

## **GEMÜ BB06**

### **Compact flanged ball valve with bare shaft**



#### **Features**

- High flow rates
- Full-flow bore
- Compact design
- ATEX version available as an option

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#### **Description**

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

#### **Technical specifications**

- Media temperature: -20 to 180 °C
- Ambient temperature: -20 to 60 °C
- Operating pressure : 0 to 40 bar
- Nominal sizes: DN 15 to 100
- Body configurations: 2/2-way body
- Connection types: Flange
- Connection standards: ANSI | EN
- Body materials: 1.4408, investment casting material
- Seal materials: PTFE
- Conformities: ATEX

Technical data depends on the respective configuration



## Product line



GEMÜ BB06



GEMÜ B26



GEMÜ B46



GEMÜ B56

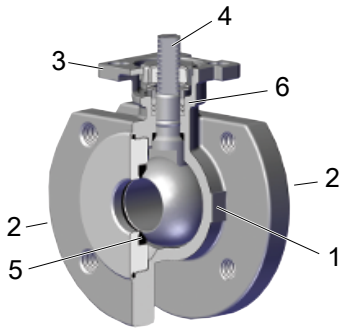
### Operation

With bare shaft	●	-	-	-
Manual	-	●	-	-
Pneumatic	-	-	●	-
Motorized	-	-	-	●
<b>Nominal sizes</b>	DN 15 to 100	DN 15 to 100	DN 15 to 100	DN 15 to 100
<b>Media temperature</b>	-20 to 180 °C	-20 to 180 °C	-20 to 180 °C	-20 to 180 °C
<b>Operating pressure</b>	0 to 40 bar	0 to 40 bar	0 to 40 bar	0 to 40 bar
<b>Connection types</b>				
Flange	●	●	●	●

\* depending on version and/or operating parameters

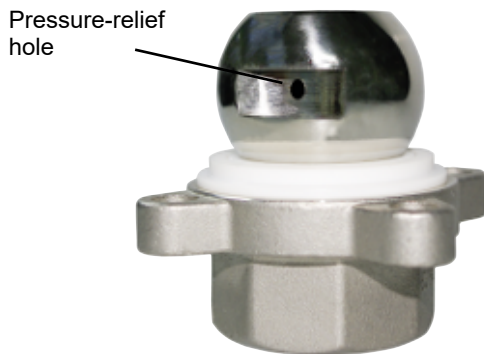
## Product description

### Construction



Item	Name	Materials
1	Ball valve body	1.4408 / CF8M
2	Pipe connections	1.4408 / CF8M
3	Mounting flange ISO 5211	1.4408 / CF8M
4	Ball valve shaft	1.4401 / SS316
5	Seal	PTFE
6	Antistatic unit	1.4408

### Pressure-relief hole



### Control ball

Control ball	Code U	Code Y	Code W

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

## 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:**

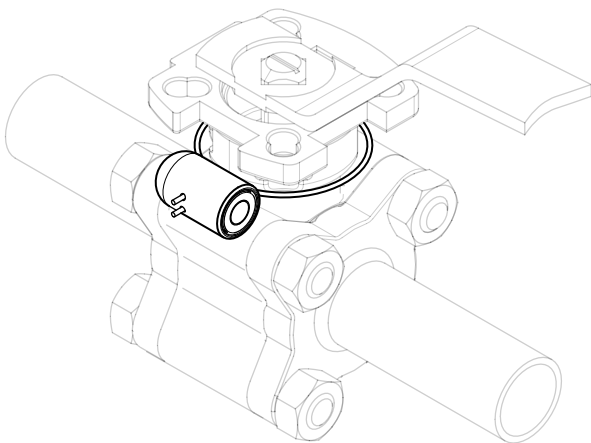
[www.gemu-group.com/conexo](http://www.gemu-group.com/conexo)

### Ordering

GEMÜ Conexo must be ordered separately with the ordering option "CONEXO" (see order data).

### Installing the RFID chip

In the corresponding design with CONEXO, this product has an RFID chip (1) for electronic recognition. The position of the RFID chip can be seen below.



## Application

- Heating systems
- Beverage industry
- Foodstuff industry
- Chemical industry
- Drinking water installations
- Processing industry
- HVAC

## 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	3 Continuation of Body/ball configuration	Code
Ball valve body, metal, one-piece, compact flange, ISO 5211, top flange	BB06	2/2-way body, V-ball 90° (for Kv value see datasheet)	W

2 DN	Code	4 Connection type	Code
DN 15	15	Flange ANSI Class 125/150 RF	39
DN 20	20	Flange EN 1092, PN 16/PN40, form B DN 15 to DN 80, flange EN 1092, PN 16, form B DN 100 only	68
DN 25	25		
DN 32	32		
DN 40	40		
DN 50	50		
DN 65	65		
DN 80	80		
DN 100	100		

3 Body/ball configuration	Code	5 Ball valve material	Code
2/2-way body	D	1.4408 / CF8M (body, connection), 1.4401 / SS316 (ball, shaft)	37
2/2-way body, V-ball 30° (for Kv value see datasheet)	U		
2/2-way body, V-ball 60° (for Kv value see datasheet)	Y		

6 Seal material	Code	7 Special version	Code
PTFE	5	without	
		ATEX certification	X

8 CONEXO	Code
without	
Integrated RFID chip for electronic identification and traceability	C

## Order example

Order option	Code	Description
1 Type	BB06	Ball valve body, metal, one-piece, compact flange, ISO 5211, top flange
2 DN	25	DN 25
3 Body/ball configuration	D	2/2-way body
4 Connection type	39	Flange ANSI Class 125/150 RF
5 Ball valve material	37	1.4408 / CF8M (body, connection), 1.4401 / SS316 (ball, shaft)
6 Seal material	5	PTFE
7 Special version		without
8 CONEXO		without

## Technical data

### 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.

### Temperature

**Media temperature:** -20 to 180 °C

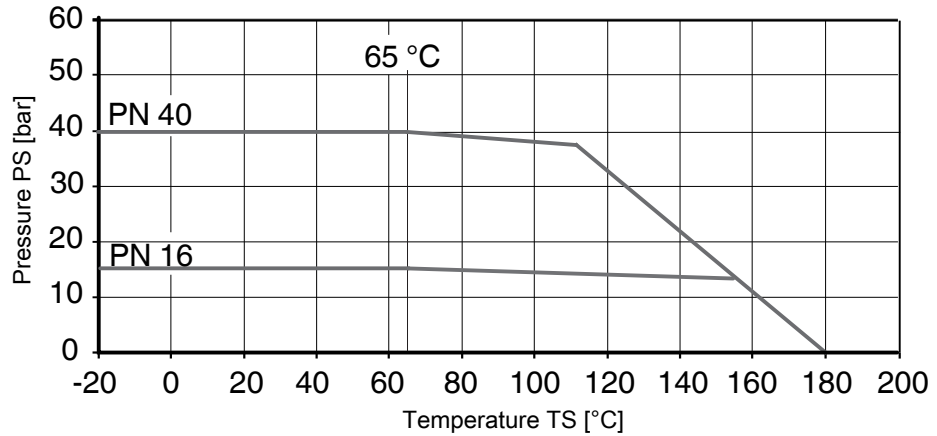
**Ambient temperature:** -20 to 60 °C  
Higher temperatures on request

**Storage temperature:** 0 to 40 °C

### Pressure

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

**Kv values:**

DN	NPS	Kv values
15	1/2"	12.8
20	3/4"	29.1
25	1"	47.8
32	1¼"	2.6
40	1½"	0.2
50	2"	213.7
65	2½"	273.3
80	3"	495.3
100	4"	871.1

Kv values in m³/h

**Kv values:**

**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	0.17	0.255	0.425	0.68	0.935	1.36	1.87	2.21
20	3/4"	0	0.085	0.17	0.425	0.595	0.935	1.53	2.04	2.805	3.825	4.59
25	1"	0	0.085	0.255	0.68	1.105	1.955	2.975	4.335	8.33	7.225	8.5
32	1¼"	0	0.17	0.34	0.935	1.7	3.145	4.675	6.8	8.5	11.05	12.75
40	1½"	0	0.255	0.51	1.36	2.55	4.25	6.375	9.35	11.9	14.45	17
50	2"	0	0.34	1.02	3.23	5.1	8.5	12.75	19.55	26.35	36.55	51
65	2½"	0	0.34	0.85	3.4	6.8	10.2	15.3	23.8	31.45	52.7	63.75
80	3"	0	0.425	1.02	3.4	6.8	11.9	19.55	28.05	39.1	55.25	69.7
100	4"	0	0.51	1.7	5.1	12.75	24.65	40.8	60.35	85	110.5	135.2

Kv values in m³/h

**V-ball 60° (code V)**

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	1.19	1.7	2.805	3.74	5.1
20	3/4"	0	0.085	0.17	0.595	0.85	1.445	2.38	3.4	5.525	7.65	10.2
25	1"	0	0.17	0.34	0.935	1.53	2.89	4.505	6.715	10.46	13.01	17.85
32	1¼"	0	0.17	0.51	1.53	2.55	4.675	8.075	10.88	16.15	22.1	33.15
40	1½"	0	0.34	0.68	2.125	3.4	6.8	11.05	16.15	22.95	34	44.2
50	2"	0	0.34	1.275	3.91	7.65	14.03	22.95	33.15	46.75	70.55	93.5
65	2½"	0	0.34	1.275	4.25	8.5	17.85	28.9	45.05	63.75	87.55	127.5
80	3"	0	0.425	2.125	5.1	11.9	21.25	34	55.25	77.35	108.8	140.3
100	4"	0	0.595	2.55	9.35	21.25	34	50.15	76.5	119.9	180.2	302.6

Kv values in m³/h

**V-ball 90° (code W)**

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	1/2"	0	0.085	0.17	0.34	0.51	0.765	1.275	1.87	3.23	4.59	5.865
20	3/4"	0	0.17	0.34	0.68	1.02	1.7	2.635	3.91	6.8	9.605	11.9
25	1"	0	0.17	0.51	1.53	2.89	4.335	6.885	9.69	13.6	17.85	24.65
32	1¼"	0	0.255	0.68	1.7	4.25	6.8	11.9	16.15	23.8	33.15	46.75
40	1½"	0	0.425	0.765	2.975	5.95	11.05	17	26.35	35.7	53.55	66.3
50	2"	0	0.595	1.7	5.1	10.2	18.7	29.75	38.25	59.5	89.25	114.8
65	2½"	0	0.425	1.445	5.95	11.9	23.8	40.8	59.5	90.1	136	185.3
80	3"	0	0.595	2.975	6.8	15.3	29.75	51	76.5	114.8	174.3	263.5
100	4"	0	0.85	2.975	13.6	34	63.75	106.3	161.5	250.8	375.7	569.5



Kv values in m³/h



## Product conformities

**Pressure Equipment Directive:** 2014/68/EU

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

**ATEX marking:**

**Up to DN 65**  
 Gas:  II 2G Ex h IIC T6 ... T2 Gb X  
 Dust:  II -/2D Ex h -/IIIC T180 °C -/Db X

**DN 80 and 100**  
 Gas:  II 2G Ex h IIB T6 ... T2 Gb X  
 Dust:  II -/2D Ex h -/IIIC T180 °C -/Db X

## Mechanical data

**Torques:**

DN	NPS	Breakaway torque
15	1/2"	7
20	3/4"	8
25	1"	10
32	1¼"	14
40	1½"	29
50	2"	58
65	2½"	62
80	3"	120
100	4"	174

Torques in Nm

**Weight:**

**Ball valve**

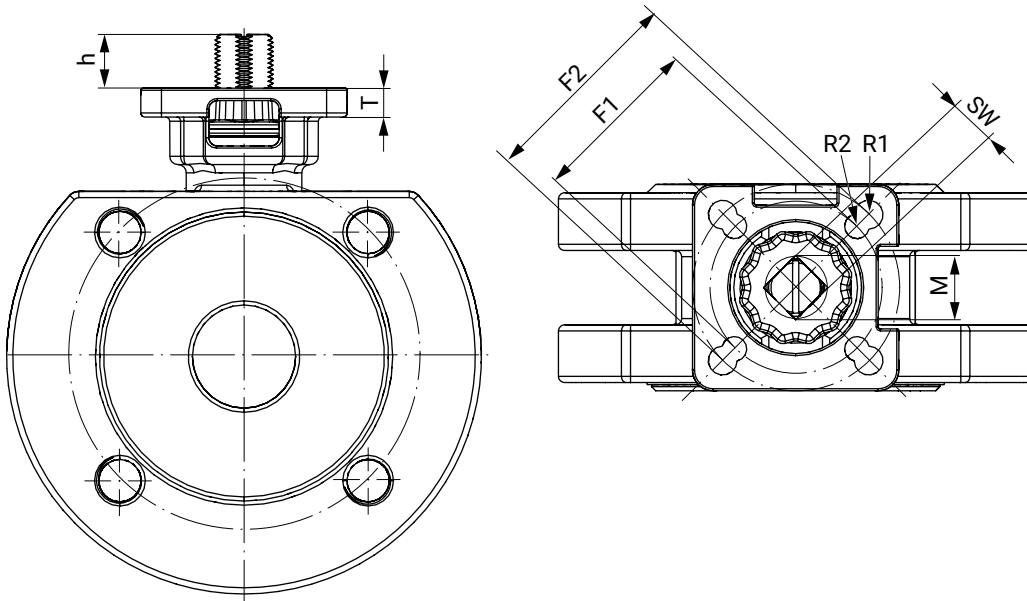
DN	NPS	Weight
15	1/2"	1.3
20	3/4"	2.0
25	1"	2.8
32	1¼"	4.2
40	1½"	5.3
50	2"	6.7
65	2½"	11.9
80	3"	14.9
100	4"	20.4

Weights in kg



## Dimensions

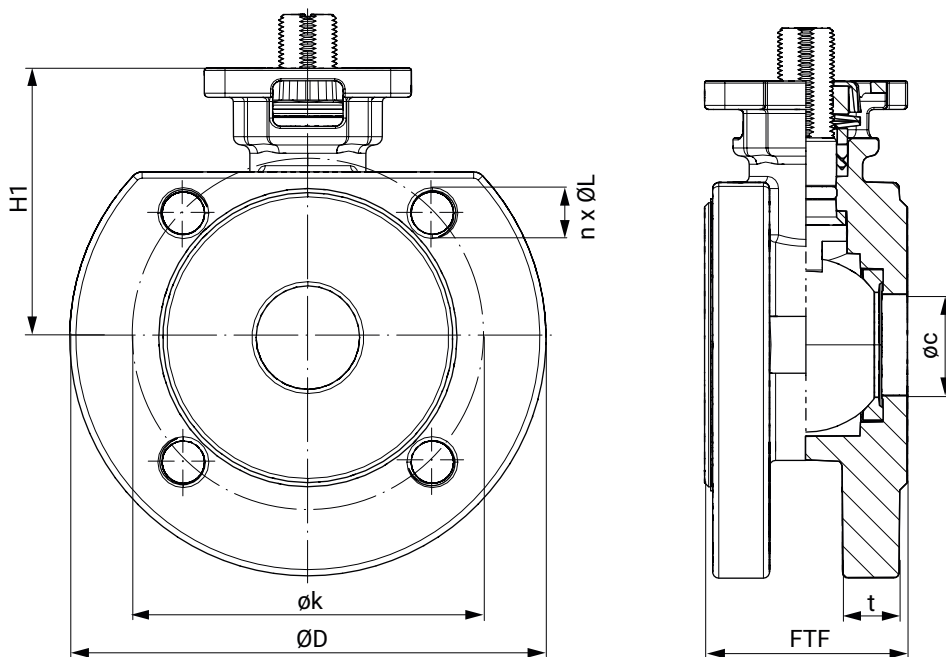
### Top flange



DN	G	F1	R1	F2	R2	SW	h	T	M
15	1/2"	36	3.0	42	3.0	9	9.5	5.5	M12
20	3/4"	36	3.0	42	3.0	9	7.5	5.5	M12
25	1"	42	3.5	50	3.5	11	13.0	7.0	M14
32	1 1/4"	42	3.5	50	3.5	11	13.0	6.5	M14
40	1 1/2"	50	4.5	70	3.5	14	15.0	7.5	M18
50	2"	50	4.5	70	3.5	14	16.0	8.5	M18
65	2 1/2"	50	4.5	70	3.5	17	18.0	8.5	M22
80	3"	70	5.5	102	4.5	17	18.0	10.5	M22
100	4"	102	5.5	125	4.5	17	18.0	10.5	M22

Dimensions in mm

**Body dimensions**



DN	$\varnothing c$	$\varnothing D$	$\varnothing k$	t	FTF	H1	n x $\varnothing L$
15	15	82	65	14	42	48.5	4 x M12
20	20	98	75	14	44	54.0	4 x M12
25	25	115	85	14	50	65.0	4 x M12
32	32	140	100	16	60	78.0	4 x M16
40	38	150	110	15	69	85.0	4 x M16
50	50	165	125	15	82	93.0	4 x M16
65	65	185	145	15	103	107.0	4 x M16
80	76	200	160	17	119	119.0	8 x M16
100	100	220	180	17	150	132.0	8 x M16

Dimensions in mm

## Add-on components



### GEMÜ ADA

#### Pneumatic quarter turn actuator

GEMÜ ADA is a pneumatic double acting quarter turn actuator. It works according to the double piston rack and pinion principle and is suitable for mounting to butterfly valves or ball valves.



### GEMÜ ASR

#### Pneumatic quarter turn actuator

GEMÜ ASR is a pneumatic single acting quarter turn actuator. It works according to the double piston rack and pinion principle and is suitable for mounting to butterfly valves or ball valves.



### GEMÜ 9428

#### Motorized quarter turn actuator

The product is a motorized quarter turn actuator. The actuator is designed for DC or AC operating voltages. A manual override and an optical position indicator are integrated as standard. The torque in the end positions is increased. This enables a closing curve matched to the valves.



### GEMÜ J4C

#### Motorized quarter turn actuator

The J4C actuator is a motorized quarter turn actuator. The motor is designed for DC and AC operating voltages. A manual override and an optical position indicator are integrated as standard. The end positions are potential-free and adjustable.



### GEMÜ AB26

#### Hand lever or gearbox with handwheel

Hand lever or gearbox with handwheel with standard flange acc. to EN ISO 5211 for the manual operation of butterfly valves.



### GEMÜ LSR

#### Electrical position indicators for quarter turn actuators

The GEMÜ LS series electrical position indicators are used to indicate and monitor the position of quarter turn valves. Depending on the version, they have either one or two mechanical microswitches or 2-wire or 3-wire proximity switches.



## **GEMÜ LSC**

### **Limit switch box for quarter turn actuators**

The GEMÜ LSC limit switch box is suitable for mounting to manually and pneumatically operated quarter turn valves. It is also fitted with an optical position indicator for visual confirmation of position.



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