	40.3	47.0	50.9	7.0	12.5	32.9	26.6	13.0	1.5	6.0	2.0
	15	45.2	40.3	47.0	50.9	7.0	15.5	29.9	26.7	19.0	1.5	6.0	2.0
J	20	50.2	53.3	62.5	69.9	7.0	17.5	34.8	32.7	23.0	1.5	6.0	2.0
M	25	70.4	84.0	84.0	97.9	7.0	21.0	49.7	47.7	29.0	1.5	6.0	2.0
	32	70.4	84.0	84.0	97.9	7.0	24.0	46.7	47.8	35.0	1.5	6.0	2.0
	40	70.4	84.0	84.0	97.9	7.0	27.0	43.7	47.9	41.0	1.5	6.0	2.0
P	50	99.7	110.0	110.0	125.9	7.0	38.0	61.9	60.4	53.0	1.5	6.0	2.0

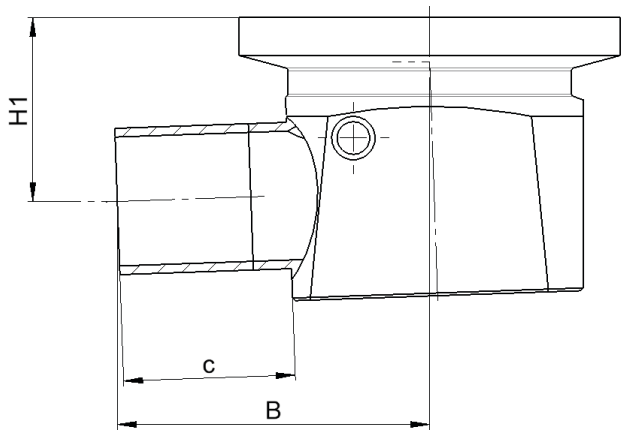
Dimensions in mm

Seat size	DN	Connection type code 60, material code 41, 43, 44, A3											
		L	G	J	ØE	f	H	H1	B	ød	s	c	α
G	6	45.2	40.3	47.0	50.9	7.0	11.0	34.4	26.5	10.2	1.6	6.0	2.0
	8	45.2	40.3	47.0	50.9	7.0	12.6	32.8	24.6	13.5	1.6	6.0	2.0
	10	45.2	40.3	47.0	50.9	7.0	14.5	30.9	26.7	17.2	1.6	6.0	2.0
J	15	50.2	53.3	62.5	69.9	7.0	16.5	35.7	32.7	21.3	1.6	6.0	2.0
	20	50.2	53.3	62.5	69.9	7.0	19.3	32.9	32.8	26.9	1.6	6.0	2.0
M	25	70.4	84.0	84.0	97.9	7.0	22.8	47.7	47.7	33.7	2.0	6.0	2.0
	32	70.4	84.0	84.0	97.9	7.0	27.2	47.9	47.9	42.4	2.0	6.0	2.0
P	40	99.7	110.0	110.0	125.9	7.0	35.1	64.8	60.3	48.3	2.0	6.0	2.0
	50	99.7	110.0	110.0	125.9	7.0	41.1	58.8	60.5	60.3	2.0	6.0	2.0

Seat size	DN	Connection type code 37, material code 41, 43, 44, A3											
		L	G	J	ØE	f	H	H1	B	ød	s	c	α
J	25	50.2	53.3	62.5	69.9	7.0	18.8	33.5	25.0	25.0	1.2	6.0	2.0
M	32	70.4	84.0	84.0	97.9	7.0	23.6	47.0	33.7	33.7	1.2	6.0	2.0
	40	70.4	84.0	84.0	97.9	7.0	25.8	44.9	38.0	38.0	1.2	6.0	2.0
P	50	99.7	110.0	110.0	125.9	7.0	37.3	62.6	51.0	51.0	1.2	6.0	2.0
	65	99.7	110.0	110.0	125.9	7.0	43.1	56.8	63.5	63.5	1.6	6.0	2.0

Dimensions in mm

8.2.2 Spigot with pipe section



Seat size	DN	Connection type code 59, material code 41, 43, 44, A3			
		H1	B	c	Pipe
G	6	-	-	-	-
	8	36.3	46.0	25.6	20.0
	10	34.7	46.0	25.6	20.0
	15	33.2	26.6	25.6	20.0
	20	30.9	51.2	30.4	25.0
J	25	34.6	57.2	30.4	25.0
M	40	46.1	72.3	30.4	25.0
P	50	64.2	89.9	35.4	30.0
	65	57.9	90.1	35.4	30.0

Seat size	DN	Connection type code 17, material code 41, 43, 44, A3			
		H1	B	c	Pipe
G	6	35.6	46.0	25.6	20.0
	8	34.6	46.1	25.6	20.0
	10	33.6	46.1	25.6	20.0
	15	30.6	46.2	25.6	20.0
J	20	35.6	57.2	30.5	25.0
M	25	50.5	72.2	30.5	25.0
	32	47.5	72.3	30.5	25.0
	40	44.5	72.4	30.5	25.0
P	50	63.0	89.9	35.5	30.0

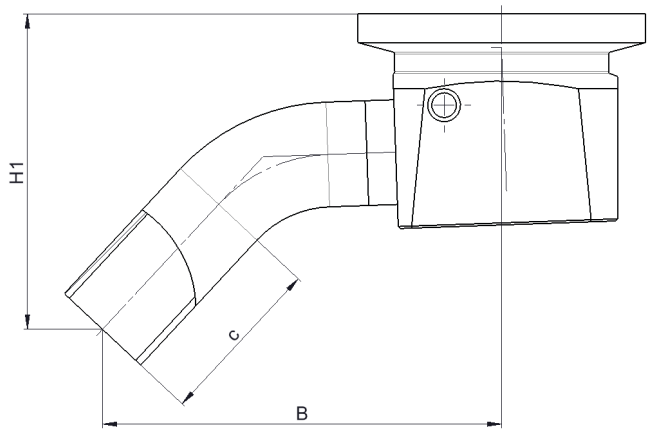
Dimensions in mm

Seat size	DN	Connection type code 60, material code 41, 43, 44			
		H1	B	c	Pipe
G	6	35.1	46.0	25.4	20.0
	8	33.5	46.1	25.4	20.0
	10	31.6	46.2	25.4	20.0
J	15	36.4	52.2	25.4	20.0
	20	33.8	57.2	30.4	25.0
M	25	48.7	72.2	30.4	25.0
	32	44.3	72.4	30.4	25.0
P	40	65.8	84.8	30.4	25.0
	50	59.8	90.0	35.4	30.0

Seat size	DN	Connection type code 37, material code 41, 43, 44, A3			
		H1	B	c	Pipe
J	25	34.3	57.2	30.5	25.0
M	32	47.9	72.2	30.5	25.0
	40	45.7	72.3	30.5	25.0
P	50	63.7	89.9	35.5	30.0
	65	57.8	90.1	35.4	30.0

Dimensions in mm

8.2.3 Spigot with pipe bend



Seat size	DN	Connection type code 59, material code 41, 43, 44, A3		
		H1	B	c
G	6	-	-	-
	8	73.3	76.6	44.9
	10	72.0	82.6	39.0
	15	75.8	87.0	45.4
	20	72.6	87.1	45.4
J	25	76.5	97.1	41.4
M	40	92.9	124.4	39.8
P	50	120.3	152.4	46.6
	65	121.2	166.2	47.1

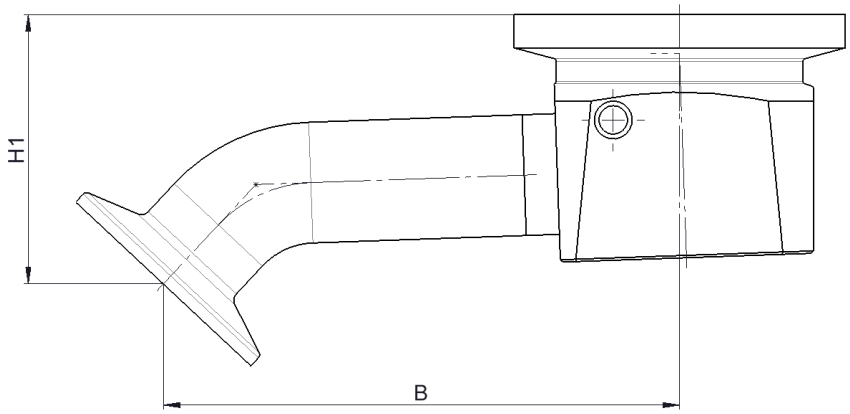
Seat size	DN	Connection type code 17, material code 41, 43, 44, A3		
		H1	B	c
G	6	59.1	67.9	22.2
	8	59.0	68.8	23.4
	10	59.8	71.3	25.0
	15	59.7	77.7	25.0
J	20	66.1	87.2	25.0
M	25	95.1	119.3	40.0
	32	93.7	122.9	40.0
	40	92.3	126.5	40.0
P	50	113.7	145.0	40.0

Dimensions in mm

Seat size	DN	Connection type code 60, material code 41, 43, 44, A3		
		H1	B	c
G	6	59.4	67.1	25.0
	8	57.8	67.1	25.0
	10	58.4	72.8	25.0
J	15	63.9	80.1	25.0
	20	71.6	89.4	40.0
M	25	88.0	111.0	40.0
	32	88.2	117.8	40.0
P	40	112.4	135.8	40.0
	50	112.5	149.3	40.0

Dimensions in mm

8.2.4 Clamp with pipe bend



Seat size	DN	Connection type code 59/88, material code 41, 43, 44, A3	
		H1	B
G	6	-	-
	8	56.0	94.1
	10	54.4	94.2
	15	53.8	100.6
	20	50.6	100.7
J	25	56.6	108.8
M	40	74.2	135.7
P	50	98.4	166.4
	65	98.1	181.5

Seat size	DN	Connection type code 17/86, material code 41, 43, 44, A3	
		H1	B
G	6	60.1	80.6
	8	59.1	81.8
	10	58.8	85.0
	15	58.6	91.4
J	20	56.2	100.9
M	25	83.8	137.8
	32	82.4	141.4
	40	81.0	145.0
P	50	102.4	163.5

Dimensions in mm

Seat size	DN	Connection type code 60/82, material code 41, 43, 44, A3	
		H1	B
G	6	58.4	80.6
	8	56.7	80.8
	10	57.4	86.5
J	15	63.0	93.8
	20	60.2	107.9
M	25	78.2	129.4
	32	76.8	136.3
P	40	101.1	154.3
	50	101.2	167.8

Dimensions in mm

9 Manufacturer's information

9.1 Packaging

The product is packaged in a cardboard box which can be recycled as paper.

9.2 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.

9.3 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.

9.4 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.

10 Installation in piping

10.1 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



Risk of crushing due to moving parts when the valve is not installed!

- ▶ Upper limbs may get into the valve body openings while working on the valve.
- Ensure that the valve is in the respective end position (closed for NC or open for NO).
- Do not reach into the crushing area through the valve body openings.

⚠ WARNING



Risk of crushing between diaphragm (PD) and valve seat!

- ▶ Serious injuries to the fingers.
- When installing the plant, do not reach between the PD and valve seat with your fingers.

⚠ WARNING



Risk of crushing due to uncontrolled movement of the valve spring when the control pressure drops!

- ▶ Serious injuries to the fingers.
- Do not reach into the operating range of the valve spring.

⚠ WARNING



Corrosive chemicals!

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

⚠ WARNING



Risk of scalding due to hot residual medium!

- ▶ Hazardous media may be in the valve body or may escape during disassembly.
- Only work on a plant that has cooled down.
- Wear protective gloves.

⚠ CAUTION



Risk of leaking liquids!

- ▶ Risk of injury due to the emission of dangerous materials!
- ● Provide for precautionary measures against exceeding the maximum permissible pressure that may be caused by pressure surges (water hammer).
- ● Wear suitable protective gear while working on the product.

⚠ CAUTION



Hot plant components!

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

⚠ CAUTION



Cold valve surface!

- ▶ Product may be very cold due to low media temperatures – danger of frostbite!
- ● If necessary, wear gloves when working on the product.

⚠ 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).

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. Correctly decontaminate, rinse and ventilate the plant or plant component.
12. Lay piping so that the product is protected against transverse and bending forces, and also from vibrations and tension.
13. Only install the product between matching aligned pipes (see chapters below).
14. Please note the flow direction (see chapter "Flow direction").
15. Please note the installation position (see chapter "Installation position").

10.2 Flow direction

The flow direction is determined by the tank at the top.

10.3 Installation position

GEMÜ recommends a vertical installation position.

10.4 Installation with butt weld spigots

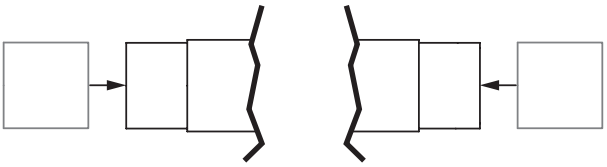


Fig. 1: Butt weld spigots

1. Carry out preparations for installation (see chapter "Preparing for installation").
2. Adhere to good welding practices!
3. Disassemble the actuator with plug diaphragm (PD) before welding in the valve body (see chapter "Removing the actuator").
4. Weld the body of the product into the tank and piping.
5. Allow butt weld spigots to cool down.
6. Reassemble the valve body and the actuator with plug diaphragm (PD) (see chapter "Mounting the actuator").
7. Re-attach or reactivate all safety and protective devices.
8. Flush the system.

10.5 Welding guidelines for welding into containers

10.5.1 General information

Improper welding of tank valves may lead to damage and loss of valve function. In order to create the basis for optimal function and to prevent damage to the tank valve, this directive provides the following information and recommendations with regard to implementing the welding process, for which the customer is responsible. The directive is expressly by no means exhaustive. Nevertheless, the directive should be read and understood carefully before starting the welding process.

10.5.1.1 Safety

In this welding directive, there are some notes which should be observed. Each note is marked with the following sign:

NOTICE

▶ Failure to observe these notes may lead to damage.

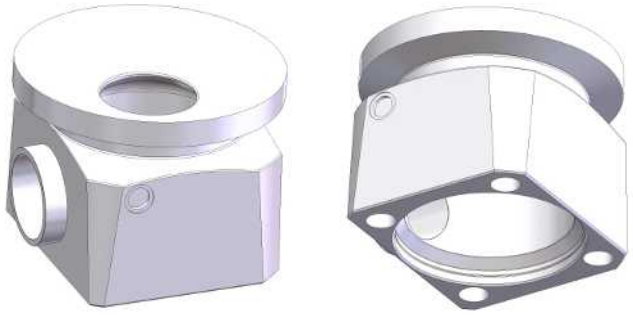
10.5.1.2 Tank valve

Today, GEMÜ tank valves are available in many different versions. They are welded onto the tank cover, the tank wall or the tank bottom. Their main functions are for filling, sampling and draining the tank contents. Sometimes, these combinations are combined in one valve for reasons of process reliability and, sometimes, even extra functions are added, such as integrated CIP/SIP connections.

The geometry of the tank bottom valve is designed so that the special seal contour optimally drains, cleans and sterilizes the tank. Only this contour ensures optimized draining of the tank.

The tank valve (see figure) is suitable as a pressure-bearing equipment part and is welded into the tank, making the valve an integral part of the tank and thus subject to national or international regulations for pressure vessels (see regulatory code AD 2000, EN 13445, ASME BPVC Section VIII Div. 1).

10.5.1.3 Tank valve standard version



Features

- Thanks to the compact design, the tank valves are ideally suited to being installed in tight spaces
- Minimal deadlegs and optimized draining capabilities
- The valve body is machined from a single piece of block material (monoblock – no welded components) and is supplied with the required material certificates.
- CIP/SIP capable and sterilizable
- The internal surface contour of the valve body is available mechanically polished and/or electropolished down to Ra 0.25 µm
- Optimized geometry for flow and process engineering
- Connection geometries such as butt weld spigots, clamps and threaded connections are available in accordance with common standards and are welded on
- 1.4435/316L standard valve body materials. Other alloys or test requirements are available to meet customer specifications
- Welding into the tank bottom is simplified by a welding neck (standard version 7 mm)
- Available with actuators from the GEMÜ modular system
- Electrical position indicator available as actuator instrumentation

10.5.2 Preparation for installation

10.5.2.1 Check list

Before the welding process can begin, the following points in particular should be checked:

- Welding instructions for tank bottom valve have been read and understood
- All necessary certificates, test certificates, etc. for pressure-bearing components are available
- The welder is authorized for welding work and familiar with similar welding operations
- It has been checked that the valve or actuator does not collide with other tank components
- The tank bottom valve's position was selected so that the distance between the weld seams complies with the specifications/regulations
- Double shells, interference edges as well as all other edges welded on later were taken into account
- Actuators and diaphragms were disassembled before starting the welding process

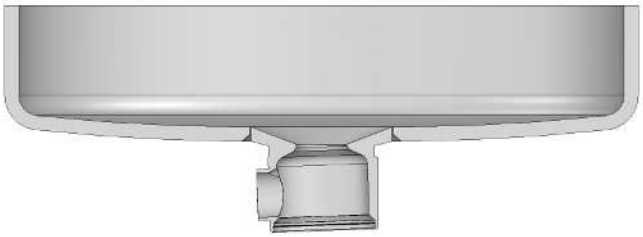
- Adequate cooling was provided

10.5.2.2 Positioning the tank valve

NOTICE

▶ Make sure that the actuator and the diaphragm can be assembled and disassembled without colliding with other tank components.

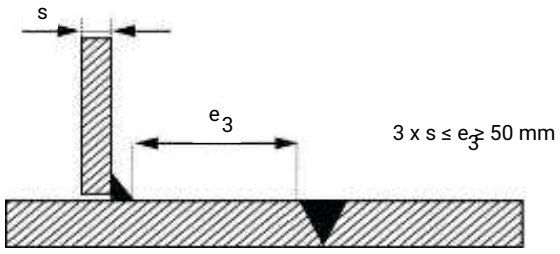
The tank bottom valve's position in the tank bottom is usually selected so that the tank can be drained without residue. In most cases, it is located in the middle of the tank bottom or at the lowest point, meaning that the contour of the valve plug is parallel to the bottom. However, other positions are also possible.



10.5.2.3 Spacing between the weld seams

The minimum spacing between the weld seams is dependent on the requirements of the standards and regulations to be considered. Check the relevant standard for pressure equipment to determine the smallest possible distance between weld seams (example: AD 2000 regulatory codes, min. spacing between weld is three times the wall thickness).

Further details on spacing can be taken from the manufacturing drawing.



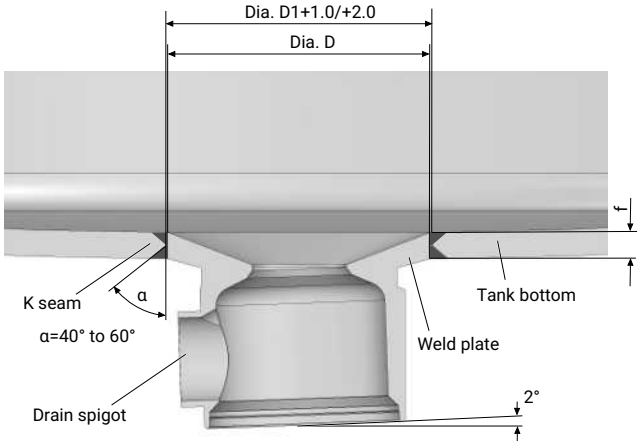
Spacing between the seam edges of weld connections

10.5.2.4 Section in the tank for tank bottom valve

Depending on the nominal size of the tank bottom valve, a certain diameter is required for the bolt hole. The valve body diameters can be taken from the table for standard valve bodies or from the respective manufacturing drawing. The opening should be designed with a tolerance of +1.0 to 2.0 mm, depending on the welding shoulder diameter D, so that the valve can be used without problems.

As the tanks are usually pressure vessels (> 0.5 bar), the welding process requires complete through-welding. To make this possible, the section edge in the tank is chamfered (K seam preparation), depending on the weld seam design and wall thickness. Depending on the weld seam design and wall thickness, the angle of the chamfer is usually 40 to 60°.

The weld seam preparation (bore diameter and chamfer angle) is carried out according to the manufacturing drawing.



Relevant dimensions for installing tank valves (see “Spigot without adapter“, page 15).

10.5.3 Welding instructions

Independent of our welding directive, the welder and the welding supervisor are responsible for the expert execution of the welding work. It is recommended that any necessary weld-on parts be fitted to the valve’s drain spigot before the valve is welded into the tank.

NOTICE

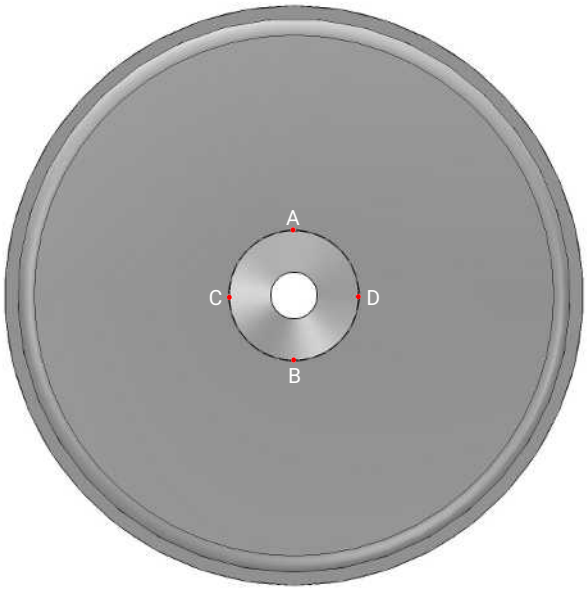
▶ Follow these instructions. Use forming gas. Ensure that the material does not overheat. Cool regularly.

10.5.3.1 Internal tack welding

Place the tank bottom valve in the tank's opening so that the valve body is flush with the inner wall.

Form and then set two tack welds A and B as shown in the figure, then the valve can be aligned, for example by using a spirit level. The valve's weld plate must be aligned horizontally. The lower surface is inclined by 2° towards the drain spigot (see "Section in the tank for tank bottom valve", page 26).

After the valve has been aligned, tack welds C and D can also be set.



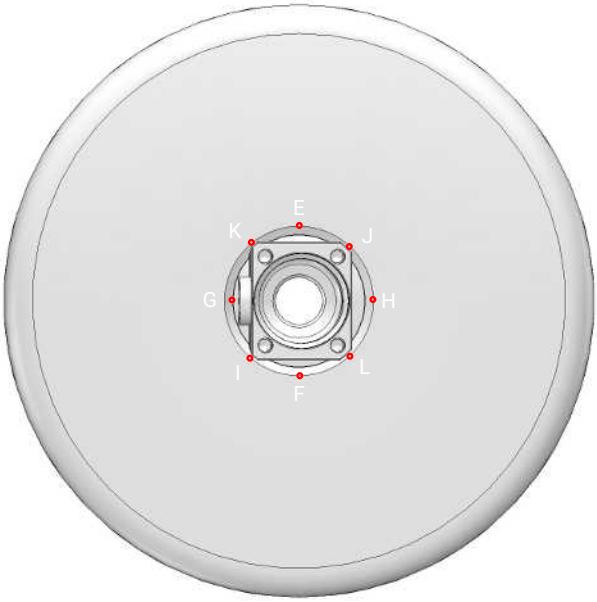
Interior view of tank with tack welds

10.5.3.2 External tack welding

Before tack welders are set from outside, the following must also be formed. Shielding gas must continue to flow during the entire welding process.

The tack welds A, B, C and D are set from the outside; then the remaining tack welds are welded in alphabetical order.

The number of remaining tack welds varies depending on the dimension. Make sure that the tack welders are always set opposite each other.



Exterior view of tank with tack welds

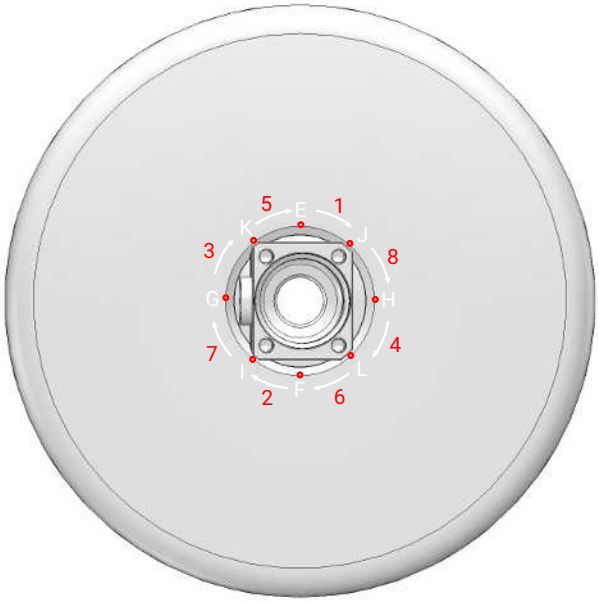
10.5.3.3 Welding in the pilgrim step outside

Use a suitable filler metal for welding the materials and weld the pilgrim step clockwise.

Start with the first pilgrim step, then cool the weld seam adequately with compressed air, for example.

Continue the welding process on the opposite side and follow the additional steps in accordance with the figure.

Repeat the welding process until sufficient layers have been welded on to produce a weld seam that complies with the technical specifications (cf. ISO 5817, ASME BPE).



Exterior view of the tank with pilgrim steps

10.5.3.4 Weld seam check

NOTICE

▶ Follow the instructions listed above. Ensure that the material does not overheat. Cool regularly.

Check the weld seam inside and outside and correct it according to the welding instructions if required. Ensure that there is adequate cooling between welding operations and that the weld seams are fully welded through the entire cross-section.

10.5.4 Check

The last step in the welding process is the final check of the weld seam. We recommend that the seam, auxiliary materials and welding seam gauges, etc. are checked for optical defects.

In accordance with the national or international standards, non-destructive testing/weld seam checks (X-ray, ultrasonic testing) must be carried out; this depends on the weld seam factor or the evaluation group. Type and circumference must be predetermined by the welding supervisor.

In addition, the valve body must be checked for optical deformations. This is because, if the original seat contour differs in shape, the way in which it works may be adversely affected.

Depending on the legislation and standard, a pressure test with the mounted sealing material and actuator must also be carried out.

10.5.5 Surface processing

After the welding process, the surface is processed according to the respective specification.

10.6 Installation with clamp connections

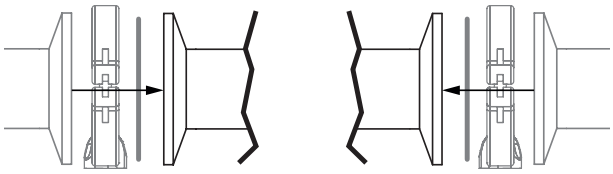


Fig. 2: Clamp connection

NOTICE

Gasket and clamp!

▶ The gasket and clamps for clamp connections are not included in the scope of delivery.

1. Keep ready gasket and clamp.
2. Carry out preparation for installation (see chapter "Preparing for installation").
3. Insert the corresponding gasket between the body of the product and the pipe connection.
4. Connect the gasket between the body of the product and the pipe connection using clamps.
5. Re-attach or reactivate all safety and protective devices.

10.7 After the installation

1. Mount the actuator (see the enclosed actuator instructions).
2. Re-attach or reactivate all safety and protective devices.

10.8 Container pressure test

By using opening stroke limiters, the pressure test of the container can be carried out with a higher testing pressure than the operating pressure of 6 bar after the tank bottom valve has been welded in. To do this, the valve is manually moved to the closed position using the installed stroke limiter.

The following table shows the order designations and the specific torques for the stroke limiter for manually sealing the valve at higher testing pressures:

Seat size	Actuator size	Order designation for opening stroke limiter	Torque for opening stroke limiter	Testing pressure
G	2	M1B0 2	5 Nm	16 bar
J	3	M1B0 3	5 Nm	16 bar
M	5	M1B0 5	10 Nm	16 bar
P	6	M1B0 6	10 Nm	16 bar

Please refer to the associated instructions for installing the opening stroke limiter. After pressing, the stroke limiter can be removed again. It is recommended that a new PD be fitted after the test procedure.

11 Pneumatic connections

11.1 Control function

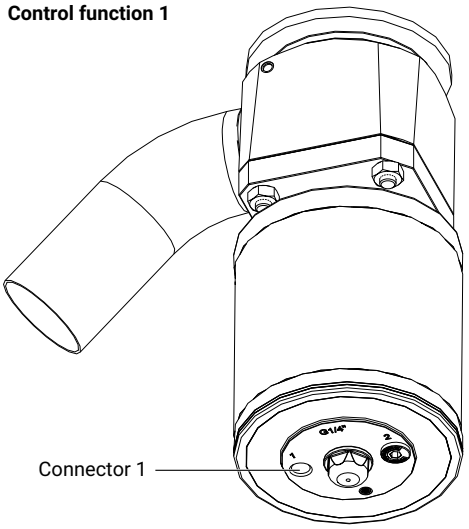
The following control functions are available:

Control function 1

Normally closed (NC):

Valve resting position: Closed by spring force. Activation of the actuator (connector 1) opens the valve. When the actuator is vented, the valve is closed by spring force.

Control function 1



11.2 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:

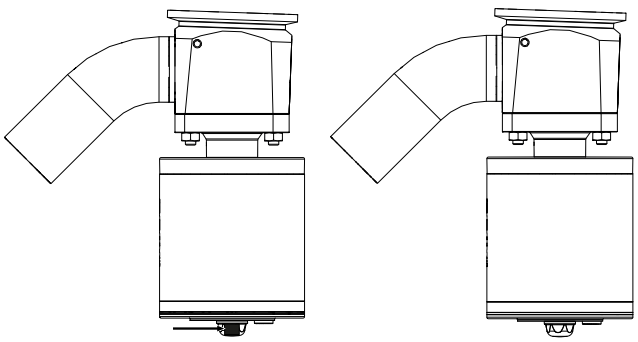
G1/8 (for actuator sizes 1–3)

G1/4 (for actuator sizes 4–6)

Control function		Connections
1	Normally closed (NC)	1: Control medium (open)

12 Operation

12.1 Optical position indicator



Valve open

Valve closed

13 Commissioning

⚠ 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.

⚠ WARNING



Risk of scalding due to hot residual medium!
- ▶ Hazardous media may be in the valve body or may escape during disassembly.
- ● Only work on a plant that has cooled down.
- ● Wear protective gloves.

⚠ CAUTION



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

⚠ CAUTION



Cold valve surface!
- ▶ Product may be very cold due to low media temperatures – danger of frostbite!
- ● If necessary, wear gloves when working on the product.

⚠ 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



Use as an end-of-line valve!
- ▶ Damage to the GEMÜ product
- ● When using the GEMÜ product as an end-of-line valve, a mating flange must be fitted.

⚠ CAUTION

Cleaning agent!
- ▶ Damage to the GEMÜ product
- ● The plant operator is responsible for selecting the cleaning material and performing the procedure.

1. Check that the product is leak-tight and functioning (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.

14 Operation

Operate the product according to the control function (see also chapter "Pneumatic connections").

15 Troubleshooting

Error	Error cause	Troubleshooting
Working medium escaping from leak detection hole	Plug diaphragm faulty	Check plug diaphragm for potential damage, replace plug diaphragm if necessary
The product does not open or does not open fully	Actuator defective	Replace the actuator
	Plug diaphragm incorrectly mounted	Remove actuator, check plug diaphragm mounting, replace plug diaphragm if necessary
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
	Plug diaphragm incorrectly mounted	Remove actuator, check plug diaphragm mounting, correct if necessary
	Foreign matter between plug diaphragm and valve seat	Remove actuator, remove foreign matter, check plug diaphragm and valve body for damage and replace if necessary
	Valve body leaking or damaged	Carry out initialisation, check valve body for damage, replace valve body if necessary.
	Plug diaphragm faulty	Check plug diaphragm for potential damage, replace plug diaphragm if necessary
The product is leaking between actuator and valve body	Plug diaphragm incorrectly mounted	Remove actuator, check plug diaphragm mounting, correct if necessary
	Bolting between valve body and actuator loose	Tighten bolting between valve body and actuator
	Plug diaphragm faulty	Check plug diaphragm for potential damage, replace plug diaphragm if necessary
	Actuator/valve body damaged	Replace actuator/valve body
Connection between valve body and piping leaking	Incorrect installation	Check installation of valve body in piping
	Sealing material faulty	Replace sealing material
Valve body leaking	Valve body leaking or corroded	Check valve body for damage, replace valve body if necessary

16 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.

⚠ WARNING



Risk of crushing between diaphragm (PD) and valve seat!
- ▶ Serious injuries to the fingers.
- ● When installing the plant, do not reach between the PD and valve seat with your fingers.

⚠ WARNING



Risk of crushing due to uncontrolled movement of the valve spring when the control pressure drops!
- ▶ Serious injuries to the fingers.
- ● Do not reach into the operating range of the valve spring.

⚠ WARNING



Risk of scalding due to hot residual medium!
- ▶ Hazardous media may be in the valve body or may escape during disassembly.
- ● Only work on a plant that has cooled down.
- ● Wear protective gloves.

⚠ CAUTION



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

⚠ CAUTION



Cold valve surface!
- ▶ Product may be very cold due to low media temperatures – danger of frostbite!
- ● If necessary, wear gloves when working on the product.

⚠ CAUTION



Risk of leaking liquids!
- ▶ Risk of injury due to the emission of dangerous materials!
- ● Provide for precautionary measures against exceeding the maximum permissible pressure that may be caused by pressure surges (water hammer).
- ● Wear suitable protective gear while working on the product.

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.

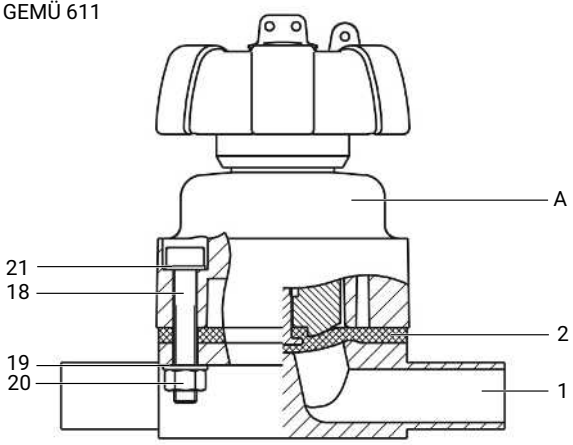
The operator must carry out regular visual examination of the GEMÜ products dependent on the operating conditions and the potential danger in order to prevent leakage and damage.

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.

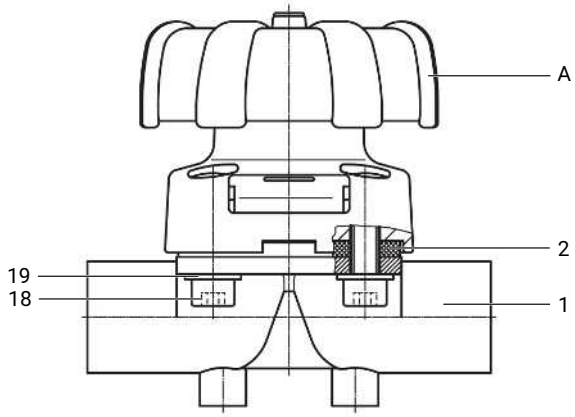
16.1 Spare parts

GEMÜ 611



Position	Name	Order designation
A	Actuator	9611
1	Valve body	K612…
2	Diaphragm	600…M
18	Bolt	611…S30…
19	Washer	
20	Nut	
21	Washer	

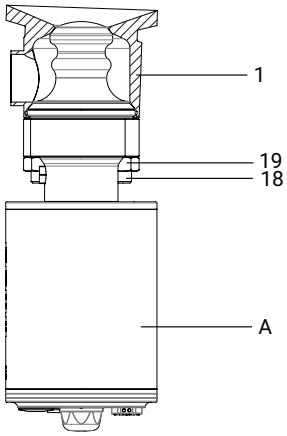
GEMÜ 671



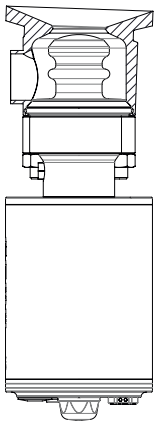
Position	Name	Order designation
A	Actuator	9671…
1	Valve body	K600…
2	Diaphragm	600…M
18	Bolt	671…S30…
19	Washer	

16.2 Fitting/removing spare parts

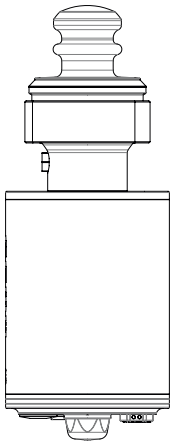
16.2.1 Disassembling the PD



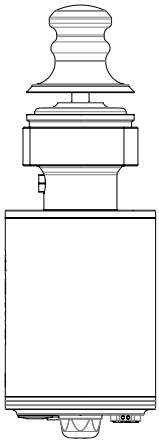
Initial position:
Actuator A in closed position, not activated



Activate actuator A to move it into the open position.



Undo the nuts 19 from the stud bolts 18.
Remove the actuator A from the valve body 1.



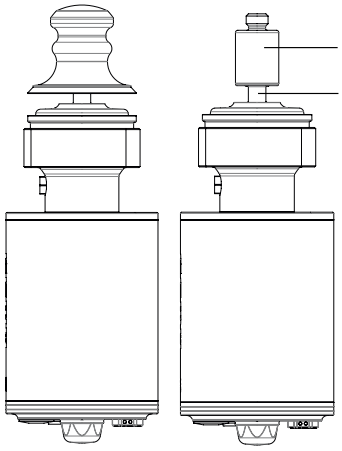
Put the actuator to the side and vent it.
The plug diaphragm moves to the closed position.
Disconnect the actuator from the control medium lines

⚠ WARNING



Risk of crushing due to moving parts when the valve is not installed!

- ▶ Upper limbs may get into the valve body openings while working on the valve.
- ● Ensure that the valve is in the respective end position (closed for NC or open for NO).
- ● Do not reach into the crushing area through the valve body openings.



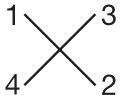
Hold the retainer 20 with an open-end wrench and unscrew PD anti-clockwise.
Screw on new PD clockwise and tighten until hand-tight.
Remove open-end wrench.

NOTICE

- ▶ Clean all parts of contamination (do not damage the parts during cleaning) following removal. Check parts for potential damage, replace if necessary (only use genuine parts from GEMÜ).

16.2.2 Assembling the PD

1. Assemble in reverse order to disassembly.
2. Put the actuator **A** to the side and move to the open position.
3. Place the actuator **A** with the seal on the valve body **1**.
4. Tighten the nuts **19** on the stud bolts **18** to torque.
5. Bolt the nuts **19** diagonally onto the block.



Seat size	Tightening torque
R015_G	6 Nm
R025_J	16 Nm
R040_M	32 Nm
R060_P	32 Nm

6. Move the actuator **A** to the closed position.
7. Check the fully assembled valve for leaks.

16.3 Cleaning and sterilizing the product

The valve can be cleaned (CIP) and sterilized (SIP) without being removed. **The conditions in the "Technical data" chapter (operating, cleaning and sterilization media, temperatures) must be complied with.** During cleaning and sterilization, the valve must be permanently open.

17 Removal from piping

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.

18 Disposal

1. Pay attention to adhered residual material and gas diffusion from penetrated media.
2. Dispose of all parts in accordance with the disposal regulations/environmental protection laws.

19 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.

20 EU Declaration of Incorporation

Version 1.0

Original EU-Einbauerklärung

EU Declaration of Incorporation

Wir, die Firma — We, the company

GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Fritz-Müller-Straße 6-8
74653 Ingelfingen
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 P40	**Product:**	GEMÜ P40
Produktname:	Pneumatisch betätigtes Bodenablassventil	**Product name:**	Pneumatically operated tank bottom valve

Die unvollständige Maschine darf erst dann in Betrieb genommen werden, wenn gegebenenfalls festgestellt wurde, dass die Maschine, in die die unvollständige Maschine eingebaut werden soll, den Bestimmungen der Maschinenrichtlinie 2006/42/EG entspricht.

The partly completed machinery may be commissioned only if it has been determined, if necessary, that the machinery into which the partly completed machinery is to be installed meets the provisions of the Machinery Directive 2006/42/EC.

Richtlinien: / **Guidelines:**

MD 2006/42/EG[1)]

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: / **The following essential health and safety requirements of the EC Machinery Directive 2006/42/EC, Annex I have been applied or adhered to:**

1.1.2.; 1.1.3.; 1.1.5.; 1.3.2.; 1.3.3.; 1.3.4.; 1.3.7.; 1.5.13.; 1.5.2.; 1.5.3.; 1.5.4.; 1.5.5.; 1.5.8.; 1.5.9.; 1.6.1.; 1.6.3.; 1.6.4.; 1.6.5.; 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.

[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:
We also declare that the specific technical documents have been created in accordance with part B of Annex VII.
The manufacturer undertakes to transmit relevant technical documents on the partly completed machinery to the national authorities in response to a reasoned request. This communication takes place electronically.
This does not affect the industrial property rights.

i.V. M. Barghoorn
Leiter Globale Technik

Ingelfingen, 02.10.2024

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www.gemu-group.com
info@gemue.de

21 EU Declaration of Conformity

CE Version 1.0

GEMÜ

EU-Konformitätserklärung

EU Declaration of Conformity

Wir, die Firma / We, the company

GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Fritz-Müller-Straße 6-8
74653 Ingelfingen
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 P40	**Product:**	GEMÜ P40
Produktname:	Pneumatisch betätigtes Bodenablassventil	**Product name:**	Pneumatically operated tank bottom valve

Richtlinien: / **Guidelines:**

PED 2014/68/EU[1)]

Folgende harmonisierte Normen (oder Teile hieraus) wurden angewandt: / **The following harmonized standards (or parts thereof) have been applied:**

EN 13397:2011-11

Weitere angewandte Normen: / **Further applied norms:**

AD 2000

[1)] PED 2014/68/EU

Benannte Stelle:
TÜV Rheinland Industrie Service GmbH
Am Grauen Stein 1
51105 Köln

Kennnummer der benannten Stelle: 0035

Nr. des QS-Zertifikats: 01 202 926/Q-02 0036

Angewandte(s) Konformitätsbewertungsverfahren: Modul H

Hinweis für Produkte mit einer Nennweite ≤ DN 25:
Die Produkte werden entwickelt und produziert nach GEMÜ eigenen Verfahrensanweisungen und Qualitätsstandards, welche die Forderungen der ISO 9001 und der ISO 14001 erfüllen. Die Produkte dürfen gemäß Artikel 4, Absatz 3 der Druckgeräterichtlinie 2014/68/EU keine CE-Kennzeichnung tragen.

Bemerkungen:
Der Einsatz des Produkts in Kategorie III gemäß Druckgeräterichtlinie 2014/68/EU sowie die Verwendung mit instabilen Gasen ist nicht zulässig.

[1)] PED 2014/68/EU

Notified body::
TÜV Rheinland Industrie Service GmbH
Am Grauen Stein 1
51105 Cologne, Germany

ID number of the notified body: 0035

No. of the QA certificate: 01 202 926/Q-02 0036

Conformity assessment procedure(s) applied: Module H

Information for products with a nominal size ≤ DN 25:
The products are developed and produced according to GEMÜ's in-house process instructions and standards of quality which comply with the requirements of ISO 9001 and ISO 14001. According to Article 4, Paragraph 3 of the Pressure Equipment Directive 2014/68/EU, these products must not be identified by a CE-marking.

Remarks:
Use of the product in category III in accordance with Pressure Equipment Directive 2014/68/EU and use with unstable gases are not permissible.

i.V. M. Barghoorn
Leiter Globale Technik

Ingelfingen, 02.10.2024

GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Fritz-Müller-Straße 6-8, 74653 Ingelfingen, Deutschland

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info@gemue.de

22 EU Declaration of Conformity

Version 1

EU-Konformitätserklärung

EU Declaration of Conformity

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 P40 Sonderausführung Code X	**Product:**	GEMÜ P40 special version Code X
Produktname:	Pneumatisch betätigtes Bodenablassventil	**Product name:**	Pneumatically operated tank bottom valve

Richtlinien/Verordnungen: — **Directives/Regulations:**

ATEX 2014/34/EU[1)]

Folgende harmonisierte Normen (oder Teile hieraus) wurden angewandt: — **The following harmonized standards (or parts thereof) have been applied:**

EN IEC 80079-36 Berichtigung 1:2024; EN IEC 80079-36:2016; EN IEC 80079-37:2016

[1)] ATEX 2014/34/EU
Dokumente hinterlegt bei:
IBExU Institut für Sicherheitstechnik GmbH
Dokumente hinterlegt unter: 211/06_E1 bzw. IB2066180
Explosionsschutzkennung: Gas: Ex II 2 G Ex h IIC T6 ... T3 Gb X
Explosionsschutzkennung: Staub: Ex II -/2 D Ex h -/IIIC T150 °C -/Db X

[1)] ATEX 2014/34/EU
Documents filed with:
IBExU Institut für Sicherheitstechnik GmbH
Documents filed under: 211/06_E1 bzw. IB2066180
Explosion protection designation: Gas: Ex II 2 G Ex h IIC T6 ... T3 Gb X
Explosion protection designation: Dust: Ex II -/2 D Ex h -/IIIC T150 °C -/Db X

i.V. M. Barghoorn
Leiter Globale Technik

Ingelfingen, 27.11.2025

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Subject to alteration

11.2026 | 88923327