GEMÜ B54

Motorized ball valve

Features

- Checked delta ferrite material < 3% (1.4435)
- Material certificates for media wetted components
- Media wetted surfaces according to ASME SF5 (Ra 0.51 µm)
- Suitable for vacuum applications
- Optionally available with cavity-filled seat
- Butt weld spigots in extended orbital welding design
- Ball valve body assembled free of oil and grease

Description

The GEMÜ B54 3-piece 2/2-way metal ball valve is motorized. Various on/off or control actuators are available.The 1.4435 stainless steel alloy material composition used for the ball valve body (compliant with 316L) with a low delta ferrite proportion of < 3% is particularly suited to applications in the supply sector for the pharmaceutical, foodstuffs processing and biotechnology (such as water treatment and sterile steam generation) industries. Only those plastics which are compliant with FDA, USP Class VI and Regulation (EU) No.10/2011 are used for the seals.

Technical specifications

- **Media temperature:** -10 to 220 °C
- **Ambient temperature:** 0 to 60 °C
- **Operating pressure :** 0 to 63 bar
- **Nominal sizes:** DN 8 to 100
- **Body configurations:** 2/2-way body
- **Connection types:** Clamp I Spigot
- **Connection standards:** ASME I DIN I ISO
- **Body materials:** 1.4435 (316L), investment casting material
- **Seal materials:** PTFE TFM™
- **Supply voltage:** 100 - 250 V, 50/60 Hz I 12 V AC, 50/60 Hz I 12 V DC I 230 V AC, 50 Hz I 24 - 240 V AC/DC I 24 V AC, 50/60 Hz I 24 V DC
- **Operating time 90°:** 4 to 58 s
- **Protection class:** IP 65, IP 67, IP 68

Technical data depends on the respective configuration

further information
webcode: GW-B54

Product line

				
	GEMÜ BB04	**GEMÜ B24**	**GEMÜ B44**	**GEMÜ B54**
Operation				
With bare shaft	●	-	-	-
Manual	-	●	-	-
Pneumatic	-	-	●	-
Motorized	-	-	-	●
Nominal sizes	DN 8 to 100	DN 8 to 100	DN 8 to 100	DN 8 to 100
Media temperature	-10 to 220 °C	-10 to 220 °C	-10 to 220 °C	-10 to 220 °C
Operating pressure *	0 to 63 bar	0 to 63 bar	0 to 63 bar	0 to 63 bar
Connection types				
Clamp	●	●	●	●
Spigot	●	●	●	●

* depending on version and/or operating parameters

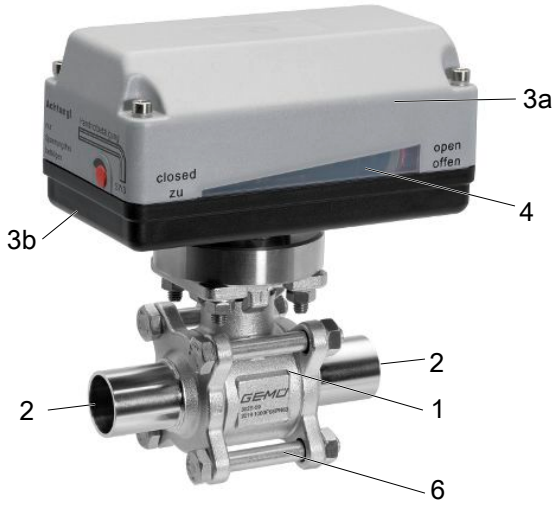
Motorized actuators GEMÜ, J+J, Bernard

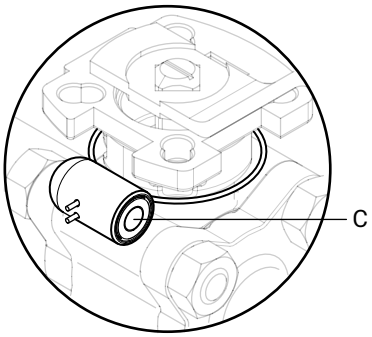
				
	GEMÜ 9428	**GEMÜ 9468**	**GEMÜ J4C**	**GEMÜ BC**
Manufacturer	GEMÜ	GEMÜ	J+J	Bernard Controls
Manufacturer type	9428	9468	J4C	AQ, AQL
Torques	6 to 55 Nm	70 to 200 Nm	20 to 300 Nm	50 to 500 Nm
Duty cycle	100 % (12 V/24 V) 40 % (100 - 250 V)	30 % (ON/OFF actuator) 50 % (control actuator)	75 %	30 % (ON/OFF actuator) 50 % (control actuator)
Heating	No	No	Yes	Yes
Voltage				
100 - 250 V, 50/60 Hz	●	-	-	-
12 V AC, 50/60 Hz	●	-	-	-
12 V DC	●	-	●	-
230 V AC, 50 Hz	●	-	-	●
230 V AC, 60 Hz	-	-	-	●
24 - 240 V AC/DC	-	-	●	-
24 V AC, 50/60 Hz	●	-	-	-
24 V DC	●	●	-	●
Protection class	IP 65	IP 65	IP 67	IP 68
Ambient temperature	-10 to 60 °C	-10 to 60 °C	-20 to 70 °C	-40 to 60 °C
Housing materials				
ABS	-	●	-	-
Aluminium	-	●	-	●
Polyamide (PA6)	-	-	●	-
PP	●	-	-	-
Versions				
Limit switches	●	●	●	●
ON/OFF actuator	●	●	-	●
Optional battery pack	-	-	●	-
Optional on-site control	-	-	-	●
Optional positioner	-	-	●	-
Optional positioning actuator	-	●	●	●
Optional potentiometer	-	●	-	●
Optionally 3 positions	-	-	●	-

Comparison of actuator applications

				
	GEMÜ 9428	**GEMÜ 9468**	**GEMÜ J4C**	**GEMÜ BC**
Range of functions				
Use in non-aggressive environment (up to C3)	●	●	●	●
Use in aggressive environment (C5)	●	●	●	●
Use in protected outdoor areas	●	●	●	●
Use in unprotected outdoor areas	●	●	●	●
Applications with many/ frequent cycle duties	●	●	●	●
Fail-safe option	●	●	●	●
Positioning application	●	●	●	●
Industrial sectors				
Chemical processes	●	●	●	●
Surface finishing	●	●	●	●
Water treatment	●	●	●	●
Mechanical engineering	●	●	●	●
Power generation and environmental systems	●	●	●	●
Food processing technology	●	●	●	●
Semiconductor	●	●	●	●
Medical systems	●	●	●	●
Pharmaceutical industry	●	●	●	●

Product description



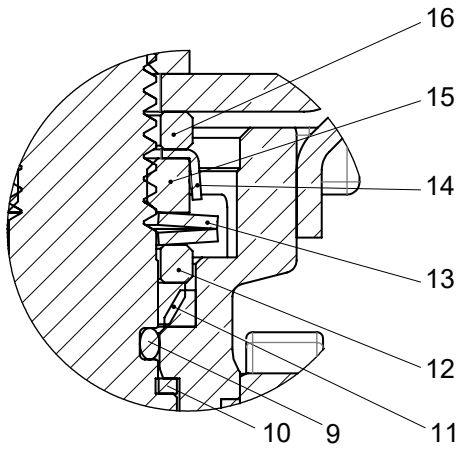


Item	Name	Materials
1	Ball valve body	ASTM A351/1.4435 (316L)
2	Pipe connections	ASTM A351/1.4435 (316L)
3a	Actuator housing cover Actuator version 1006,1015 Actuator version 3035, 3055 Actuator version 4100, 4200	 PPO (10% glass fibre reinforced) PP (30% glass fibre reinforced) Aluminium
3b	Actuator housing base Actuator version 1006, 1015, 3035, 3055 Actuator version 4100, 4200	 PP (30% glass fibre reinforced) Aluminium
4	Optical position indicator	PP-R natural
6	Bolt	A2 70
	Seals	TFM
C	CONEXO RFID chip (see “GEMÜ CONEXO“, page 33)	

Application

- Water treatment
- Steam processing
- CIP/SIP
- Waste water treatment
- Storage and distribution
- Drying

The spindle seal system



Item	Name	Material
9	O-ring	Viton
10	Seal	TFM
11	V-ring	TFM
12	Stainless steel sleeve	SS304 – 1.4301
13	Spring washer	SS304 – 1.4301
14	Cap	SS304 – 1.4301
15	Spindle nut	A2 70
16	Washer	SS304 – 1.4301

Long service life due to double spindle seal

- Conical spindle seal:
The seal **10** arranged at an angle of 45° effectively prevents the leakage of medium when operating the spindle
- 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 pretension provides low maintenance and reliable spindle sealing even after a long service life.

Actuator assignment

GEMÜ actuator

GEMÜ type	Actuator version (code)	Control module (code) [1]	Voltage/Frequency				
			12 V DC (code B1)	12 V AC (code B4)	24 V DC (code C1)	24 V AC (code C4)	100-250 V AC (code O4)
9428	1006	A0, AE	X	X	X	X	-
	1015		X	-	X	-	-
	3035		-	-	X	-	X
	3055		-	-	X	-	-
9468	4100	00, 0E, 0P	-	-	X	-	-
	4200		-	-	X	-	-

1) **Control module**
Code 00: ON/OFF actuator, relay, not reversible
Code 0E: ON/OFF actuator, 2 additional potential-free limit switches, relay, not reversible
Code 0P: ON/OFF actuator, potentiometer output, relay, not reversible
Code A0: ON/OFF actuator
Code AE: ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)

TFM 1600 (FDA certification), cavity filled (code 5H)

DN	NPS	Actuator version (code)					
		1006	1015	3035	3055	4100	4200
8	1/4"	X	-	-	-	-	-
10	3/8"	X	-	-	-	-	-
15	1/2"	-	X	-	-	-	-
20	3/4"	-	X	-	-	-	-
25	1"	-	-	X	-	-	-
32	1¼"	-	-	X	-	-	-
40	1½"	-	-	-	X	-	-
50	2"	-	-	-	X	-	-
65	2½"	-	-	-	-	X	-
80	3"	-	-	-	-	X	-
100	4"	-	-	-	-	-	X

Seal material TFM 1600 (FDA certification) (code 5T)

DN	NPS	Actuator version (code)				
		1006	1015	3035	4100	4200
8	1/4"	X	-	-	-	-
10	3/8"	X	-	-	-	-
15	1/2"	-	X	-	-	-
20	3/4"	-	X	-	-	-
25	1"	-	X	-	-	-
32	1¼"	-	X	-	-	-
40	1½"	-	-	X	-	-
50	2"	-	-	X	-	-
65	2½"	-	-	-	X	-
80	3"	-	-	-	X	-
100	4"	-	-	-	-	X

J+J actuator

J+J - Voltage/Frequency

Voltage/Frequency	Code	Actuator version (code)				
		J4C20	J4C35	J4C55	J4C14	J4C30
24 – 240 V AC/DC	**U5**	X	X	X	X	X

J+J - Control module

Control module	Code [1)]	Actuator version (code)				
		J4C20	J4C35	J4C55	J4C14	J4C30
Open/close	**A3**	X	X	X	X	X
	AE	X	X	X	X	X
	AE1	X	X	X	X	X
	AE2	X	X	X	X	X
	AP	X	X	X	X	X
	AP1	X	X	X	-	-
Positioner	**E1**	X	X	X	X	X
	E11	X	X	X	-	-
	E2	X	X	X	X	X
	E22	X	X	X	-	-

1) **Control module**
Code A3: ON/OFF 3-position actuator, additional potential-free limit switches
Code AE: ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)
Code AE1: ON/OFF actuator, 2 additional potential-free limit switches, BSR battery pack (NC)
Code AE2: ON/OFF actuator, 2 additional potential-free limit switches, BSR battery pack (NO)
Code AP: ON/OFF actuator, potentiometer output, Class A (EN15714-2)
Code AP1: ON/OFF actuator, 2 additional potential-free limit switches, potentiometer output 5 kOhm, Failsafe battery pack (NC), preferred direction adjustable
Code E1: Control actuator, external set value 0-10 VDC
Code E11: Positioner DPS, external set value 0-10V, BSR battery pack (NC)
Code E2: Control actuator, external set value 0/4-20 mA
Code E22: Positioner DPS, external set value 4-20mA, BSR battery pack (NO)

TFM 1600 (FDA certification), cavity filled (code 5H)

DN	NPS	Actuator version (code)			
		J4C20	J4C55	J4C14	J4C30
8	**1/4"**	X	-	-	-
10	**3/8"**	X	-	-	-
15	**1/2"**	X	-	-	-
20	**3/4"**	X	-	-	-
25	**1"**	X	-	-	-
32	**1¼"**	X	-	-	-
40	**1½"**	-	X	-	-
50	**2"**	-	X	-	-
65	**2½"**	-	-	X	-
80	**3"**	-	-	X	-
100	**4"**	-	-	-	X

Seal material TFM 1600 (FDA certification) (code 5T)

DN	NPS	Actuator version (code)		
		J4C20	J4C35	J4C14
8	1/4"	X	-	-
10	3/8"	X	-	-
15	1/2"	X	-	-
20	3/4"	X	-	-
25	1"	X	-	-
32	1¼"	X	-	-
40	1½"	-	X	-
50	2"	-	X	-
65	2½"	-	-	X
80	3"	-	-	X
100	4"	-	-	X

Bernard BC actuator

Bernard Controls BC - Voltage/Frequency

Voltage/Frequency	Code	Actuator version (code)					
		BC05	BC10	BC15	BC25	BC1L	BC3L
230 V / 50 Hz	L2	X	X	X	X	-	-
24 V DC oder 230 V 50/60 Hz	Y5	-	-	-	-	X	X

Bernard Controls BC - Control modules

Control module (code)	Actuator version (code)					
	BC05	BC10	BC15	BC25	BC1L	BC3L
AB	-	-	-	X	-	-
AE	X	X	X	-	X	X
AP	X	X	X	X	X	X
AT	X	X	X	X	X	X
E2	X	X	X	X	X	X
ALS	X	X	X	X	-	-
ELS	X	X	X	X	-	-

TFM 1600 (FDA certification), cavity filled (code 5H)

DN	NPS	Actuator version (code)					
		BC1L	BC3L	BC05	BC10	BC15	BC25
8	1/4"	X	-	-	-	-	-
10	3/8"	X	-	-	-	-	-
15	1/2"	X	-	-	-	-	-
20	3/4"	X	-	-	-	-	-
25	1"	-	X	-	-	-	-
32	1¼"	-	X	-	-	-	-
40	1½"	-	-	X	-	-	-
50	2"	-	-	X	-	-	-
65	2½"	-	-	-	X	-	-
80	3"	-	-	-	-	X	-
100	4"	-	-	-	-	-	X

Seal material TFM 1600 (FDA certification) (code 5T)

DN	NPS	Actuator version (code)			
		BC1L	BC3L	BC10	BC25
8	1/4"	X	-	-	-
10	3/8"	X	-	-	-
15	1/2"	X	-	-	-
20	3/4"	X	-	-	-
25	1"	X	-	-	-
32	1¼"	X	-	-	-
40	1½"	-	X	-	-
50	2"	-	X	-	-
65	2½"	-	-	X	-

DN	NPS	Actuator version (code)			
		BC1L	BC3L	BC10	BC25
80	**3"**	-	-	X	-
100	**4"**	-	-	-	X

Order data

Ball valve with GEMÜ 9428, 9468 actuator

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
Ball valve, metal, electrically operated, 3-piece body, sanitary	B54

2 DN	Code
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
DN 80	80
DN 100	100

3 Body/ball configuration	Code
2/2-way body	D

4 Connection type	Code
Spigot EN 10357,series A	17
Spigot ASME BPE	59
Spigot ISO 1127 / EN 10357, series C	60
Clamp ASME BPE, face-to-face dimension FTF ASME BPE	80

5 Ball valve material	Code
1.4435 / ASTM A351, low ferrite <3% (equivalent to 316L Δ Fe<3%) (body, connection, ball), 1.4409 / SS316L (spindle)	C3

6 Seal material	Code
TFM 1600 (FDA certification), cavity filled	5H
TFM 1600 (FDA certification)	5T

7 Voltage/Frequency	Code
12 VDC	B1
12 V 50/60 Hz	B4
24 VDC	C1
24 V 50/60 Hz	C4
100-250V 50/60Hz	O4

8 Control module	Code
ON/OFF actuator, relay, not reversible	00

8 Continuation of Control module	Code
ON/OFF actuator, 2 additional potential-free limit switches, relay, not reversible	0E
ON/OFF actuator, potentiometer output, relay, not reversible	0P
ON/OFF actuator	A0
ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)	AE

9 Actuator version	Code
GEMÜ actuator, motorized, size 1, operating time 4 s, torque 6 Nm, supply voltage B1, C1, B4, C4	1006
GEMÜ actuator, motorized, size 1, operating time 11 s, torque 15 Nm, supply voltage B1, C1	1015
GEMÜ actuator, motorized, size 3, operating time 15 s, torque 35 Nm, supply voltage C1, O4	3035
GEMÜ actuator, motorized, size 3, operating time 15 s, torque 55 Nm, supply voltage C1, O4	3055
GEMÜ actuator, motorized, size 4, operating time 20 s, torque 100 Nm, supply voltage C1	4100
GEMÜ actuator, motorized, size 4, operating time 16 s, torque 200 Nm, supply voltage C1	4200

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

Order example

Order option	Code	Description
1 Type	B54	Ball valve, metal, electrically operated, 3-piece body, sanitary
2 DN	15	DN 15
3 Body/ball configuration	D	2/2-way body
4 Connection type	60	Spigot ISO 1127 / EN 10357, series C
5 Ball valve material	C3	1.4435 / ASTM A351, low ferrite <3% (equivalent to 316L Δ Fe<3%) (body, connection, ball), 1.4409 / SS316L (spindle)
6 Seal material	5T	TFM 1600 (FDA certification)
7 Voltage/Frequency	C1	24 VDC
8 Control module	A0	ON/OFF actuator
9 Actuator version	1015	GEMÜ actuator, motorized, size 1, operating time 11 s, torque 15 Nm, supply voltage B1, C1
10 CONEXO		without

Ball valve with J+J actuator

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
Ball valve, metal, electrically operated, 3-piece body, sanitary	B54

2 DN	Code
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
DN 80	80
DN 100	100

3 Body/ball configuration	Code
2/2-way body	D

4 Connection type	Code
Spigot EN 10357,series A	17
Spigot ASME BPE	59
Spigot ISO 1127 / EN 10357, series C	60
Clamp ASME BPE, face-to-face dimension FTF ASME BPE	80

5 Ball valve material	Code
1.4435 / ASTM A351, low ferrite <3% (equivalent to 316L Δ Fe<3%) (body, connection, ball), 1.4409 / SS316L (spindle)	C3

6 Seal material	Code
TFM 1600 (FDA certification), cavity filled	5H
TFM 1600 (FDA certification)	5T

7 Voltage/Frequency	Code
24-240V AC/DC	U5

8 Control module	Code
ON/OFF 3-position actuator, additional potential-free limit switches	A3
ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)	AE
ON/OFF actuator, 2 additional potential-free limit switches, BSR battery pack (NC)	AE1

8 Continuation of Control module	Code
ON/OFF actuator, 2 additional potential-free limit switches, BSR battery pack (NO)	AE2
ON/OFF actuator, potentiometer output, Class A (EN15714-2)	AP
ON/OFF actuator, 2 additional potential-free limit switches, potentiometer output 5 kOhm, Failsafe battery pack (NC), preferred direction adjustable	AP1
Control actuator, external set value 0-10 VDC	E1
Positioner DPS, external set value 0-10V, BSR battery pack (NC)	E11
Control actuator, external set value 0/4-20 mA	E2
Positioner DPS, external set value 4-20mA, BSR battery pack (NO)	E22

9 Actuator version	Code
J+J actuator, motorized, type J4C, operating time 10 s, torque 20 Nm, heating, IP 67	J4C20
J+J actuator, motorized, type J4C, operating time 10 s, torque 35 Nm, heating, IP 67	J4C35
J+J actuator, motorized, type J4C, operating time 14 s, torque 55 Nm, heating, IP 67	J4C55
J+J actuator, motorized, type J4C, operating time 34 s, torque 140 Nm, heating, IP 67	J4C14
J+J actuator, motorized, type J4C, operating time 58 s, torque 300 Nm, heating, IP 67	J4C30

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

Order example

Order option	Code	Description
1 Type	B54	Ball valve, metal, electrically operated, 3-piece body, sanitary
2 DN	15	DN 15
3 Body/ball configuration	D	2/2-way body
4 Connection type	60	Spigot ISO 1127 / EN 10357, series C
5 Ball valve material	C3	1.4435 / ASTM A351, low ferrite <3% (equivalent to 316L Δ Fe<3%) (body, connection, ball), 1.4409 / SS316L (spindle)
6 Seal material	5T	TFM 1600 (FDA certification)
7 Voltage/Frequency	U5	24-240V AC/DC
8 Control module	AE	ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)
9 Actuator version	J4C20	J+J actuator, motorized, type J4C, operating time 10 s, torque 20 Nm, heating, IP 67
10 CONEXO		without

Ball valve with Bernard actuator

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
Ball valve, metal, electrically operated, 3-piece body, sanitary	B54

2 DN	Code
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
DN 80	80
DN 100	100

3 Body/ball configuration	Code
2/2-way body	D

4 Connection type	Code
Spigot EN 10357,series A	17
Spigot ASME BPE	59
Spigot ISO 1127 / EN 10357, series C	60
Clamp ASME BPE, face-to-face dimension FTF ASME BPE	80

5 Ball valve material	Code
1.4435 / ASTM A351, low ferrite <3% (equivalent to 316L Δ Fe<3%) (body, connection, ball), 1.4409 / SS316L (spindle)	C3

6 Seal material	Code
TFM 1600 (FDA certification), cavity filled	5H
TFM 1600 (FDA certification)	5T

7 Voltage/Frequency	Code
230V 50Hz	L2
24VDC 85-260VAC	Y5

8 Control module	Code
ON/OFF actuator, 2 additional potential-free limit switches, additional potential-free torque switches, Class A (EN15714-2)	AB
ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)	AE

8 Continuation of Control module	Code
ON/OFF actuator, potentiometer output, Class A (EN15714-2)	AP
ON/OFF actuator, analogue position feedback, external set value 0/4-20mA, 2 additional potential-free limit switches	AT
Control actuator, external set value 0/4-20 mA	E2
ON/OFF actuator, on-site control, 2 additional potential-free limit switches, Basic (Logic ON/OFF), (S4 30% duty, 120 starts/hour, actuator class A/B)	ALS
Position control, external set value 4-20mA, input and output, on-site control, 2 additional potential-free limit switches, Basic (Logic Positioner), (S4 50% duty, 360 starts/hour, actuator class C)	ELS

9 Actuator version	Code
BERNARD actuator, motorized, type AQ1L, operating time 13s, torque 15Nm, 2 additional limit switches, heating, manual override, aluminium housing, RAL5002, IP 67	BC1L
BERNARD actuator, motorized, type AQ, operating time 15s, torque 30Nm, 2 additional limit switches, heating, manual override, aluminium housing, RAL5002, IP 67	BC3L
BERNARD actuator, motorized, type AQ05, operating time 16s, torque 50Nm, 2 additional limit switches, heating, manual override, aluminium housing, RAL1014, IP 68	BC05
BERNARD actuator, motorized, type AQ10, operating time 25s, torque 100Nm, 2 additional limit switches, heating, manual override, aluminium housing, RAL1014, IP 68	BC10
BERNARD actuator, motorized, type AQ15, operating time 30s, torque 150Nm, 2 additional limit switches, heating, manual override, aluminium housing, RAL1014, IP 68	BC15
BERNARD actuator, motorized, type AQ25, operating time 30s, torque 250Nm, 2 additional limit switches, heating, manual override, aluminium housing, RAL1014, IP 68	BC25

10 CONEXO	Code
without	

10 Continuation of CONEXO	Code
Integrated RFID chip for electronic identification and traceability	C

Order example

Order option	Code	Description
1 Type	B54	Ball valve, metal, electrically operated, 3-piece body, sanitary
2 DN	15	DN 15
3 Body/ball configuration	D	2/2-way body
4 Connection type	60	Spigot ISO 1127 / EN 10357, series C
5 Ball valve material	C3	1.4435 / ASTM A351, low ferrite <3% (equivalent to 316L Δ Fe<3%) (body, connection, ball), 1.4409 / SS316L (spindle)
6 Seal material	5T	TFM 1600 (FDA certification)
7 Voltage/Frequency	Y5	24VDC 85-260VAC
8 Control module	AE	ON/OFF actuator, 2 additional potential-free limit switches, Class A (EN15714-2)
9 Actuator version	BC1L	BERNARD actuator, motorized, type AQ1L, operating time 13s, torque 15Nm, 2 additional limit switches, heating, manual override, aluminium housing, RAL5002, IP 67
10 CONEXO		without

Ball valve 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: -10 to 220 °C

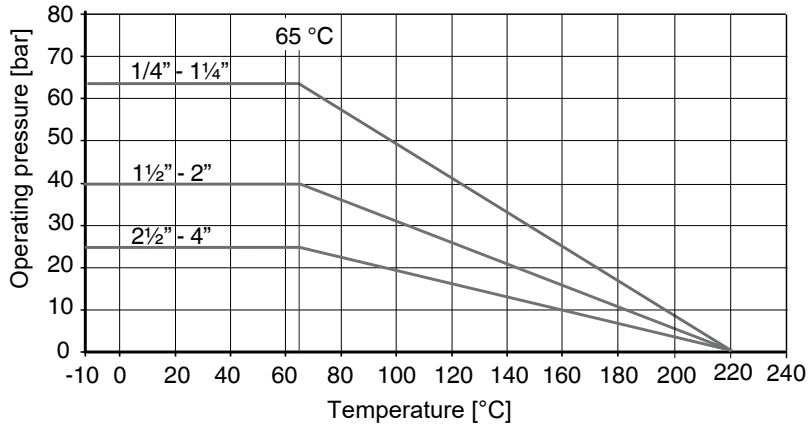
Ambient temperature: 0 to 60 °C

Storage temperature: 0 to 40 °C

Pressure

Operating pressure: 0 to 63 bar

Pressure/temperature diagram:



Leakage rate: Leakage rate according to ANSI FCI70 – B16.104

Leakage rate according to EN12266, 6 bar air, leakage rate A

Kv values:

DN	NPS	Connection code [1]		
		59, 80	60	17
8	**1/4"**	-	7	7
10	**3/8"**	-	7	7
15	**1/2"**	9	18	18
20	**3/4"**	26	43	43
25	**1"**	56	77	77
32	**1¼"**	-	95	95
40	**1½"**	172	206	206
50	**2"**	327	344	344
65	**2½"**	516	602	602
80	**3"**	817	844	844
100	**4"**	1376	1462	1462

Kv values in m³/h

1) **Connection type**
Code 17: Spigot EN 10357,series A
Code 59: Spigot ASME BPE
Code 60: Spigot ISO 1127 / EN 10357, series C
Code 80: Clamp ASME BPE, face-to-face dimension FTF ASME BPE

Pressure rating:

DN	Connection type code [1]			
	60	17	80	59
8	PN63	-	-	-
10	PN63	PN63	-	-
15	PN63	PN63	PN63	PN63
20	PN63	PN63	PN63	PN63
25	PN63	PN63	PN63	PN63
32	PN63	PN63	-	-
40	PN63	PN63	PN63	PN63
50	PN63	PN63	PN63	PN63
65	PN40	PN40	PN40	PN40
80	PN40	PN40	PN40	PN40
100	PN25	PN25	PN25	PN25

1) **Connection type**
Code 17: Spigot EN 10357,series A
Code 59: Spigot ASME BPE
Code 60: Spigot ISO 1127 / EN 10357, series C
Code 80: Clamp ASME BPE, face-to-face dimension FTF ASME BPE

Product conformities

Pressure Equipment Directive: 2014/68/EU

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

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

ATEX marking: The ATEX marking of the product depends on the respective product configuration with valve body and actuator. It can be found in the product-specific ATEX documentation and the ATEX type plate.

Mechanical data

Torques:

DN	NPS	Seal material (code [1])	
		5T	5H
8	**1/4"**	4	4
10	**3/8"**	4	4
15	**1/2"**	8	12
20	**3/4"**	8	12
25	**1"**	13	19
32	**1¼"**	16	22
40	**1½"**	32	47
50	**2"**	34	51
65	**2½"**	56	83
80	**3"**	78	117
100	**4"**	140	209

Free of oil and grease incl. 25% safety
Torques in Nm

1) **Seal material**
Code 5H: TFM 1600 (FDA certification), cavity filled
Code 5T: TFM 1600 (FDA certification)

Weight:

Ball valve

DN	NPS	Connection code [1]			
		59	80	60	17
8	**1/4"**	-	-	0.5	-
10	**3/8"**	-	-	0.5	-
15	**1/2"**	0.5	0.5	0.5	0.8
20	**3/4"**	0.5	0.5	0.8	0.8
25	**1"**	1	1.1	1.1	1.1
32	**1¼"**	-	-	1.6	1.6
40	**1½"**	2.1	2.2	2.7	2.7
50	**2"**	3.5	3.5	4.2	4.2
65	**2½"**	7	7.1	8.2	8.2
80	**3"**	11	11.8	11.6	11.6
100	**4"**	20	20.5	24	24

Weights in kg

1) **Connection type**
Code 17: Spigot EN 10357,series A
Code 59: Spigot ASME BPE
Code 60: Spigot ISO 1127 / EN 10357, series C
Code 80: Clamp ASME BPE, face-to-face dimension FTF ASME BPE

Technical data of actuator

GEMÜ 9428, 9468 actuators

Mechanical data

Weight:

GEMÜ 9428

Supply voltage 24 V / 100-250 V	2.4 kg
Actuator version 3035:	2.4 kg
Actuator version 3055:	2.8 kg

Actuator type 9468

Actuator version 2070:	4.6 kg
Actuator version 4100:	11.6 kg
Actuator version 4200:	11.6 kg

Product compliance

Machinery Directive: 2006/42/EU

EMC Directive: 2014/30/EU

Low Voltage Directive: 2014/35/EU

Electrical data

Rated voltage: 12 V / 24 V AC or DC (± 10 %)
100 – 250 V AC (± 10 %)

Rated frequency: 50/60 Hz (at AC rated voltage)

Electrical protection class: I (DIN EN 61140)

Power consumption:

Actuator version (code)	Control module (code)	12 V DC (code B1)	12 V AC (code B4)	24 V DC (code C1)	24 V AC (code C4)	100-250 V AC (code O4)
1006	**A0, AE**	30	30	30.0	30	-
1015	**A0, AE**	30	-	30.0	-	-
3035	**A0, AE**	-	-	30.0	-	50
3055	**A0, AE**	-	-	38.4	-	-
4100	**00, 0E, 0P**	-	-	105.0	-	-
4200	**00, 0E, 0P**	-	-	90.0	-	-

Power consumption in W

Current consumption:

Actuator version (code)	Control module (code)	12 V DC (code B1)	12 V AC (code B4)	24 V DC (code C1)	24 V AC (code C4)	100-250 V AC (code O4)
1006	**A0, AE**	2.2	2	1.2	1.5	-
1015	**A0, AE**	2.2	-	1.2	-	-
3035	**A0, AE**	-	-	1.3	-	0.2
3055	**A0, AE**	-	-	1.6	-	-
4100	**00, 0E, 0P**	-	-	4.4	-	-
4200	**00, 0E, 0P**	-	-	3.6	-	-

Current data in A

Max. switching current:

Actuator version (code)	Control module (code)	12 V DC (code B1)	12 V AC (code B4)	24 V DC (code C1)	24 V AC (code C4)	100-250 V AC (code O4)
1006	**A0, AE**	6.3	2.4	4.0	1.8	-
1015	**A0, AE**	9.2	-	3.8	-	-
3035	**A0, AE**	-	-	3.3	-	0.2
3055	**A0, AE**	-	-	6,4	-	-
4100	**00, 0E, 0P**	-	-	35.0	-	-
4200	**00, 0E, 0P**	-	-	35.0		-

Current data in A

Input signal:

24 V DC, 24 V AC, 120 V AC, 230 V AC
dependent on rated voltage

Duty cycle:

Supply voltage 12 V / 24 V: Continuous duty
Supply voltage 100 - 250 V: 40 % duty
Actuator version 2070: Continuous duty

Electrical protection:

GEMÜ 9428

Supply voltage 12 V / 24 V:
Motor protective system by customer

Supply voltage 100 - 250 V:
Integrated stall and overload protection

plus excess current release T 1A 5x20 mm

GEMÜ 9468

Internal for functional module 0x

Actuator version 2070: MT 6.3 A
Actuator version 4100, 4200: MT 10.0 A

Motor protective system by customer, see "Recommended motor protection"

Recommended motor protection:

GEMÜ 9428

Voltage	12 V DC	24 V DC	120 V AC	230 V AC
Motor protection switch type	Siemens 3RV 1011-1CA10	Siemens 3RV 1011-1BA10	Siemens 3RV 1011-OGA10	Siemens 3RV 1011-OGA10
Set current	2.20	1.70	0.60	0.45

Current data in A

GEMÜ 9468

Motor protection switch type:	Siemens 3RV 1011-1FA10
Set current:	4.0 A

Bernard, J+J actuators

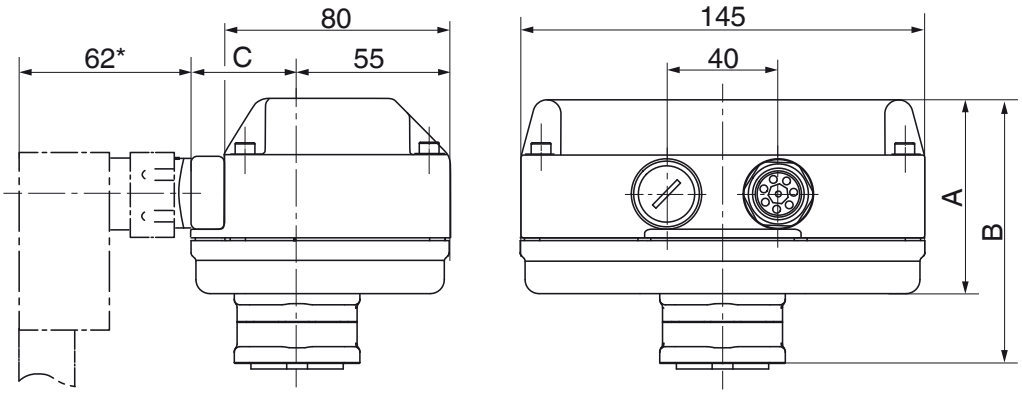
Note: For technical data see manufacturer's original datasheets

Dimensions

Actuator dimensions

GEMÜ 9428, 9468 actuators

Actuator version 1006, 1015, 2006, 2015

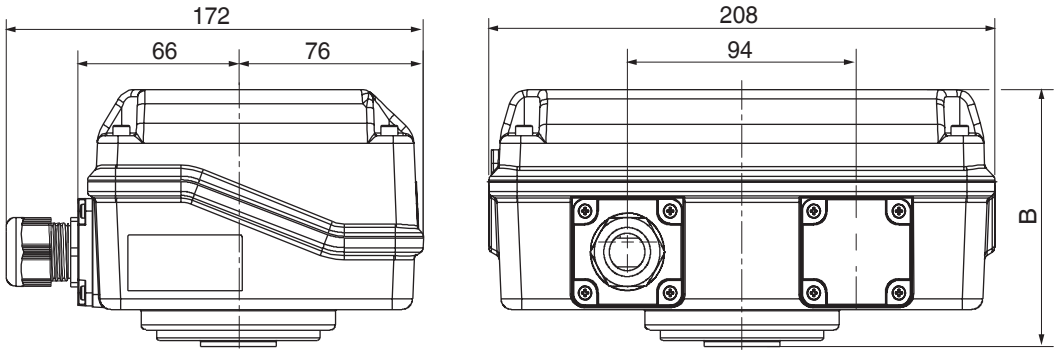


* Standard with supply voltage code O4

Actuator version	A	B	C
1006, 1015	69	94	49
2006, 2015	96	122	53

Dimensions in mm

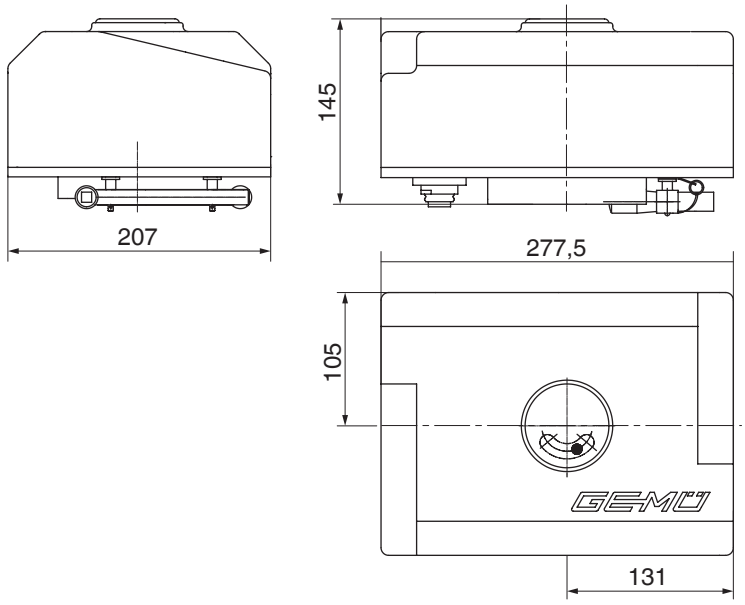
Actuator version 3035, 3055



Voltages	B
24 V	100.5
100 V - 250 V	124.5

Dimensions in mm

Actuator version 4100, 4200



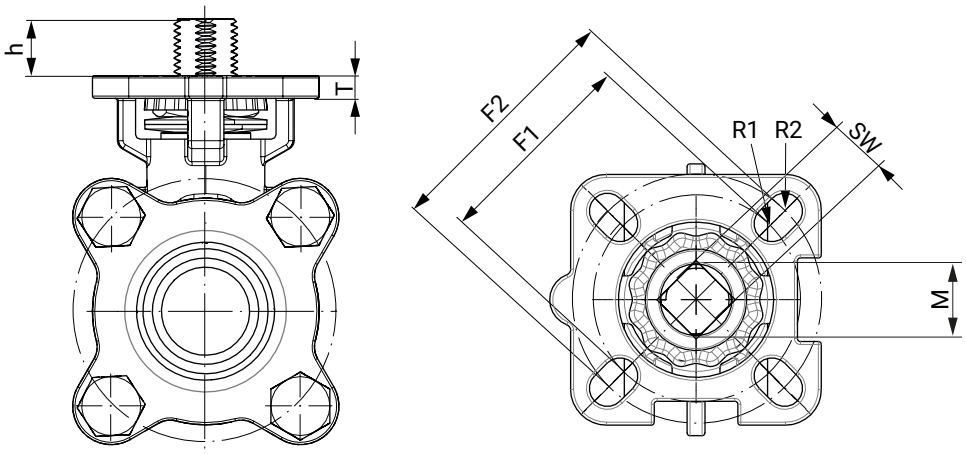
Dimensions in mm

Bernard, AUMA, J+J actuators

For more detailed information on third-party actuators, refer to the manufacturers' documentation

Ball valve

Actuator flange

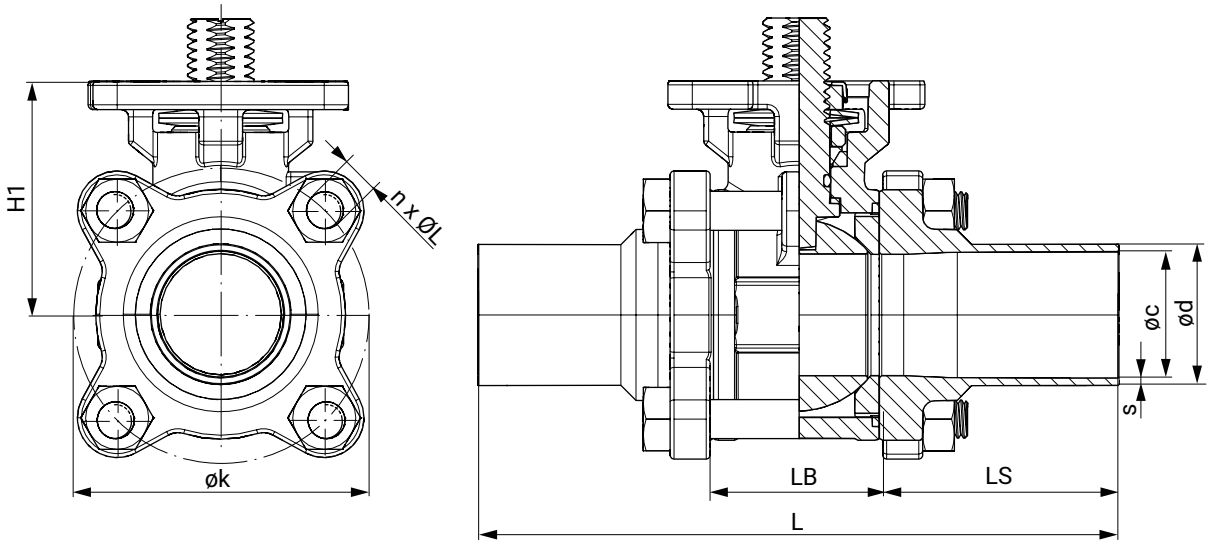


	G	F1	ISO 5211	R1	F2	ISO 5211	R2	SW	h	T	M
8	**1/4“**	36.0	F03	3.0	42.0	F04	3.0	9.0	9.5	5.5	M12
10	**3/8“**	36.0	F03	3.0	42.0	F04	3.0	9.0	9.5	5.5	M12
15	**1/2“**	36.0	F03	3.0	42.0	F04	3.0	9.0	9.5	5.5	M12
20	**3/4“**	36.0	F03	3.0	42.0	F04	3.0	9.0	7.5	5.5	M12
25	**1“**	42.0	F04	3.5	50.0	F05	3.5	11.0	13.0	7.0	M14
32	**1¼“**	42.0	F04	3.5	50.0	F05	3.5	11.0	13.0	6.5	M14
40	**1½“**	50.0	F05	4.5	70.0	F07	3.5	14.0	15.0	7.5	M18
50	**2“**	50.0	F05	4.5	70.0	F07	3.5	14.0	16.0	8.5	M18
65	**2½“**	50.0	F07	4.5	70.0	F10	3.5	17.0	18.0	8.5	M22
80	**3“**	70.0	F07	5.5	102.0	F10	4.5	17.0	18.0	10.5	M22
100	**4“**	102.0	F10	5.5	125.0	F12	4.5	17.0	18.0	10.5	M22

Dimensions in mm

Body dimensions

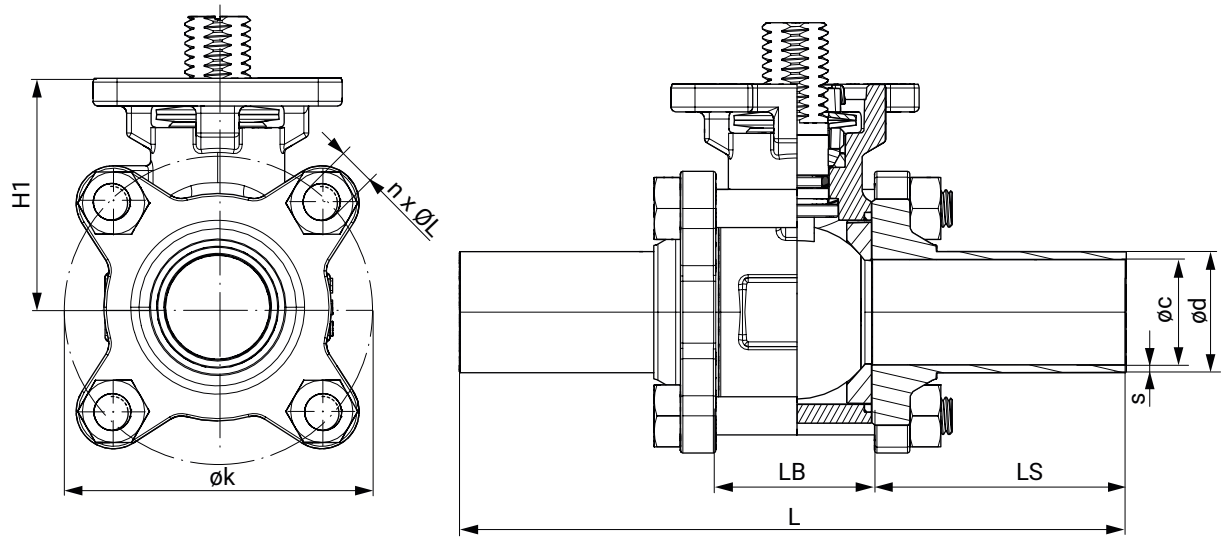
Spigot DIN EN 10357 (connection code 17)



DN	øc	ød	øk	L	LB	LS	H1	n x ØL	s
10	10.0	13.0	42.5	120.1	24.3	47.9	37.0	4 x M6	1.5
15	16.0	19.0	42.5	140.1	24.3	57.9	37.0	4 x M6	1.5
20	20.0	23.0	54.5	140.0	31.2	54.4	40.0	4 x M8	1.5
25	26.0	29.0	60.4	152.0	34.0	59.0	48.0	4 x M8	1.5
32	32.0	35.0	75.0	165.0	44.0	60.5	53.0	4 x M10	1.5
40	38.0	41.0	86.5	190.0	55.0	67.5	63.0	4 x M12	1.5
50	50.0	53.0	107.0	203.0	68.9	67.0	72.0	4 x M14	1.5
65	66.0	70.0	131.5	254.0	82.0	86.0	92.0	4 x M14	2.0
80	81.0	85.0	158.0	280.0	96.0	92.0	102.0	4 x M16	2.0
100	100.0	104.0	198.5	308.0	122.0	93.0	132.0	6 x M20	2.0

Dimensions in mm

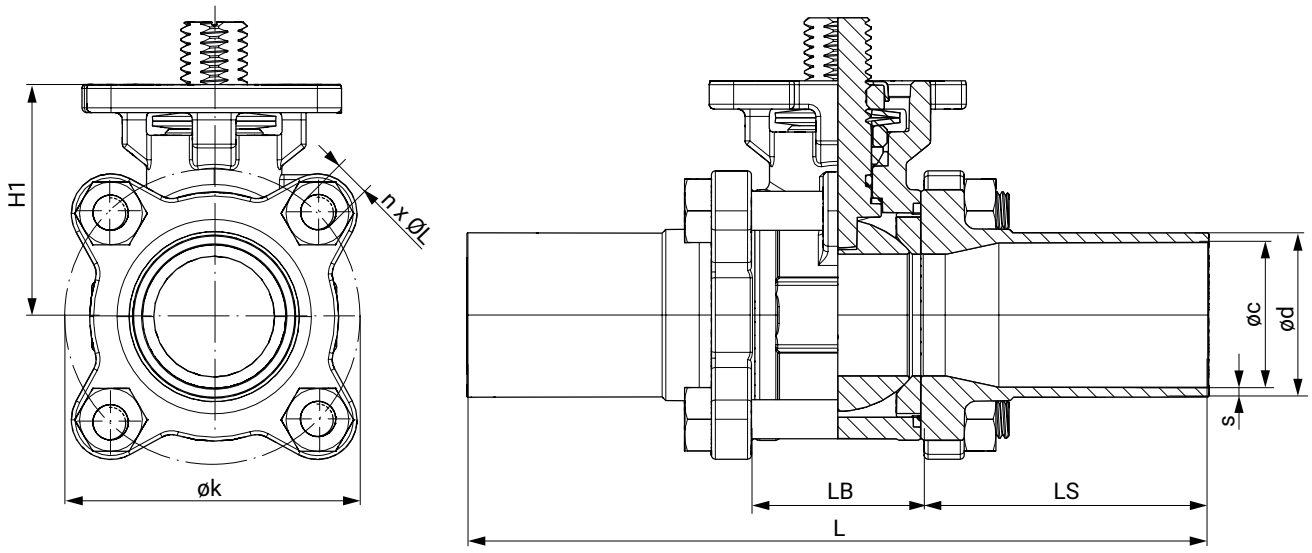
Spigot ASME BPE (connection code 59)



DN	øc	ød	s	øk	L	LB	LS	H1	n x ØL
15	9.4	12.7	1.65	44.6	124.4	25.0	49.7	38.0	4 x M6
20	15.7	19.0	1.65	44.6	142.2	28.0	58.6	38.0	4 x M6
25	22.1	25.4	1.65	61.5	162.3	32.1	65.1	48.0	4 x M8
40	34.8	38.1	1.65	78.5	182.2	46.0	68.1	60.0	4 x M12
50	47.5	50.8	1.65	100.4	193.0	59.6	66.7	69.0	4 x M14
65	60.2	63.5	1.65	126.0	254.1	77.1	88.5	89.0	4 x M14
80	72.9	76.2	1.65	150.0	276.9	91.7	92.6	98.0	4 x M16
100	97.4	101.6	2.1	187.5	304.9	118.3	93.3	130.0	6 x M16

Dimensions in mm

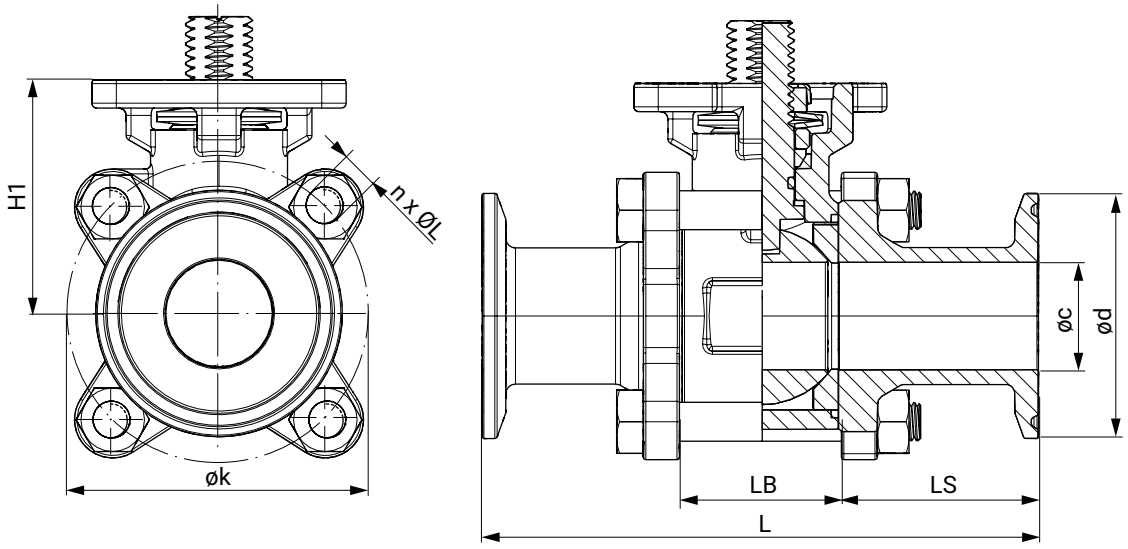
Spigot ISO 1127 / EN 10357 (connection code 60)



DN	øc	ød	s	øk	L	LB	LS	H1	n x ØL
8	10.3	13.5	1.6	42.5	120.1	24.3	47.9	37.0	4 x M6
10	14.0	17.2	1.6	42.5	120.1	24.3	47.9	37.0	4 x M6
15	18.1	21.3	1.6	42.5	140.1	24.3	57.9	37.0	4 x M6
20	23.7	26.9	1.6	54.5	140.0	31.2	54.4	40.0	4 x M8
25	29.7	33.7	2.0	60.4	152.0	34.0	59.0	48.0	4 x M8
32	38.4	42.4	2.0	75.0	165.0	44.0	60.5	53.0	4 x M10
40	44.3	48.3	2.0	86.5	190.0	55.0	67.5	63.0	4 x M12
50	56.3	60.3	2.0	107.0	203.0	68.9	67.0	72.0	4 x M14
65	72.1	76.1	2.0	131.5	254.0	82.0	86.0	92.0	4 x M14
80	84.3	88.9	2.3	158.0	280.0	96.0	92.0	102.0	4 x M16
100	109.7	114.3	2.3	198.5	308.0	122.0	93.0	132.0	6 x M20

Dimensions in mm

Clamp ASME BPE (connection code 80)



DN	øc	ød	s	øk	L	LB	LS	H1	n x ØL
15	9.4	25.0	1.65	44.6	88.8	25.0	31.9	38.0	4 x M6
20	15.8	25.0	1.65	44.6	101.6	25.0	38.3	38.0	4 x M6
25	22.1	50.4	1.65	61.5	114.3	32.1	41.1	48.0	4 x M8
40	34.8	50.4	1.65	78.5	139.8	46.0	46.9	60.0	4 x M12
50	47.5	63.9	1.65	100.4	158.8	59.6	49.6	69.0	4 x M14
65	60.2	77.4	1.65	126.0	171.5	77.1	47.2	89.0	4 x M14
80	72.9	90.9	1.65	150.0	196.3	91.7	52.3	98.0	4 x M16
100	97.4	118.9	2.1	187.5	241.3	118.3	61.5	130.0	6 x M16

Dimensions in mm

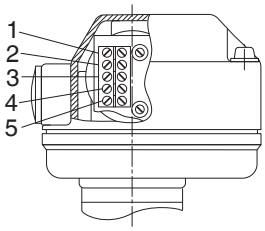
Electrical connection

Connection and wiring diagram – actuator version 1015, 2015, 3035, 3055

Control module A0/AE

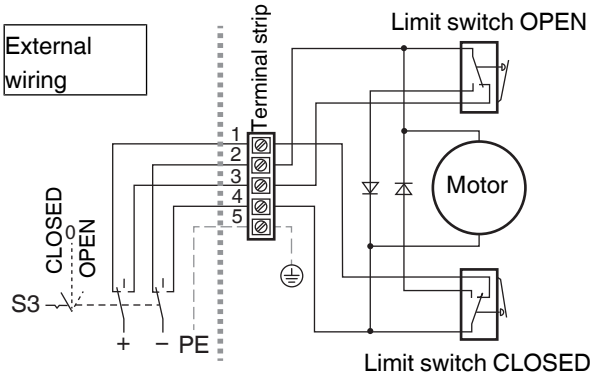
12 V DC (code B1) / 24 V DC (code C1)

Assignment of the terminal strips



Item	Description
1	Uv+, direction of travel CLOSED
2	Uv-, direction of travel CLOSED
3	Uv+, direction of travel OPEN
4	Uv-, direction of travel OPEN
5	PE, protective earth conductor

Connection diagram



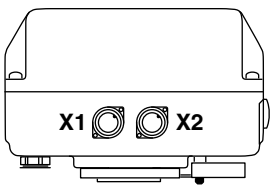
S3	Actuator
CLOSED	Direction of travel CLOSED
0	OFF
OPEN	Direction of travel OPEN

Connection and wiring diagram – actuator version 2070, 4100, 4200

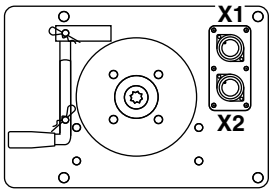
Control module 00

On/Off actuator with relay (code 00), 24 V DC (code C1)

Position of the connectors

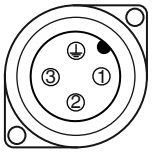


Actuator version 2070



Actuator version 4100, 4200

Electrical connection

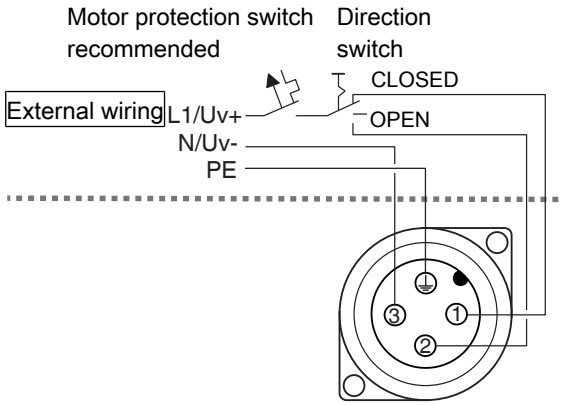


Plug assignment X1

Pin	Description
1	L1 / Uv+, direction of travel CLOSED
2	L1 / Uv+, direction of travel OPEN
3	N / Uv-, neutral conductor
⏚	PE, protective earth conductor

N / L- signals in the unit are separated.
The potential must be assigned by the user.
When the OPEN and CLOSED switches are operated simultaneously the actuator "CLOSES".

Connection diagram



Connection assignment X1

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

Ordering

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

Subject to alteration | 11.2020 | 88736571

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