

# **GEMÜ BB06**

Compact flanged ball valve with bare shaft

EN

## Operating instructions



further information  
webcode: GW-BB06



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23.12.2025

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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.

### 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	
	<b>Imminent danger!</b> ► Non-observance can cause death or severe injury

⚠ WARNING	
	<b>Potentially dangerous situation!</b> ► Non-observance can cause death or severe injury

⚠ CAUTION	
	<b>Potentially dangerous situation!</b> ► Non-observance can cause moderate to light injury

NOTICE	
	<b>Potentially dangerous situation!</b> ► Non-observance can cause damage to property

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

Symbol	Meaning
	Risk of crushing due to moving parts when the valve is not installed!
	The equipment is subject to pressure!
	Corrosive chemicals!
	Falling product!
	Hot plant components!
	Maximum permissible pressure exceeded!
	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:

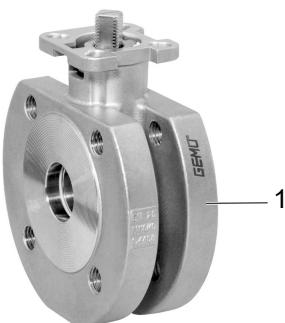
9. Keep this document available at the place of use.
10. Observe the safety information.
11. Operate the product in accordance with this document.
12. Operate the product in accordance with the specifications.
13. Maintain the product correctly.
14. Do not carry out any maintenance work and repairs not described in this document without consulting the manufacturer first.

### In cases of uncertainty:

15. Consult the nearest GEMÜ sales office.

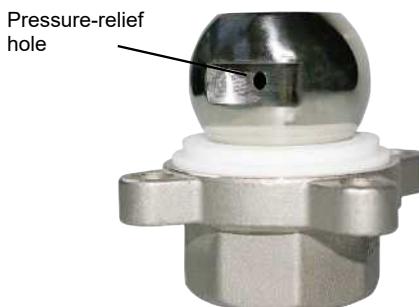
## 3 Product description

### 3.1 Construction

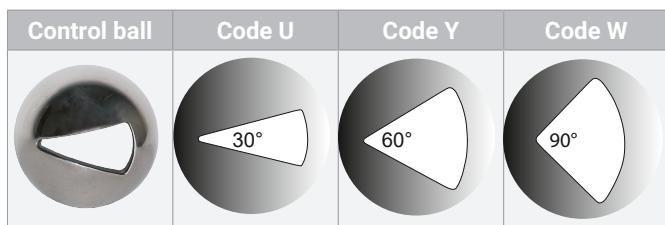


Item	Name	Materials
1	Ball valve body	1.4408 investment casting (316)
	Ball	1.4401 investment casting (316)
	Seal material	PTFE

### 3.2 Pressure-relief hole



### 3.3 Control ball



Note: The control ball cannot be retrofitted to standard 2/2-way bodies at a later date.

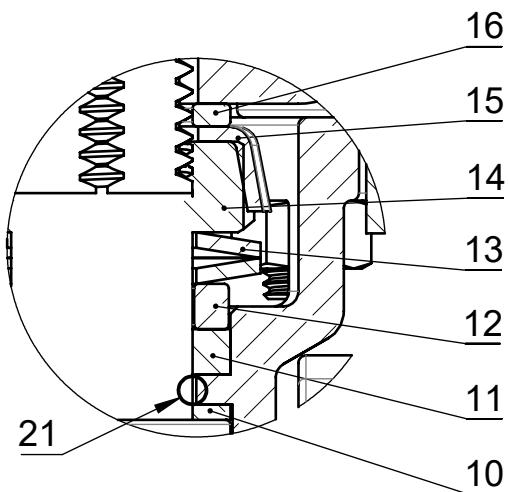
### 3.4 Description

The GEMÜ BB06 metal one-piece 2/2-way ball valve has a bare shaft. The seat seal is made of PTFE.

### 3.5 Function

The product is designed for use in piping. It controls a flowing medium after a manual actuator (see GEMÜ B26), pneumatic actuator (see GEMÜ B46) or motorized actuator (see GEMÜ B56) has been mounted.

## 4 The spindle seal system



Item	Name	Material
10	Seal	PTFE
11	V-ring	PTFE
12	Stainless steel sleeve	SS304-1.4301
13	Spring washer	SS304-1.4301
14	Spindle nut	A2 70
15	Cap	SS304-1.4301
16	Washer	SS304-1.4301
21	O-ring (spindle seal)	FKM

### Long service life due to triple spindle seal

#### - Conical spindle seal:

The seal 10 arranged at an angle of 45° effectively prevents the leakage of media when operating the spindle

#### - O-ring:

Stabilising spindle seal 21 with low wear and long service life

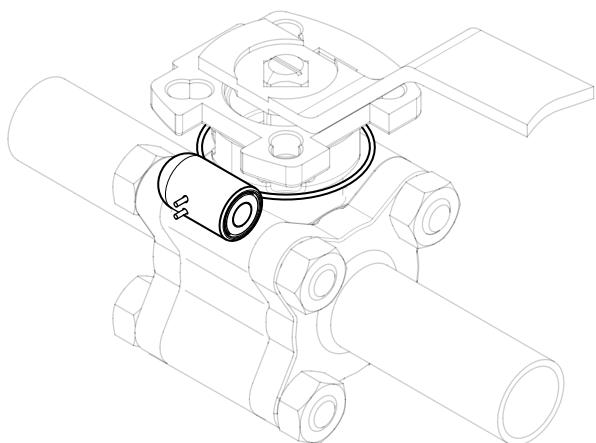
#### - Pretensioned self-adjusting spindle seal:

The spindle packing consists of several V-rings 11, a spring washer 13 and a stainless steel sleeve 12. The spring washer 13 is pretensioned via the spindle nut 14. The pretension force is distributed to the V-rings 11 via the stainless steel sleeve 12, thereby preventing the leakage of media. The pre-tension provides low maintenance and reliable spindle sealing even after a long service life.

## 5 GEMÜ CONEXO

### Installing the RFID chip

In the corresponding design with CONEXO, this product has an RFID chip for electronic identification purposes. The position of the RFID chip can be seen below.



## 6 Correct use

Ball valves are used to isolate media flows.

Only clean, liquid or gaseous media must be used, and the body and seal materials used must be resistant to and suitable for this. Contaminated media and / or applications outside of the pressure and temperature data may lead to damage to the body and, in particular, to the seals on the ball valve.

The "Technical data" chapter describes the permissible pressure / temperature range for these ball valves.

### **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.

### **NOTICE**

#### **Explosion protection (ATEX)**

- ▶ The product is free from potential ignition sources and does not fall under the ATEX Directive 2014/34/EU. It is suitable for use in potentially explosive areas. See the manufacturer's declaration.

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

- Use the product in accordance with the technical data.

Due to the design, in the open and closed position, a low volume of medium may be trapped within the ball or between the ball and the body.

Expansion of the medium due to temperature differences, change in state or a chemical response may lead to a high pressure build-up. In order to prevent unacceptable pressure increases, a special version with pressure-relief hole in the ball is available on request for this case.

### **NOTICE**

#### **Build-up of lint!**

- ▶ For soft-seated ball valves, due to the relative rotations of the stainless steel ball to the seat seal, slight wear of the PTFE seals must always be anticipated. Despite this, the safety of the ball valve is not affected by any potential build-up of lint and the seal materials are compliant in accordance with FDA directives.

## 7 Order data

The order data provide an overview of standard configurations.

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

Products ordered with **bold marked ordering options** are so-called preferred series. Depending on the nominal size, these are available more quickly.

### Order codes

<b>1 Type</b>	<b>Code</b>	<b>5 Ball valve material</b>	<b>Code</b>
Ball valve body, metal, one-piece body, compact flange, ISO 5211, top flange, low-maintenance spindle seal and blow-out proof shaft, with anti-static unit	BB06	1.4408/CF8M (body, connection), 1.4401/SS316 (ball, shaft)	37
<b>2 DN</b>	<b>Code</b>	<b>6 Seal material</b>	<b>Code</b>
DN 15	15	PTFE	5
DN 20	20	FKM O-ring	
DN 25	25		
DN 32	32		
DN 40	40		
DN 50	50		
DN 65	65		
DN 80	80		
DN 100	100		
<b>3 Body/ball configuration</b>	<b>Code</b>	<b>7 Type of design</b>	<b>Code</b>
<b>2/2-way body</b>	<b>D</b>	Standard	
2/2-way body, V-ball, 30° (Kv value, see datasheet)	U	Thermal separation between actuator and valve body via mounting kit	5222
2/2-way body, V-ball, 60° (Kv value, see datasheet)	Y	Thermal separation between actuator and valve body by mounting kit, mounting kit and mounting parts in stainless steel	5227
2/2-way body, V-ball, 90° (Kv value, see datasheet)	W	K-no. 5227, K-no. 7056, 5227 – thermal separation by mounting kit, 7056 – drilled shaft, shortened toggle	5237
		Shortened toggle for construction of feedback units. Shaft face drilled for mounting kit: DN8-DN20 M5 x 12.5/depth of thread 9.0 mm, DN25-DN100 M6 x 15/depth of thread 10.0 mm	7056
<b>4 Connection type</b>	<b>Code</b>	<b>8 Special version</b>	<b>Code</b>
Flange ANSI Class 125/150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D	39	Without	
<b>Flange EN 1092, PN16/PN40, form B DN15 to DN50, Flange EN1092, PN 16, form B DN65 to DN100</b>	<b>68</b>	Special version for oxygen Maximum temperature for medium: 100 °C, Operating pressure limited in accordance with product label data Media-wetted materials cleaned, and grease and seal tested in accordance with DIN EN 1797/ISO 21010	0
		Explosion protection	X
<b>9 CONEXO</b>	<b>Code</b>		
Without			
Integrated RFID chip for electronic identification and traceability	C		

### Order example

Ordering option	Code	Description
1 Type	BB06	Ball valve body, metal, one-piece body, compact flange, ISO 5211, top flange, low-maintenance spindle seal and blow-out proof shaft, with anti-static unit
2 DN	25	DN 25
3 Body/ball configuration	D	2/2-way body
4 Connection type	39	Flange ANSI Class 125/150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D
5 Ball valve material	37	1.4408/CF8M (body, connection), 1.4401/SS316 (ball, shaft)

Ordering option	Code	Description
6 Seal material	5	PTFE FKM O-ring
7 Type of design		Standard
8 Special version		Without
9 CONEXO		Without

## 8 Technical data

### 8.1 Medium

**Working medium:** Corrosive, inert, gaseous and liquid media and steam which have no negative impact on the physical and chemical properties of the body and seal material.  
For special version for oxygen (code O): Only gaseous oxygen.

### 8.2 Temperature

**Media temperature:** -40 – 180 °C  
For media temperatures > 100 °C, we recommend using a mounting kit with adapter between the ball valve and the actuator.  
For the medium gaseous oxygen (special version code O): Media temperature max. 100 °C.

**Ambient temperature:** -40 – 60 °C  
Higher temperatures on request

**Storage temperature:** -60 – 60 °C

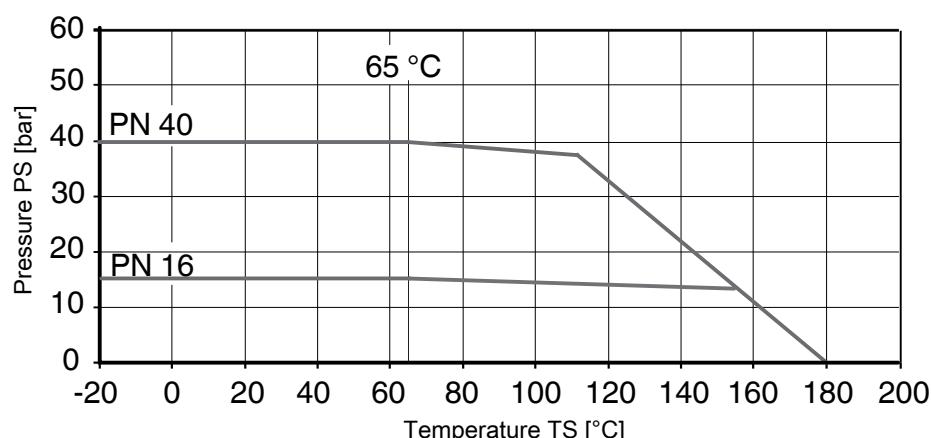
### 8.3 Pressure

**Operating pressure:** 0 – 40 bar  
For the medium gaseous oxygen (special version code O): Operating pressure limited in accordance with product label data.

**Vacuum:** Can be used up to a vacuum of 50 mbar (absolute)  
These values apply to room temperature and air. The values may deviate for other media and other temperatures.

**Leakage rate:** Leakage rate according to ANSI FCI70 – B16.104  
Leakage rate according to EN12266, 6 bar air, leakage rate A

**Pressure/temperature diagram:**



Pressure/temperature data according to the diagram refer to static operating conditions. Strongly fluctuating parameters or parameters that change quickly over time can lead to a reduction in service life. Special applications are to be discussed with your technical contact in advance.

**Pressure rating:** DN 15 – 50: PN40  
DN 65 – 100: PN16

**Kv values:**

DN	NPS	Kv value
15	1/2"	13.0
20	3/4"	34.0
25	1"	60.0
32	1 1/4"	94.0
40	1 1/2"	213.0
50	2"	366.0
65	2 1/2"	595.0
80	3"	935.0
100	4"	1700.0

Kv values in m<sup>3</sup>/h**V-ball 30° (code U)**

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	1/2"	0	0.085	0.085	0.170	0.255	0.425	0.680	0.935	1.360	1.870	2.210
20	3/4"	0	0.085	0.170	0.425	0.595	0.935	1.530	2.040	2.805	3.825	4.590
25	1"	0	0.085	0.255	0.680	1.105	1.955	2.975	4.335	5.961	8.128	8.500
32	1 1/4"	0	0.170	0.340	0.935	1.700	3.145	4.675	6.800	8.500	11.050	12.750
40	1 1/2"	0	0.255	0.510	1.360	2.550	4.250	6.375	9.350	11.900	14.450	17.000
50	2"	0	0.340	1.020	3.230	5.100	8.500	12.750	19.550	26.350	36.550	51.000
65	2 1/2"	0	0.340	0.850	3.400	6.800	10.200	15.300	23.800	31.450	52.700	63.750
80	3"	0	0.425	1.020	3.400	6.800	11.900	19.550	28.050	39.100	55.250	69.700
100	4"	0	0.510	1.700	5.100	12.750	24.650	40.800	60.350	85.000	110.50	135.20

Kv values in m<sup>3</sup>/h**V-ball 60° (code Y)**

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	1/2"	0	0.085	0.085	0.255	0.425	0.765	1.190	1.700	2.805	3.740	5.100
20	3/4"	0	0.085	0.170	0.595	0.850	1.445	2.380	3.400	5.525	7.650	10.200
25	1"	0	0.170	0.340	0.935	1.530	2.890	4.505	6.715	10.460	13.010	17.850
32	1 1/4"	0	0.170	0.510	1.530	2.550	4.675	8.075	10.880	16.150	22.100	33.150
40	1 1/2"	0	0.340	0.680	2.125	3.400	6.800	11.050	16.150	22.950	34.000	44.200
50	2"	0	0.340	1.275	3.910	7.650	14.030	22.950	33.150	46.750	70.550	93.500
65	2 1/2"	0	0.340	1.275	4.250	8.500	17.850	28.900	45.050	63.750	87.550	127.50
80	3"	0	0.425	2.125	5.100	11.900	21.250	34.000	55.250	77.350	108.800	140.30
100	4"	0	0.595	2.550	9.350	21.250	34.000	50.150	76.500	119.900	180.200	302.60

Kv values in m<sup>3</sup>/h

**Kv values:**

V-ball 90° (code W)

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
<b>15</b>	<b>1/2"</b>	0	0.085	0.170	0.340	0.510	0.765	1.275	1.870	3.230	4.590	5.865
<b>20</b>	<b>3/4"</b>	0	0.170	0.340	0.680	1.020	1.700	2.635	3.910	6.800	9.605	11.900
<b>25</b>	<b>1"</b>	0	0.170	0.510	1.530	2.890	4.335	6.885	9.690	13.600	17.850	24.650
<b>32</b>	<b>1 1/4"</b>	0	0.255	0.680	1.700	4.250	6.800	11.900	16.150	23.800	33.150	46.750
<b>40</b>	<b>1 1/2"</b>	0	0.425	0.765	2.975	5.950	11.050	17.000	26.350	35.700	53.550	66.300
<b>50</b>	<b>2"</b>	0	0.595	1.700	5.100	10.200	18.700	29.750	38.250	59.500	89.250	114.800
<b>65</b>	<b>2 1/2"</b>	0	0.425	1.445	5.950	11.900	23.800	40.800	59.500	90.100	136.000	185.300
<b>80</b>	<b>3"</b>	0	0.595	2.975	6.800	15.300	29.750	51.000	76.500	114.800	174.300	263.500
<b>100</b>	<b>4"</b>	0	0.850	2.975	13.600	34.000	63.750	106.300	161.50	250.800	375.700	569.500

Kv values in m³/h

#### 8.4 Product conformities

Pressure Equipment Directive: 2014/68/EU  
Food:

FDA  
Regulation (EC) No. 10/2011  
Regulation (EC) No. 1935/2004

Oxygen: Testing of the seal material based on DIN EN 1797 and ISO 21010:2017 (special version code 0)

#### 8.5 Mechanical data

Torques:

DN	NPS	Breakaway torque
15	1/2"	7
20	3/4"	8
25	1"	10
32	1 1/4"	14
40	1 1/2"	29
50	2"	58
65	2 1/2"	62
80	3"	120
100	4"	174

Torques in Nm

Weight:

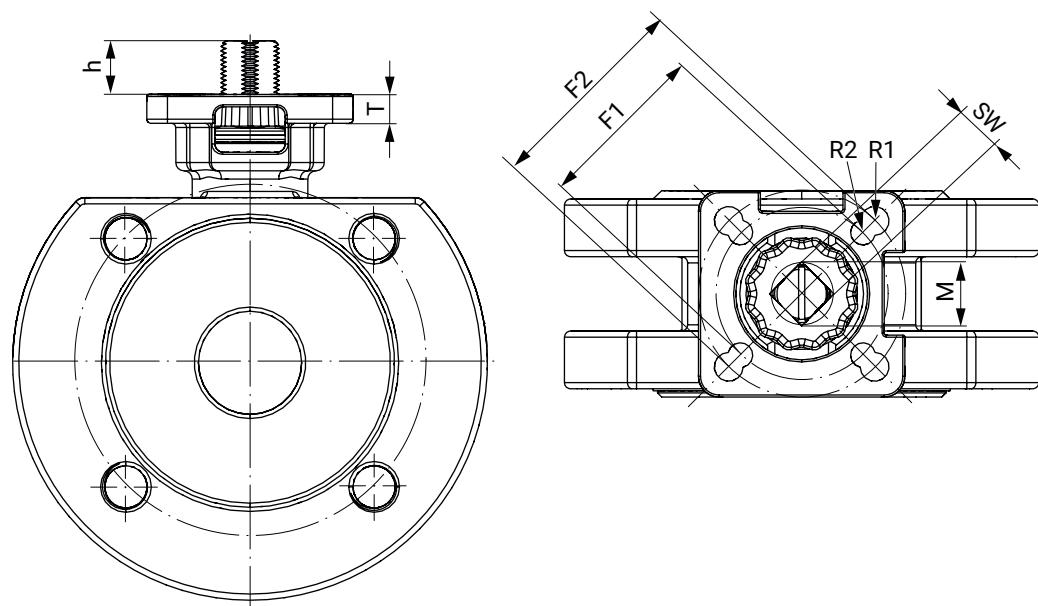
Ball valve

DN	NPS	Weight
15	1/2"	1.3
20	3/4"	2.0
25	1"	2.8
32	1 1/4"	4.2
40	1 1/2"	5.3
50	2"	6.7
65	2 1/2"	11.9
80	3"	14.9
100	4"	20.4

Weights in kg

## 9 Dimensions

### 9.1 Actuator flange

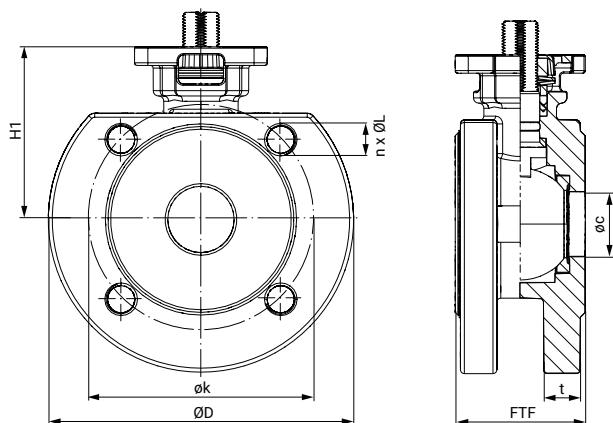


DN	G	F1	R1	F2	R2	SW	h	T	M
15	1/2"	36.0	3.0	42.0	3.0	9.0	9.0	5.0	M12
20	3/4"	36.0	3.0	42.0	3.0	9.0	7.5	5.0	M12
25	1"	42.0	3.0	50.0	3.5	11.0	13.0	7.0	M14
32	1 1/4"	42.0	3.0	50.0	3.5	11.0	13.0	7.0	M14
40	1 1/2"	50.0	3.5	70.0	4.5	14.0	15.0	9.0	M18
50	2"	50.0	3.5	70.0	4.5	14.0	16.0	9.0	M18
65	2 1/2"	70.0	5.0	102.0	6.0	17.0	18.0	10.5	M22
80	3"	70.0	5.0	102.0	6.0	17.0	18.0	10.5	M22
100	4"	70.0	5.0	102.0	6.0	17.0	18.0	10.5	M22

Dimensions in mm

## 9.2 Body dimensions

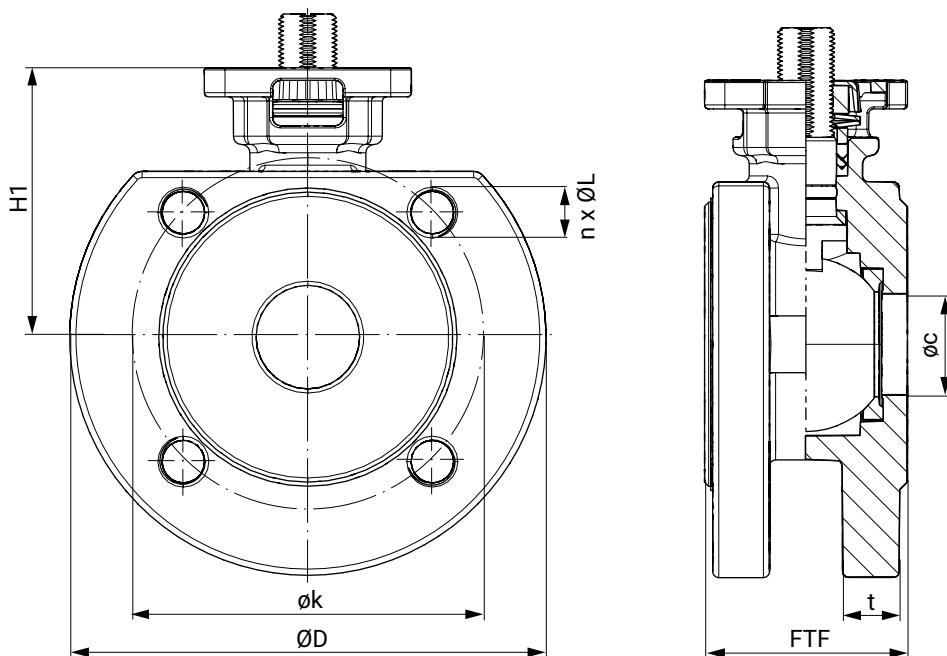
### 9.2.1 Flange (connection code 39)



DN	Øc	ØD	Øk	t	FTF	H1	n x ØL
15	15.0	89.0	60.5	9.2	38.0	48.5	4x1/2-13UNC
20	20.0	99.0	69.8	11.0	40.0	54.0	4x1/2-13UNC
25	25.0	108.0	79.2	13.5	46.0	65.0	4x1/2-13UNC
32	32.0	117.0	88.9	14.0	56.0	78.0	4x1/2-13UNC
40	38.0	127.0	98.6	15.5	65.0	85.0	4x1/2-13UNC
50	50.0	152.0	120.6	17.0	78.0	93.0	4x5/8-11UNC
65	65.0	178.0	139.7	20.5	99.0	107.0	4x5/8-11UNC
80	76.0	190.0	152.4	22.0	116.0	119.0	4x5/8-11UNC
100	100.0	229.0	190.5	22.0	149.0	132.0	8x5/8-11UNC

Dimensions in mm

### 9.2.2 Flange (connection code 68)



DN	Øc	ØD	Øk	t	FTF	H1	n x ØL
15	15.0	82.0	65.0	14.0	42.0	48.5	4 x M12
20	20.0	98.0	75.0	14.0	44.0	54.0	4 x M12

DN	Øc	ØD	Øk	t	FTF	H1	n x ØL
25	25.0	115.0	85.0	14.0	50.0	65.0	4 x M12
32	32.0	140.0	100.0	16.0	60.0	78.0	4 x M16
40	38.0	150.0	110.0	15.0	69.0	85.0	4 x M16
50	50.0	165.0	125.0	15.5	82.0	93.0	4 x M16
65	65.0	185.0	145.0	15.5	103.0	107.0	4 x M16
80	76.0	200.0	160.0	17.0	119.0	119.0	8 x M16
100	100.0	220.0	180.0	17.0	150.0	132.0	8 x M16

Dimensions in mm

## 10 Manufacturer's information

### 10.1 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.

### 10.2 Packaging

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

### 10.3 Transport

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

### 10.4 Storage

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

## 11 Installation in piping

### 11.1 Preparing for installation

#### ⚠ 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.
- Do not reach into the crushing area through the valve body openings.

#### ⚠ 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



##### Falling product!

- Risk of injury and damage to the product
- Observe the weight in the technical data.
- If necessary, use suitable lifting equipment.

#### ⚠ 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!

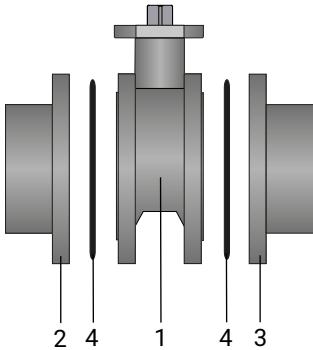
- The tools required for installation and assembly are not included in the scope of delivery.
- Use appropriate, functional and safe tools.

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.

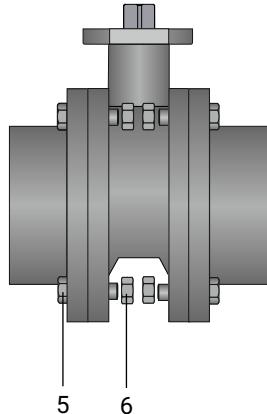
## 11.2 Installation with flanged connections

## NOTICE

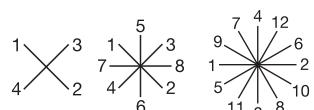
- Observe valid standards for mounting flanges!



1. Ensure sealing surfaces on the mating flanges are clean and undamaged.
2. Only use connector elements made of approved materials.
3. Install the ball valve in the state it is delivered.
4. Carefully align the ball valve body **1** centrally between the pipes with flanges (**2** and **3**).
5. Centre the seals **4** accurately. Seals are not included in the scope of delivery.
6. Connect the ball valve flange and the piping flange using appropriate sealing material and matching bolting. Sealing material and bolts are not included in the scope of delivery.



7. Insert bolts **5** in all holes in the flange.
8. Slightly tighten the bolts **5** and nuts **6** diagonally.



9. Check the alignment of the piping.

10. Tighten the nuts **6** diagonally.

**Comply with appropriate regulations for the connections.**

## 11.3 After the installation

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

## 12 Commissioning

<b>⚠ WARNING</b>	
	<b>Corrosive chemicals!</b> <ul style="list-style-type: none"><li>▶ Risk of caustic burns</li><li>● Wear appropriate protective gear.</li><li>● Completely drain the plant.</li></ul>
<b>⚠ CAUTION</b>	
	<b>Leakage!</b> <ul style="list-style-type: none"><li>▶ Emission of dangerous materials</li><li>● Provide for precautionary measures against exceeding the maximum permissible pressure that may be caused by pressure surges (water hammer).</li></ul>

1. Check the tightness and the function of the product (close and reopen the product).
2. Flush the piping system of new plant and following repair work (the product must be fully open).
  - ⇒ Harmful foreign matter has been removed.
  - ⇒ The product is ready for use.
3. Commission the product.

## 13 Operation

The product is operated via manual, pneumatic or motorized actuators.

- Observe the enclosed actuator instructions.

## 14 Troubleshooting

Error	Possible cause	Troubleshooting
The product does not open or does not open fully	Operating pressure too high	Operate the product with operating pressure specified in datasheet
	Foreign matter in the product	Remove and clean the product
The product does not close or does not close fully	Operating pressure too high	Operate the product with operating pressure specified in datasheet
	Foreign matter in the product	Remove and clean the product
Connection between valve body and piping leaking	Incorrect installation	Check installation of valve body in piping
	Flange bolting loose/thread leaking	Retighten flange bolting / reseal threads
	Flange seals faulty	Replace flange seals
	Sealing material faulty	Replace sealing material
	Threaded connections / unions loose	Tighten threaded connections / unions
Valve body leaking	Incorrect installation	Check installation of valve body in piping
	Seat and flange seals incorrectly mounted	Mount seat and flange seals correctly
	Seat and flange seals faulty	Replace seat and flange seals
	Valve body leaking or corroded	Check valve body for damage, replace valve body if necessary

## 15 Inspection/maintenance

<b>⚠ WARNING</b>	
	<b>Risk of crushing due to moving parts when the valve is not installed!</b> <ul style="list-style-type: none"> <li>▶ Upper limbs may get into the valve body openings while working on the valve.</li> <li>● Ensure that the valve is in the respective end position.</li> <li>● Do not reach into the crushing area through the valve body openings.</li> </ul>

<b>⚠ WARNING</b>	
	<b>The equipment is subject to pressure!</b> <ul style="list-style-type: none"> <li>▶ Risk of severe injury or death</li> <li>● Depressurize the plant or plant component.</li> <li>● Completely drain the plant or plant component.</li> </ul>

<b>⚠ CAUTION</b>	
	<b>Hot plant components!</b> <ul style="list-style-type: none"> <li>▶ Burns</li> <li>● Only work on plant that has cooled down.</li> <li>● Wear protective gear.</li> </ul>

<b>⚠ CAUTION</b>	
<ul style="list-style-type: none"> <li>● Servicing and maintenance work must only be performed by trained personnel.</li> <li>● In case of doubt, contact GEMÜ prior to commissioning.</li> </ul> <ol style="list-style-type: none"> <li>1. Use appropriate protective gear as specified in plant operator's guidelines.</li> <li>2. Shut off plant or plant component.</li> <li>3. Secure against recommissioning.</li> <li>4. Depressurize the plant or plant component.</li> </ol>	<p>Ball valves are maintenance-free. No lubrication or routine maintenance of the ball valve shaft is required. The shaft is guided through a PTFE gland packing in the ball valve body. The shaft seal is pretensioned and self-adjusting. However, the operator must carry out regular visual examinations of the ball valves, dependent on the operating conditions and the potential danger in order to prevent leakage and damage.</p> <p>If there is a leakage at the spindle nut, this can generally be rectified by retightening the spindle nut. However, overtightening the spindle nut must be avoided.</p> <p>Usually, retightening by between 30° and 60° will be sufficient to rectify the leakage.</p>

## 16 Removal from piping

1. Remove the clamp or screw connections in reverse order to installation.
2. Remove welded or solvent cemented connections using a suitable cutting tool.
3. Observe the safety information and accident prevention regulations.

## 17 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.

## 18 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.

**19 EU Declaration of Conformity**

Version 1

**EU-Konformitätserklärung****EU Declaration of Conformity**

Wir, die Firma

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

We, the company

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 BB06**Product:** GEMÜ BB06**Produktnamen:** Kompaktfansch-Kugelhahn mit freiem Wellenende**Product name:** Compact flanged ball valve with bare shaft**Richtlinien/Verordnungen:****Directives/Regulations:**PED 2014/68/EU<sup>1)</sup>**Folgende harmonisierte Normen (oder Teile hieraus) wurden angewandt:****The following harmonized standards (or parts thereof) have been applied:**

EN ISO 1983:2013

**Weitere angewandte Normen:**

DIN EN ISO 5211; DIN EN 558; AD 2000

<sup>1)</sup> PED 2014/68/EU

**Einteilung gemäß Druckgeräterichtlinie 2014/68/EU, Artikel 4 und Anhang II:**  
 Fluidklasse 1 (gasförmig oder flüssig),  
 Diagramm 6, Kategorie II  
 Instabile Gase sind ausgeschlossen.

<sup>1)</sup> PED 2014/68/EU

**Classification acc. Pressure Equipment Directive 2014/68/EU, Article 4 and Annex II:**  
 Class 1 fluid (gaseous or liquid)

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

Chart 6, Category II  
 Unstable gases are excluded.

**Kennnummer der benannten Stelle:** 0035  
 Nr. des QS-Zertifikats: 01 202 926/Q-02 0036

**Notified body:**

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

**Angewandte(s) Konformitätsbewertungsverfahren:** Modul H

**ID number of the notified body:** 0035

**Hinweis für Produkte mit einer Nennweite ≤ DN 25:**

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

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.

**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.

i.V. M. Barghoorn  
 Leiter Globale Technik

Ingelfingen, 29.10.2025

