

GEMÜ B42

Pneumatically operated 2/2-way ball valve



Features

- Suitable for vacuum applications
- Low maintenance and reliable spindle sealing
- Antistatic device unit

Description

The GEMÜ B42 3-piece 2/2-way metal ball valve is pneumatically operated. The seat seal is made of PTFE.

Technical specifications

- **Media temperature:** -4 to 356 °F
- **Ambient temperature:** -4 to 140 °F
- **Operating pressure:** 0 to 914 psi
- **Nominal sizes:** 1/4" (DN 8) to 4" (DN 100)
- **Body configurations:** 2/2-way body
- **Ball configurations:** Control ball
- **Connection types:** Flange | Spigot | Threaded connection
- **Connection standards:** ASME | DIN | EN | ISO | NPT
- **Body materials:** 1.4408, investment casting material
- **Seal materials:** PTFE
- **Conformities:** ASME GEMÜ B31.3 | ATEX | EAC | FDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act)

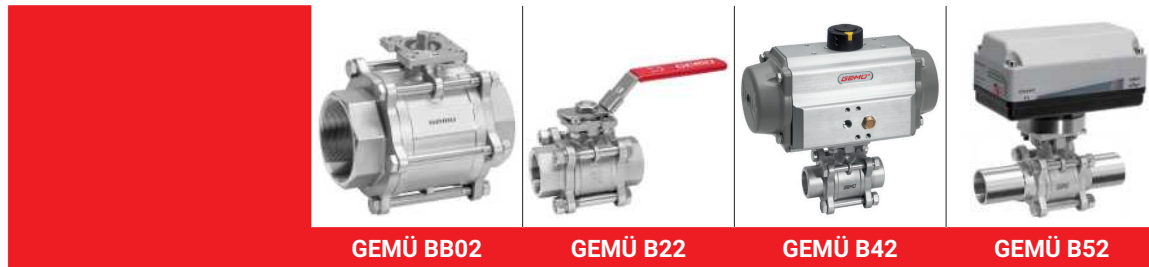
Technical data depends on the respective configuration



further information
webcode: GW-B42



Product line



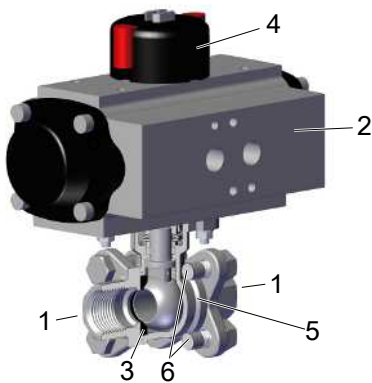
	GEMÜ BB02	GEMÜ B22	GEMÜ B42	GEMÜ B52
Operation				
With bare shaft	●	-	-	-
Manual	-	●	-	-
pneumatic	-	-	●	-
Motorized	-	-	-	●
Nominal sizes	1/4" (DN 8) to 4" (DN 100)	1/4" (DN 8) to 4" (DN 100)	1/4" (DN 8) to 4" (DN 100)	1/4" (DN 8) to 4" (DN 100)
Media temperature	-4 to 356 °F	-4 to 356 °F	-4 to 356 °F	-4 to 356 °F
Operating pressure	0 to 914 psi	0 to 914 psi	0 to 914 psi	0 to 914 psi
Connection types				
Flange	●	●	●	●
Spigot	●	●	●	●
Threaded connection	●	●	●	●
Conformities				
ASME GEMÜ B31.3	●	●	●	●
ATEX	●	●	●	●
EAC	●	●	●	●
FDA	●	●	●	●
Functional safety	●	-	-	-
Oxygen	●	●	●	●
Reg. (EU) No. 10/2011	●	●	●	●
Regulation (EC) No. 1935/2004	●	●	●	●
Regulation (EC) No. 2023/2006	●	●	●	●
TA Luft (German Clean Air Act)	●	●	●	●

Comparison of actuator applications

	GEMÜ ADA/ASR	GEMÜ DR/SC	GEMÜ GDR/GSR
Industrial sectors			
Chemical processes	●	●	●
Surface finishing	●	●	●
Water treatment	●	●	●
Mechanical engineering	●	●	●
Power generation and environmental systems	●	●	●
Food processing technology	●	●	●
Semiconductor	●	●	●
Medical systems	●	●	●
Pharmaceutical industry	●	●	●

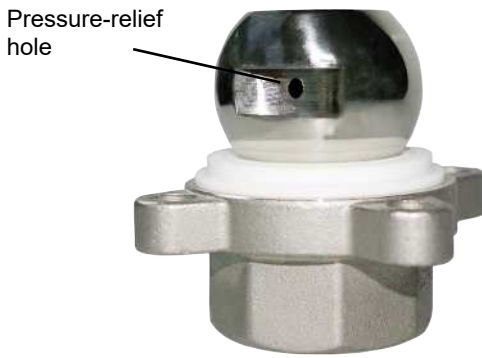
Product description

Construction

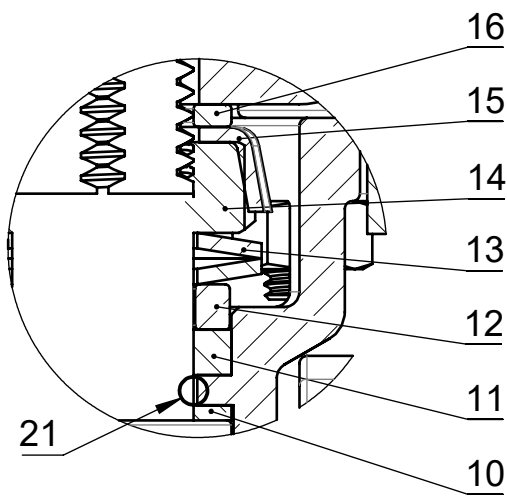


Item	Name	Materials
5	Ball valve body	1.4408 / CF8M
1	Pipe connections	1.4408 / CF8M, 1.4409 / CF3M butt weld connections
2	Pneumatic actuator	Aluminium
4	Position indicator	
6	Bolts	A2 70
3	Seal	PTFE

Pressure-relief hole



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)	Viton

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 pretension provides low maintenance and reliable spindle sealing even after a long service life.

Application

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

Availability

Connection types ¹⁾	Body materials ²⁾		Control functions ³⁾	
	Code 37	Code C7	Code 1, 2, 3	Code Q, T, U
Spigot (code 17, 19, 59, 60)	-	X	X	-
Threaded socket (code 1, 31)	X	-	X	-
Flange (code 8, 11)	X	-	-	X

1) Connection type

Code 1: Threaded socket DIN ISO 228

Code 31: NPT female thread

Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 11: Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 17: Spigot EN 10357 series A/DIN 11866 series A formerly DIN 11850 series 2

Code 19: Spigot DIN EN 12627

Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C

Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B

2) Ball valve material

Code 37: 1.4408 / CF8M (body, connection), 1.4401 / SS316 (ball, shaft)

Code C7: 1.4408 / CF8M (body), 1.4409 / CF3M (connection), 1.4401 / SS316 (ball, shaft)

3) Control function

Code 1: Normally closed (NC)

Code 2: Normally open (NO)

Code 3: Double acting (DA)

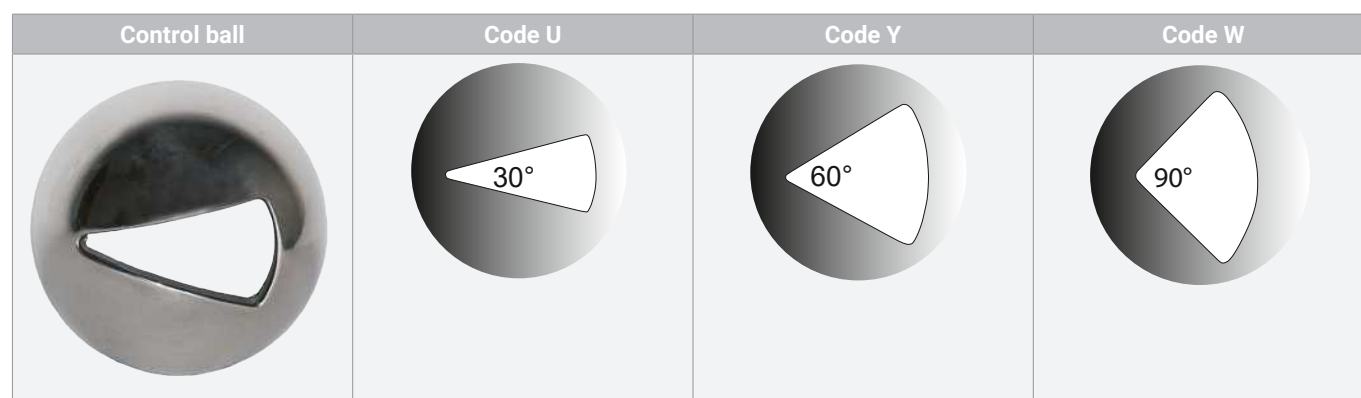
Code Q: Normally closed (NC), actuator mounted across the piping

Code T: Double acting (DA), actuator mounted across the piping

Code U: Normally open (NO), actuator mounted across the piping

Control ball

DN 15 to DN 100



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

Actuator assignment**GEMÜ type GDR/GSR**

DN	Double acting GDR	Code	Single acting GSR	Code
8	GDR0032 F03 S09	HR03AT	GSR0050 SC5F03/05 S11	GR05SW
10	GDR0032 F03 S09	HR03AT	GSR0050 SC5F03/05 S11	GR05SW
15	GDR0032 F03 S09	HR03AT	GSR0050 SC5F03/05 S11	GR05SW
20	GDR0050 F03/05 S11	HR05AW	GSR0065 SC5F05/07 S14	GR06SP
25	GDR0050 F03/05 S11	HR05AW	GSR0075 SC5F05/07 S14	GR07SP
32	GDR0050 F03/05 S11	HR05AW	GSR0075 SC5F05/07 S14	GR07SP
40	GDR0065 F05/07 S14	HR06AP	GSR0085 SC5F05/07 S14	GR08SP
50	GDR0085 F05/07 S17	HR08AC	GSR0115 SC5F07/10 S17	GR11SE
65	GDR0085 F05/07 S17	HR08AC	GSR0125 SC5F07/10 S17	GR12SE
80	GDR0085 F05/07 S17	HR08AC	GSR0125 SC5F07/10 S17	GR12SE
100	GDR0100 F07/10 S17	HR10AE	GSR0140 SC5F10/12 S22	GR14SA

GEMÜ type ADA/ASR

DN	Double acting	Code	Single acting	Code
8	ADA0020U F04 S14S11	BU02AA	ASR0020US08 F04 S14S11	AU02FA
10	ADA0020U F04 S14S11	BU02AA	ASR0020US08 F04 S14S11	AU02FA
15	ADA0020U F04 S14S11	BU02AA	ASR0020US08 F04 S14S11	AU02FA
20	ADA0020U F04 S14S11	BU02AA	ASR0040US14 F04 S14 S11	AU04KA
25	ADA0040U F05 S14S11	BU04AB	ASR0040US14 F05 S14 S11	AU04KB
32	ADA0040U F05 S14S11	BU04AB	ASR0040US14 F05 S14S11	AU04KB
40	ADA0040U F05 S14S11	BU04AB	ASR0080US14 F05/07 S17S14	AU08KC
50	ADA0080U F05/F07 S17S14	BU08AC	ASR0200 US14 F05/07 S17S14	AU20KE
65	ADA0080U F05/F07 S17S14	BU08AC	ASR0300US14 F07/10 S22	AU30KD
80	ADA0130U F05/F07 S17S14	BU13AC	ASR0300US14 F07/10 S22	AU30KD
100	ADA0200U F07/F10 S17S14	BU20AC	ASR0500US14 F07/10 S22	AU50KD

GEMÜ type DR/SC

DN	Double acting DR	Code	Single acting SC	Code
8	DR0015U F04 S11	DU01AO	SC0015USC8F04 S11	SU01VO
10	DR0015U F04 S11	DU01AO	SC0015USC8F04 S11	SU01VO
15	DR0015U F04 S11	DU01AO	SC0015USC8F04 S11	SU01VO
20	DR0015U F04 S11	DU01AO	SC0030U 6F04 S11	SU03KO
25	DR0030U F05/07 S14	DU03AP	SC0060U 6F05/07 S14	SU06KP
32	DR0030U F05/07 S14	DU03AP	SC0060U 6F05/07 S14	SU06KP
40	DR0030U F05/07 S14	DU03AP	SC0100U 6F05/07 S17D11	SU10KC
50	DR0060U F05/07 S17	DU06AC	SC0150U 6F05/07 S17	SU15KC
65	DR0060U F05/07 S17	DU06AC	SC0220U 6F07/10 S22	SU22KD
80	DR0100U F05/07 S17	DU10AC	SC0220U 6F07/10 S22	SU22KD
100	DR0150U F07/10 S22	DU15AD	SC0450U 6F10/12 S27	SU45KG

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

1 Type	Code
Ball valve, metal, pneumatically operated, three-piece body, aluminium double piston actuator, low-maintenance spindle seal and blow-out proof shaft, with anti-static unit	B42

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
2/2-way body, V-ball, 30° (Kv value, see datasheet)	U
2/2-way body, V-ball, 90° (Kv value, see datasheet)	W
2/2-way body, V-ball, 60° (Kv value, see datasheet)	Y

4 Connection type	Code
Spigot	
Spigot EN 10357 series A/DIN 11866 series A formerly DIN 11850 series 2	17
Spigot DIN EN 12627	19
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
Threaded socket	
Threaded socket DIN ISO 228	1
NPT female thread	31
Flange	
Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752 basic series 1	8

4 Connection type	Code
Flange EN 1092, PN40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752 basic series 1	11

5 Ball valve material	Code
1.4408/CF8M (body, connection), 1.4401/SS316 (ball, shaft)	37
1.4408 / CF8M (body), 1.4409 / CF3M (connection), 1.4401 / SS316 (ball, shaft)	C7

6 Seal material	Code
PTFE	5

7 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	3
Normally closed (NC), actuator mounted across the piping	Q
Double acting (DA), actuator mounted across the piping	T
Normally open (NO), actuator mounted across the piping	U

8 Actuator version	Code
Actuator GEMÜ GDR	
Actuator, pneumatic, double acting, clockwise rotation, GDR0032 F03 S09	HR03AT
Actuator, pneumatic, double acting, clockwise rotation, GDR0050 F03/05 S11	HR05AW
Actuator, pneumatic, double acting, clockwise rotation, GDR0065 F05/07 S14	HR06AP
Actuator, pneumatic, double acting, clockwise rotation, GDR0085 F05/07 S17	HR08AC
Actuator, pneumatic, double acting, clockwise rotation, GDR0100 F07/10 S17	HR10AE
Actuator GEMÜ GSR	
Actuator, pneumatic, single acting, clockwise rotation, spring closing, GSR0050 SC5F03/05 S11	GR05SW
Actuator, pneumatic, single acting, clockwise rotation, spring closing, GSR0065 SC5F05/07 S14	GR06SP
Actuator, pneumatic, single acting, clockwise rotation, spring closing, GSR0075 SC5F05/07 S14	GR07SP
Actuator, pneumatic, single acting, clockwise rotation, spring closing, GSR0085 SC5F05/07 S14	GR08SP

Order data

8 Actuator version	Code
Actuator, pneumatic, single acting, clockwise rotation, spring closing, GSR0115 SC5F07/10 S17	GR11SE
Actuator, pneumatic, single acting, clockwise rotation, spring closing, GSR0125 SC5F07/10 S17	GR12SE
Actuator, pneumatic, single acting, clockwise rotation, spring closing, GSR0140 SC5F10/12 S22	GR14SA
Actuator GEMÜ ADA	
Actuator, pneumatic, double acting, clockwise rotation, ADA0020U F04 S14S11	BU02AA
Actuator, pneumatic, double acting, clockwise rotation, ADA0040U F05 S14S11	BU04AB
Actuator, pneumatic, double acting, clockwise rotation, ADA0080U F05/07S17S14	BU08AC
Actuator, pneumatic, double acting, clockwise rotation, ADA0130U F05/07S17S14	BU13AC
Actuator, pneumatic, double acting, clockwise rotation, ADA0200U F07/10S17S14	BU20AE
Actuator GEMÜ ASR	
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0020US08F04 S14S11	AU02FA
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0040US14F04 S14S11	AU04KA
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0040US14F05 S14S11	AU04KB
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0080US14F05/07S17S14	AU08KC
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0130US14F05/07S17S14	AU13KC
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0300US14F07/10 S22	AU30KD
Actuator, pneumatic, single acting, clockwise rotation, spring closing, ASR0500US14F07/10 S22	AU50KD
Actuator GEMÜ DR	
Actuator, pneumatic, double acting, clockwise rotation, DR0015U F04 S11	DU01AO
Actuator, pneumatic, double acting, clockwise rotation, DR0030U F05/07 S14	DU03AP
Actuator, pneumatic, double acting, clockwise rotation, DR0060U F05/07 S17	DU06AC
Actuator, pneumatic, double acting, clockwise rotation, DR0100U F05/07 S17	DU10AC
Actuator, pneumatic, double acting, clockwise rotation, DR0150U F07/10 S22	DU15AD
Actuator GEMÜ SC	
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0015USC8F04 S11	SU01VO

8 Actuator version	Code
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0030U 6F04 S11	SU03KO
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0030U 6F05/07 S14	SU03KP
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0060U 6F05/07 S14	SU06KP
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0100U 6F05/07S17D11	SU10KC
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0150U 6F05/07 S17	SU15KC
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0220U 6F07/10 S22	SU22KD
Actuator, pneumatic, single acting, clockwise rotation, spring closing, SC0450U 6F10/12 S27	SU45KG

9 Actuator particulars	Code
Gen. industrial version, housing alu, anodising layer 25-35µm, end caps alu, powder coated, shaft C steel + ENP, bolts A2	0

10 Type of design	Code
Standard	
Media-wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag	0101
Valve free of oil and grease, media-wetted area cleaned and packed in PE bag	0107
Thermal separation between actuator and valve body via mounting kit	5222
Thermal separation between actuator and valve body by mounting kit, mounting kit and mounting parts in stainless steel	5227
K-no. 0101, K-no. 5227, 0101 – media-wetted area cleaned to ensure suitability for paint applications, 5227 – thermal separation by mounting kit	5238
K-no. 0107, K-no. 5227, 0107 – media-wetted area cleaned to ensure suitability for paint applications, 5227 – thermal separation by mounting kit	5239

11 Special version	Code
Without	
Special version for oxygen maximum medium temperature: 60 °C, Media wetted materials cleaned, and grease and seal with BAM testing	O
ASME B31.3	P

12 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

Order example

Order option	Code	Description
1 Type	B42	Ball valve, metal, pneumatically operated, three-piece body, aluminium double piston actuator, low-maintenance spindle seal and blow-out proof shaft, with anti-static unit
2 DN	15	DN 15
3 Body/ball configuration	D	2/2-way body
4 Connection type	1	Threaded socket DIN ISO 228
5 Ball valve material	37	1.4408 / CF8M (body, connection), 1.4401 / SS316 (ball, shaft)
6 Seal material	5	PTFE
7 Control function	3	Double acting (DA)
8 Actuator version	BU02AA	Actuator, pneumatic, double acting, clockwise rotation, ADA0020U F04 S14S11
9 Actuator particulars	0	Gen. industrial version, housing alu, anodising layer 25-35µm, end caps alu, powder coated, shaft C steel + ENP, bolts A2
10 Type of design		Standard
11 Special version		Without
12 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: Connection code 17, 19, 59, 60: 14 – 356 °F
Connection code 1, 31, 8, 11: -4 – 356 °F
For media temperatures > 212 °F, we recommend using a mounting kit with adapter between the ball valve and the actuator.

Ambient temperature: -4 – 140 °F

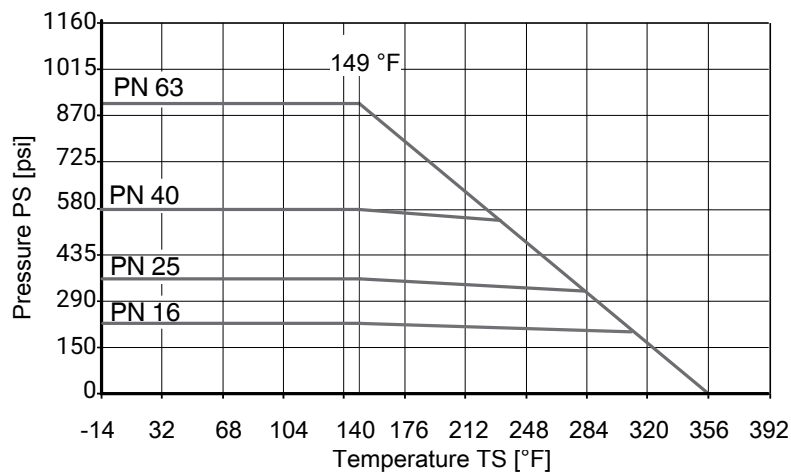
Storage temperature: -76 – 140 °F

Pressure

Operating pressure: 0 – 914 psi

Vacuum: Can be used up to a vacuum of 1.5 inhg (absolute)
These values apply to room temperature and air. The values may deviate for other media and other temperatures.

Pressure/temperature diagram:



Note media temperature

Pressure/temperature data in accordance with diagram refers to static operating conditions. Strongly fluctuating or fast-changing parameters can lead to a reduction of the service life. Special applications must be talked through with your technical contact person in advance.

Leakage rate: Leakage rate according to ANSI FCI70 – B16.104
Leakage rate according to EN 12266, 90 psi air, leakage rate A

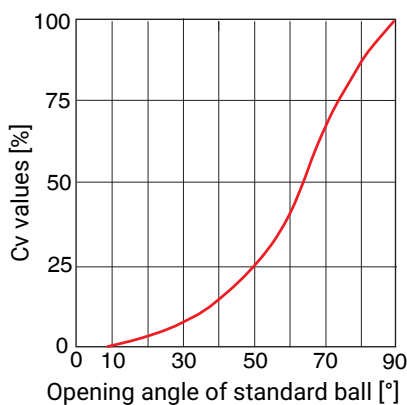
Cv-values:

Standard ball (code D)

DN	NPS	Cv values
8	1/4"	9.36
10	3/8"	9.36
15	1/2"	19.89
20	3/4"	39.78
25	1"	70.20
32	1¼"	109.98
40	1½"	249.21
50	2"	428.22
65	2½"	696.15
80	3"	1093.95
100	4"	1989.00

Cv values in gpm

Diagrammatic view



V-ball 30° (code U)

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	1/2"	0	0.100	0.100	0.200	0.300	0.500	0.800	1.090	1.590	2.190	2.590
20	3/4"	0	0.100	0.200	0.500	0.700	1.090	1.790	2.390	3.280	4.480	5.370
25	1"	0	0.100	0.300	0.800	1.290	2.290	3.480	5.070	6.970	9.510	9.950
32	1¼"	0	0.200	0.400	1.090	1.990	3.680	5.470	7.960	9.950	12.930	14.920
40	1½"	0	0.300	0.600	1.590	2.980	4.970	7.460	10.940	13.920	16.910	19.890
50	2"	0	0.400	1.190	3.780	5.970	9.950	14.920	22.870	30.830	42.760	59.670
65	2½"	0	0.400	0.990	3.980	7.960	11.930	17.900	27.850	36.800	61.660	74.590
80	3"	0	0.500	1.190	3.980	7.960	13.920	22.870	32.820	45.750	64.640	81.550
100	4"	0	0.600	1.990	5.970	14.920	28.840	47.740	70.610	99.450	129.290	158.180

Cv values in gpm

Cv-values:

V-ball 60° (code Y)

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	1/2"	0	0.100	0.100	0.300	0.500	0.900	1.390	1.990	3.280	4.380	5.970
20	3/4"	0	0.100	0.200	0.700	0.990	1.690	2.780	3.980	6.460	8.950	11.930
25	1"	0	0.200	0.400	1.090	1.790	3.380	5.270	7.860	12.240	15.220	20.880
32	1¼"	0	0.200	0.600	1.790	2.980	5.470	9.450	12.730	18.900	25.860	38.790
40	1½"	0	0.400	0.800	2.490	3.980	7.960	12.930	18.900	26.850	39.780	51.710
50	2"	0	0.400	1.490	4.570	8.950	16.420	26.850	38.790	54.700	82.540	109.400
65	2½"	0	0.400	1.490	4.970	9.950	20.880	33.810	52.710	74.590	102.430	149.180
80	3"	0	0.500	2.490	5.970	13.920	24.860	39.780	64.640	90.500	127.300	164.150
100	4"	0	0.700	2.980	10.940	24.860	39.780	58.680	89.510	140.280	210.830	354.040

Cv values in gpm

V-ball 90° (code W)

DN	NPS	Opening angle										
		0	15%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	1/2"	0	0.100	0.200	0.400	0.600	0.900	1.490	2.190	3.780	5.370	6.860
20	3/4"	0	0.200	0.400	0.800	1.190	1.990	3.080	4.570	7.960	11.240	13.920
25	1"	0	0.200	0.600	1.790	3.380	5.070	8.060	11.340	15.910	20.880	28.840
32	1¼"	0	0.300	0.800	1.990	4.970	7.960	13.920	18.900	27.850	38.790	54.700
40	1½"	0	0.500	0.900	3.480	6.960	12.930	19.890	30.830	41.770	62.650	77.570
50	2"	0	0.700	1.990	5.970	11.930	21.880	34.810	44.750	69.620	104.420	134.320
65	2½"	0	0.500	1.690	6.960	13.920	27.850	47.740	69.620	105.420	159.120	216.800
80	3"	0	0.700	3.480	7.960	17.900	34.810	59.670	89.510	134.320	203.930	308.300
100	4"	0	0.990	3.480	15.910	39.780	74.590	124.370	188.960	293.440	439.570	666.320

Cv values in gpm

Pressure rating:

DN	Spigot				Threaded socket		Flange	
	Connection type code ¹⁾							
	17	19	59	60	1	31	8	11
8	-	PN63	-	PN63	PN63	PN63	-	-
10	PN63	PN63	-	PN63	PN63	PN63	-	-
15	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
20	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
25	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
32	PN63	PN63	-	PN63	PN63	PN63	-	PN40
40	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
50	PN63	PN63	PN63	PN63	PN63	PN63	-	PN40
65	PN40	PN40	PN40	PN40	PN40	PN40	PN16	PN40*
80	PN40	PN40	PN40	PN40	PN40	PN40	PN16	-
100	PN25	PN25	PN25	PN25	PN25	PN25	PN16	-

* on request

1) Connection type

Code 1: Threaded socket DIN ISO 228

Code 31: NPT female thread

Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 11: Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 17: Spigot EN 10357 series A/DIN 11866 series A formerly DIN 11850 series 2

Code 19: Spigot DIN EN 12627

Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C

Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B

Control pressure: 87 – 116 psi

Product conformities

Machinery Directive: 2006/42/EC

Pressure equipment standards: ASME GEMÜ B31.3 (DN 15 – 100)
2014/68/EU

Food: FDA
Regulation (EC) No. 10/2011
Regulation (EC) No. 1935/2006

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.

Oxygen: BAM compliant, the product is suitable for application with oxygen

Mechanical data

90° travel: GEMÜ GDR/GSR: ±5° adjustable (85° - 95°)
GEMÜ ADA /ASR: ±5° adjustable (85° - 95°)
GEMÜ DR /SC: 20° adjustable (75° - 95°)

Weight:

Ball valve

DN	NPS	Threaded connection, spigot	Flange
8	1/4"	1.21	2.54
10	3/8"	1.21	2.54
15	1/2"	1.32	2.98
20	3/4"	1.54	3.20
25	1"	1.76	3.97
32	1¼"	2.65	5.29
40	1½"	5.07	7.72
50	2"	7.72	10.80
65	2½"	15.21	20.50
80	3"	25.79	32.41
100	4"	42.55	49.16

Weight in lb

Actuator type GDR/GSR

Type	GDR Double acting	GSR Single acting
0032	1.10	-
0050	2.43	2.65
0065	3.31	3.97
0075	5.73	7.05
0085	7.50	9.48
0100	11.24	14.55
0115	17.64	23.37
0125	22.05	29.54
0140	24.25	37.92

Weight in lb

Actuator type ADA/ASR

Type	ADA Double acting	ASR Single acting
0020U	3.09	3.31
0040U	4.63	5.07
0080U	6.61	8.16
0130U	8.38	10.58
0200U	12.35	16.09
0300U	18.74	23.81

Weight in lb

Weight:

Actuator DR/SC

Type	DR Double act- ing	SC Single acting
0015U	2.20	2.43
0030U	3.53	3.75
0060U	5.95	6.83
0100U	8.16	9.48
0150U	11.46	13.45
0220U	17.64	20.50
0300U	21.61	26.46

Weight in lb

Torques:

DN	NPS	Breakaway torque
8	1/4"	53.10
10	3/8"	53.10
15	1/2"	53.10
20	3/4"	88.51
25	1"	97.36
32	1¼"	150.46
40	1½"	247.82
50	2"	469.09
65	2½"	672.66
80	3"	787.72
100	4"	1221.40

Torques in lbf in

A safety factor of 1.2 is included

With dry, non-lubricating media the breakaway torque may be increased.

Valid for clean, non-particulate and oil-free media (water, alcohol, etc.), gas or saturated steam (clean and wet).

PTFE seal.

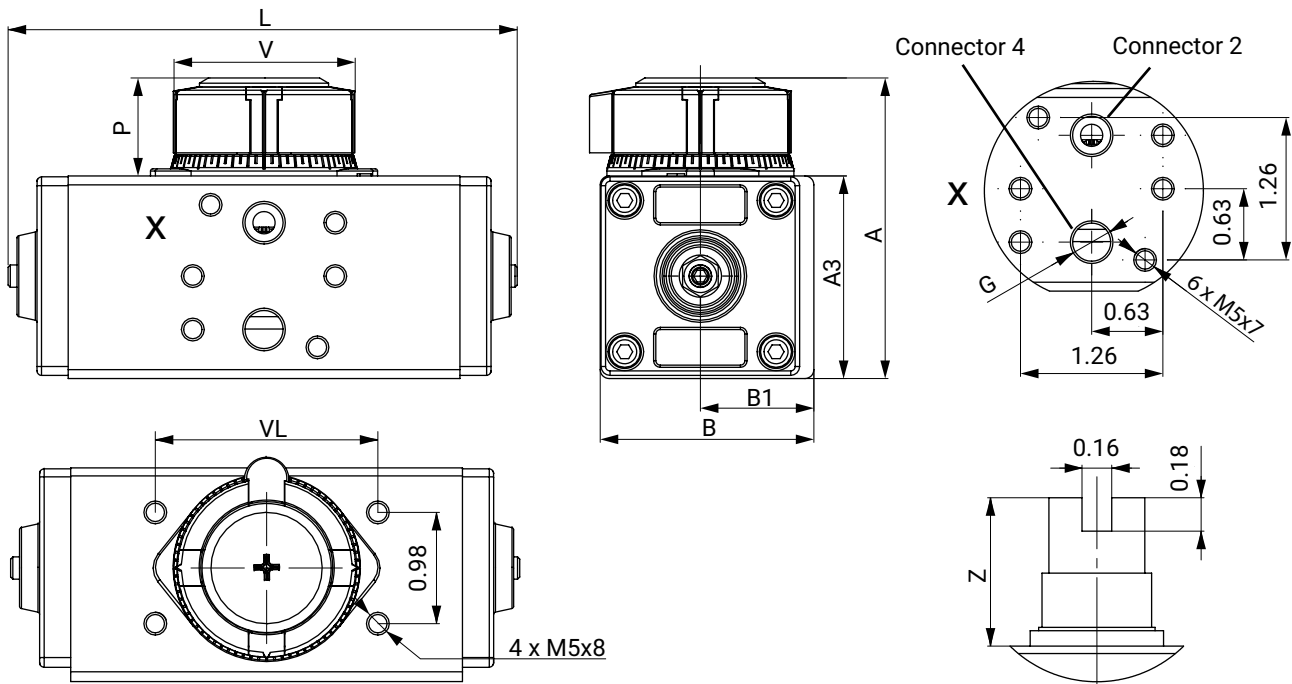
Dimensions

Actuator dimensions

Note on actuator mounting:
 Standard mounting orientation – actuator positioned in-line with piping
 Only with flanged connections the actuator is mounted across the piping

Actuator type GDR/GSR

Type G0032



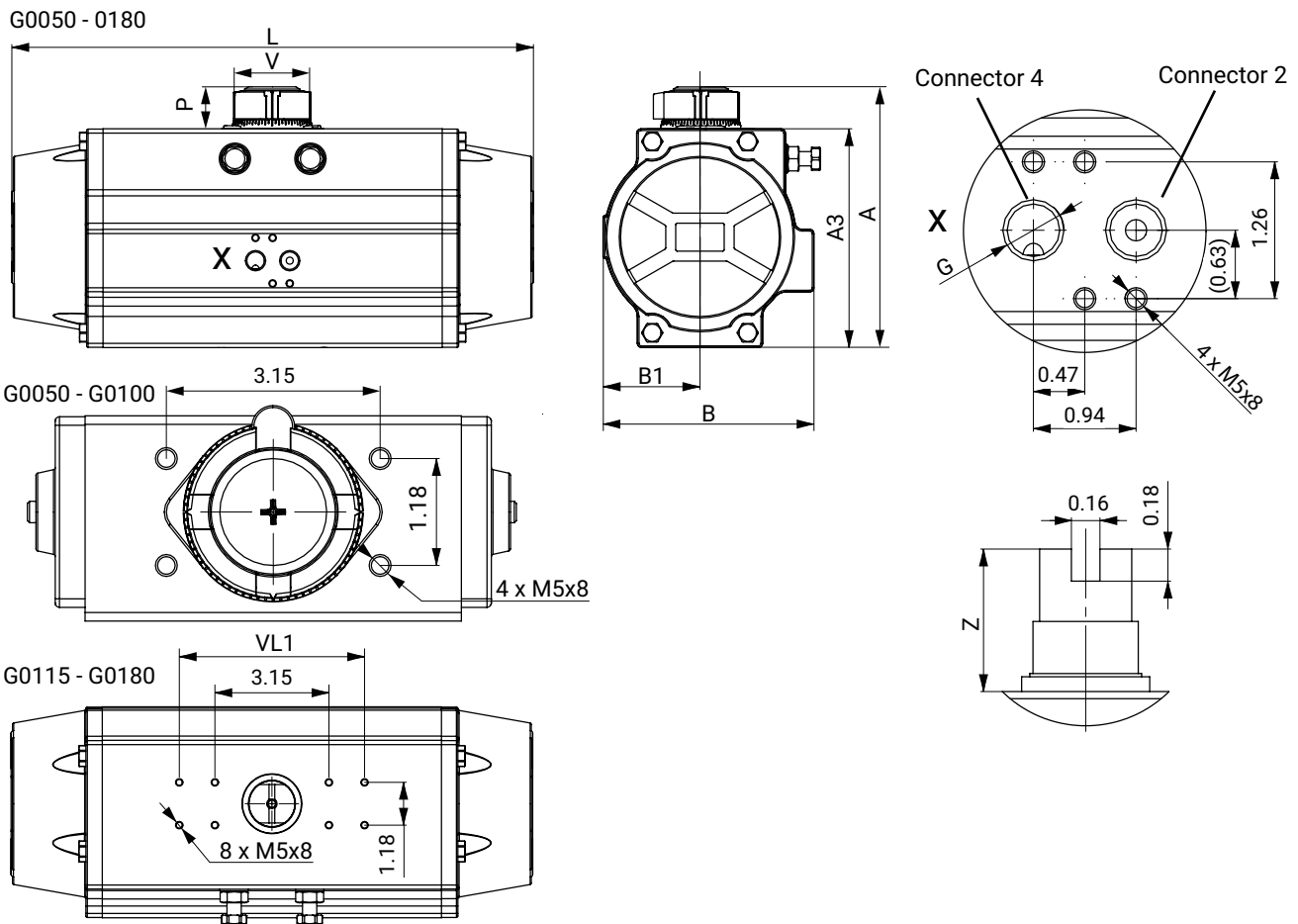
The control air connector (view X) for GDR0032 is not compatible for direct mounting with a Namur pilot valve, or a throttle of type 8500/8506.

Provide the control air connector with external thread fittings and a compressed air hose

Type	A	A3	B	B1	V	G	P	VL	Z	L
G0032	2.66	1.79	1.93	1.04	1.57	G1/8"	0.87	1.97	0.79	4.53

Dimensions in inch

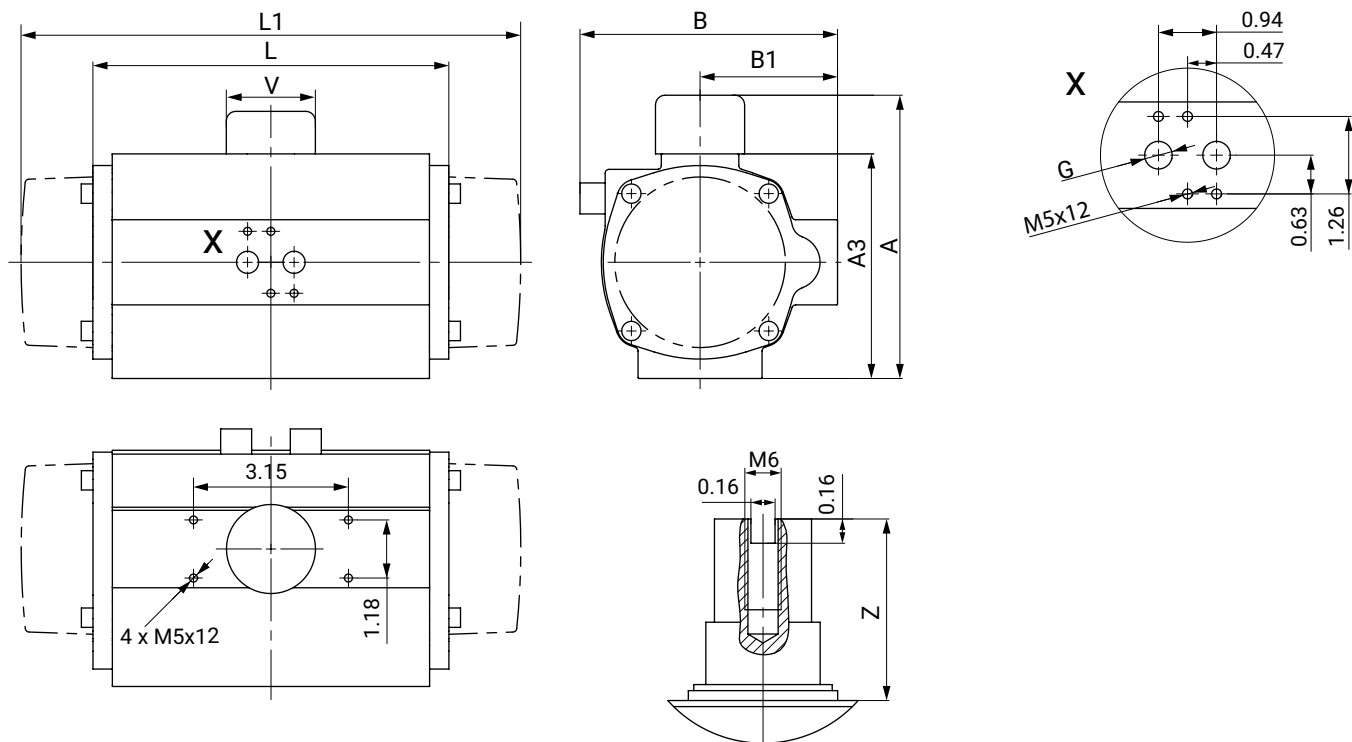
Type G0050 – G0180



Type	A	A3	B	B1	V	G	P	VL	Z	L	VL1
G0050	3.62	2.76	2.80	1.18	1.57	G1/8"	0.87	3.15	0.79	5.55	-
G0065	4.04	3.17	3.17	1.40	1.57	G1/8"	0.87	3.15	0.79	6.38	-
G0075	4.69	3.82	3.72	1.65	1.57	G1/8"	0.87	3.15	0.79	8.19	-
G0085	5.14	4.27	4.17	1.87	1.57	G1/8"	0.87	3.15	0.79	9.33	-
G0100	5.65	4.78	4.84	2.17	1.57	G1/4"	0.87	3.15	0.79	10.69	-
G0115	6.85	5.59	5.39	2.52	2.56	G1/4"	1.26	3.15	1.18	13.27	5.12
G0125	7.30	6.04	5.83	2.68	2.56	G1/4"	1.26	3.15	1.18	14.41	5.12
G0140	8.19	6.93	6.46	3.01	2.56	G1/4"	1.26	3.15	1.18	16.87	5.12
G0160	8.86	7.60	7.40	3.46	2.56	G1/4"	1.26	3.15	1.18	20.16	5.12
G0180	9.88	8.62	8.37	3.80	2.56	G1/4"	1.26	3.15	1.18	22.56	5.12

Dimensions in inch

Actuator type ADA/ASR

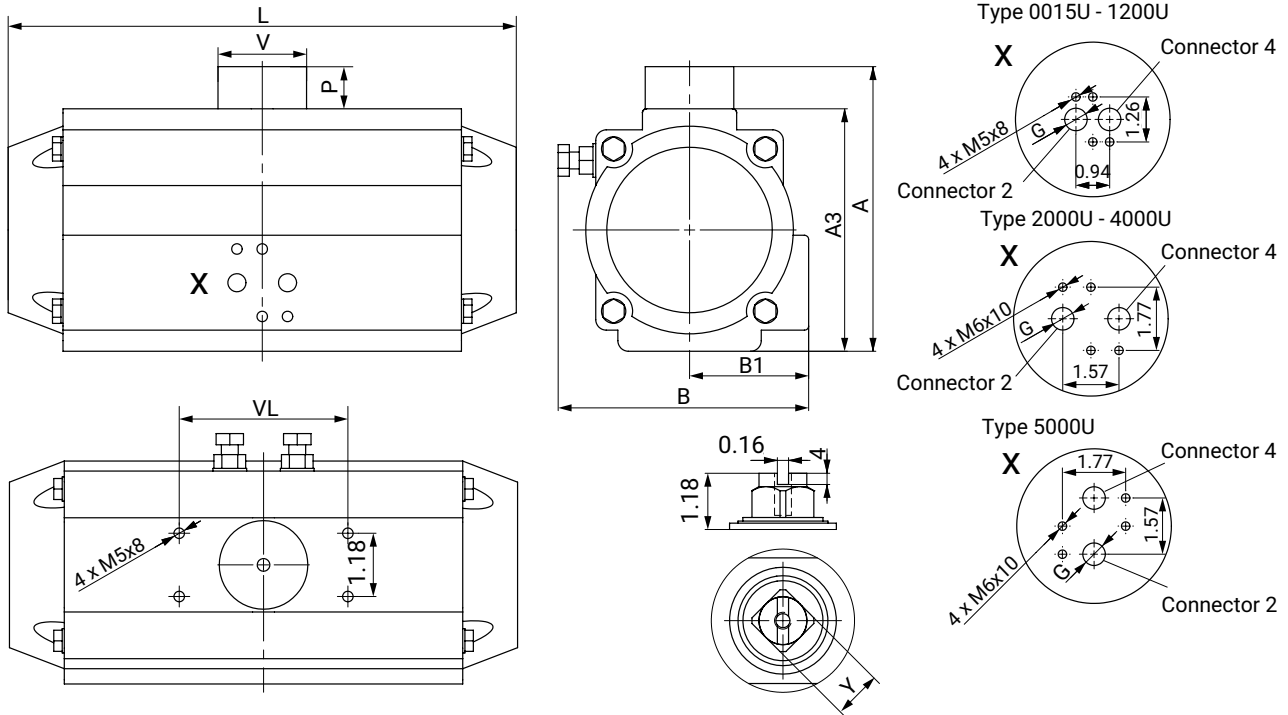


Type	A	A3	B	B1	G	L	L1	V	Z
0020U	3.78	2.60	2.99	1.89	G1/4"	5.71	6.42	1.57	1.18
0040U	4.53	3.35	3.58	2.20	G1/4"	6.22	7.68	1.57	1.18
0080U	5.39	4.21	4.37	2.60	G1/4"	6.97	8.54	1.57	1.18
0130U	5.79	4.61	4.80	2.80	G1/4"	7.72	10.16	1.57	1.18
0200U	6.50	5.31	5.33	3.07	G1/4"	8.86	11.77	1.57	1.18
0300U	7.17	5.98	6.00	3.39	G1/4"	10.75	13.72	1.57	1.18
0500U	7.83	6.65	6.81	3.78	G1/4"	11.97	15.63	1.57	1.18

Dimensions in inch

Actuator type DR/SC

Actuator dimensions

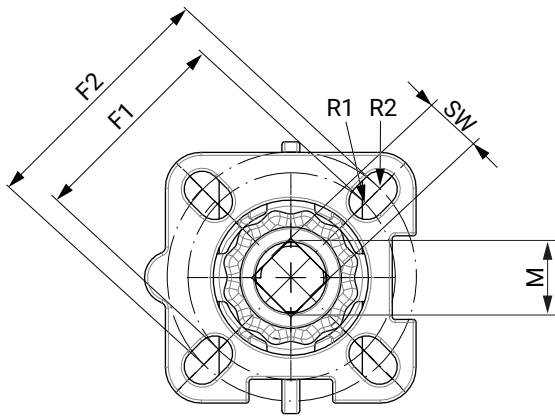


Type	A	A3	B	B1	V	VL	G	P	L	Y
0015U	3.50	2.72	2.83	1.69	1.65	3.15	G1/8"	0.79	5.35	0.43
0030U	4.13	3.35	3.33	1.91	1.65	3.15	G1/8"	0.79	6.04	0.43
0060U	4.80	4.02	3.66	1.99	1.65	3.15	G1/8"	0.79	8.01	0.67
0100U	5.31	4.53	4.17	2.22	1.65	3.15	G1/8"	0.79	9.49	0.67
0150U	5.79	5.00	4.67	2.48	1.65	3.15	G1/4"	0.79	10.20	0.67
0220U	6.89	5.71	5.35	2.83	2.28	3.15	G1/4"	1.18	11.97	1.06
0300U	7.36	6.18	5.77	3.03	2.28	3.15	G1/4"	1.18	13.11	1.06
0450U	8.15	6.97	6.54	3.39	2.66	3.15	G1/4"	1.18	15.53	1.06

Dimensions in inch

Ball valve

Actuator flange

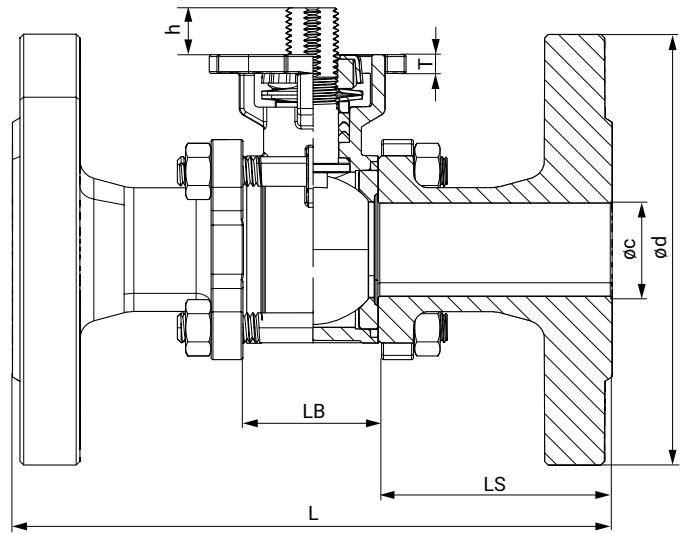
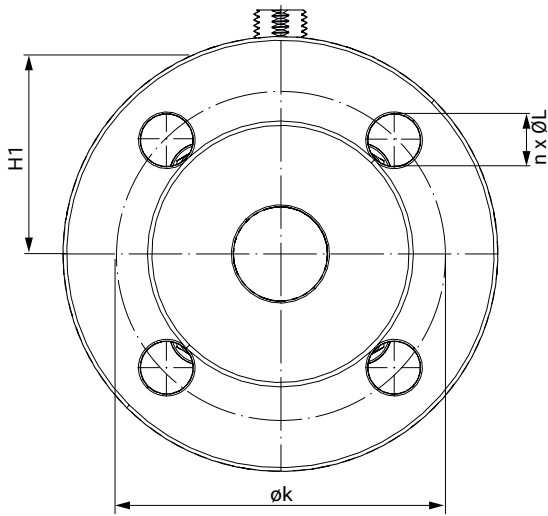


DN	G	F1	ISO 5211	R1	F2	ISO 5211	R2	SW [mm]	M
8	1/4"	1.42	F03	0.12	1.65	F04	0.12	9.0	M12
10	3/8"	1.42	F03	0.12	1.65	F04	0.12	9.0	M12
15	1/2"	1.42	F03	0.12	1.65	F04	0.12	9.0	M12
20	3/4"	1.42	F03	0.12	1.65	F04	0.12	9.0	M12
25	1"	1.65	F04	0.12	1.97	F05	0.14	11.0	M14
32	1 1/4"	1.65	F04	0.12	1.97	F05	0.14	11.0	M14
40	1 1/2"	1.97	F05	0.14	2.76	F07	0.18	14.0	M18
50	2"	1.97	F05	0.14	2.76	F07	0.18	14.0	M18
65	2 1/2"	1.97	F05	0.14	2.76	F07	0.18	14.0	M18
80	3"	2.76	F07	0.20	4.02	F10	0.24	17.0	M22
100	4"	2.76	F07	0.20	4.02	F10	0.24	17.0	M22

Dimensions in inch

Body dimensions

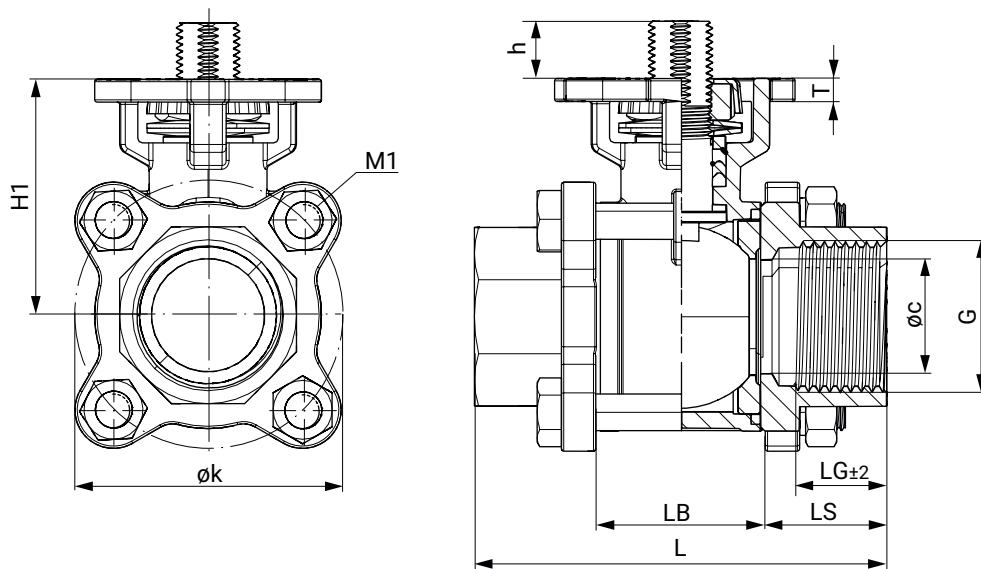
Flange (connection code 8, 11)



DN	Conne- tion code	$\varnothing c$	$\varnothing d$	$\varnothing k$	h	L	LB	LS	H1	T	n x $\varnothing L$
15	11	0.59	3.74	2.56	0.35	5.12	0.94	2.09	1.59	0.22	4 x 0.55
20	11	0.79	4.13	2.95	0.41	5.91	1.14	2.38	1.77	0.22	4 x 0.55
25	11	0.98	4.53	3.35	0.49	6.30	1.38	2.46	2.05	0.20	4 x 0.55
32	11	1.26	5.51	3.94	0.49	7.09	1.73	2.68	2.24	0.26	4 x 0.71
40	11	1.50	5.91	4.33	0.63	7.87	2.09	2.89	2.72	0.30	4 x 0.71
50	11	1.93	6.50	4.92	0.63	9.06	2.56	3.25	3.03	0.33	4 x 0.71
65	8	2.56	7.28	5.71	0.59	11.42	3.19	4.11	3.54	0.33	4 x 0.71
80	8	2.99	7.87	6.30	0.71	12.20	3.78	4.21	4.25	0.39	8 x 0.71
100	8	3.94	8.66	7.09	0.71	13.78	4.88	4.45	4.84	0.39	8 x 0.71

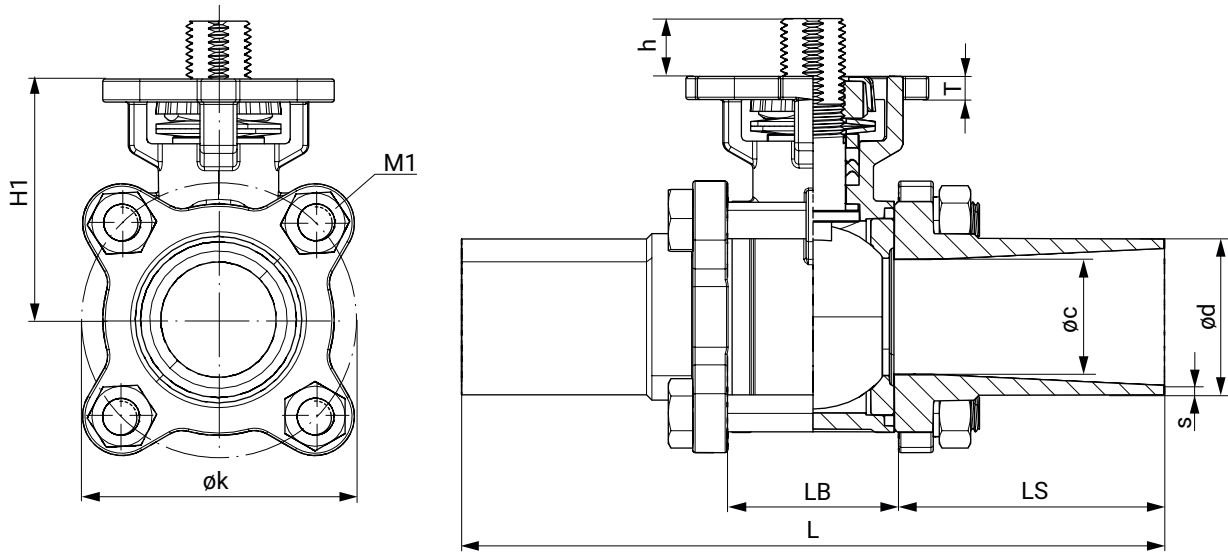
Dimensions in inch
n = number of bolts

Threaded socket (connection code 1, 31)



DN	G	øc	øk	h	LG	L	LB	LS	H1	M1	T
8	1/4"	0.39	1.81	0.35	0.47	2.17	0.94	0.61	1.59	M8	0.47
10	3/8"	0.47	1.81	0.35	0.47	2.36	0.94	0.71	1.59	M8	0.55
15	1/2"	0.59	1.81	0.35	0.63	2.95	0.94	1.00	1.59	M8	0.63
20	3/4"	0.79	2.01	0.41	0.63	3.15	1.14	1.00	1.77	M8	0.63
25	1"	0.98	2.40	0.49	0.67	3.54	1.38	1.08	2.05	M8	0.67
32	1¼"	1.26	2.87	0.49	0.79	4.33	1.73	1.30	2.24	M10	0.79
40	1½"	1.50	3.27	0.63	0.87	4.72	2.09	1.32	2.72	M10	0.87
50	2"	1.93	3.98	0.63	0.94	5.51	2.56	1.48	3.03	M12	0.94
65	2½"	2.52	5.12	0.59	1.10	7.28	3.19	2.05	3.54	M12	1.10
80	3"	2.99	6.10	0.71	1.26	8.07	3.78	2.15	4.25	M14	1.26
100	4"	3.94	7.36	0.71	1.57	9.45	4.88	2.28	4.84	M14	1.57

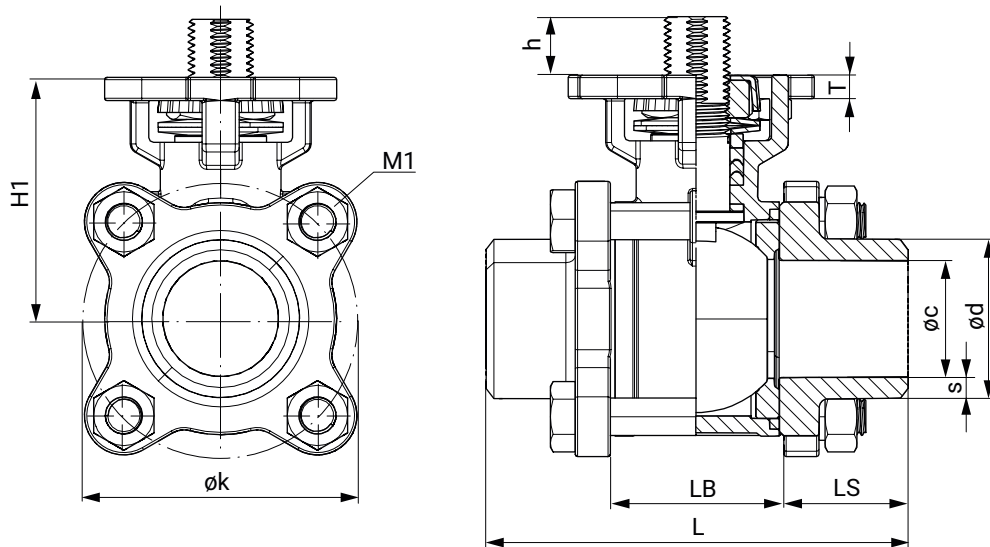
Dimensions in inch

Spigot EN 10357 series A (connection code 17)

DN	øc	ød	h	øk	s	L	LB	LS	H1	M1	SW [mm]	T
10	0.39	0.51	0.35	1.81	0.06	4.72	0.94	1.89	1.59	M8	18.0	0.22
15	0.59	0.75	0.35	1.81	0.06	5.52	0.94	2.28	1.59	M8	18.0	0.22
20	0.79	0.91	0.41	2.01	0.06	5.51	1.14	2.19	1.77	M8	18.0	0.22
25	0.98	1.14	0.49	2.40	0.06	5.99	1.38	2.30	2.05	M8	21.0	0.20
32	1.26	1.38	0.49	2.87	0.06	6.50	1.73	2.38	2.24	M10	21.0	0.26
40	1.50	1.61	0.63	3.27	0.06	7.50	2.09	2.70	2.72	M10	27.0	0.30
50	1.97	2.09	0.63	3.98	0.06	7.99	2.56	2.72	3.03	M12	27.0	0.33
65	2.56	2.76	0.59	5.12	0.08	10.00	3.19	3.41	3.54	M12	27.0	0.33
80	3.15	3.35	0.71	6.10	0.08	11.03	3.78	3.62	4.25	M14	-	0.39
100	3.94	4.09	0.71	7.36	0.08	12.48	4.88	3.80	4.84	M14	-	0.39

Dimensions in inch

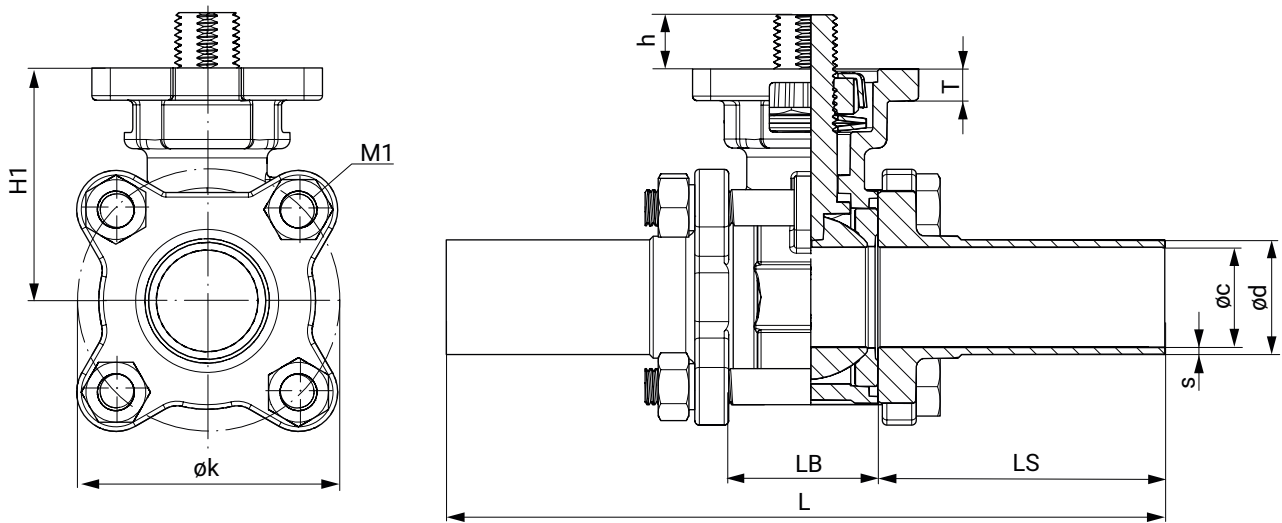
Spigot DIN EN 12627 (connection code 19)



DN	øc	ød	øk	h	s	L	LB	LS	H1	M1	T
8	0.46	0.64	1.81	0.35	0.09	2.36	0.94	0.71	1.59	M8	0.22
10	0.50	0.69	1.81	0.35	0.09	2.36	0.94	0.71	1.59	M8	0.22
15	0.59	0.85	1.81	0.35	0.13	2.95	0.94	1.00	1.59	M8	0.22
20	0.79	1.07	2.01	0.41	0.14	3.15	1.14	1.00	1.77	M8	0.22
25	0.98	1.34	2.40	0.49	0.18	3.54	1.38	1.08	2.05	M8	0.20
32	1.26	1.68	2.87	0.49	0.21	4.33	1.73	1.30	2.24	M10	0.26
40	1.50	1.91	3.27	0.63	0.21	4.72	2.09	1.32	2.72	M10	0.30
50	1.97	2.38	3.98	0.63	0.21	5.51	2.56	1.48	3.03	M12	0.33
65	2.48	3.00	5.12	0.59	0.26	7.30	3.19	2.06	3.54	M12	0.33
80	2.99	3.50	6.10	0.71	0.26	8.07	3.78	2.15	4.25	M14	0.39
100	3.94	4.57	7.36	0.71	0.31	9.45	4.88	2.28	4.84	M14	0.39

Dimensions in inch

Spigot ASME (connection code 59)

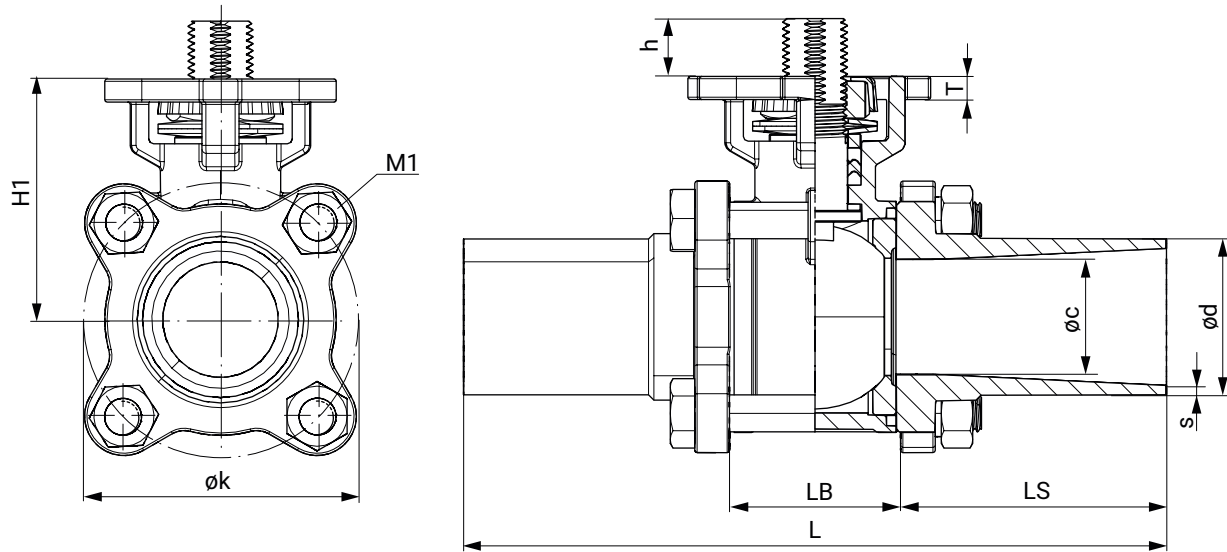


DN	øc	ød	h	øk	s	L	LB	LS	H1	M1	T
15	0.37	0.50	0.33	1.81	0.06	5.51	0.98	2.26	1.59	M8	0.20
20	0.62	0.75	0.41	1.85	0.06	5.75	1.10	2.32	1.71	M8	0.20
25	0.87	1.00	0.47	2.20	0.06	6.26	1.26	2.50	1.99	M8	0.28
40	1.37	1.50	0.57	3.11	0.06	7.52	1.89	2.81	2.66	M10	0.31
50	1.87	2.00	0.57	3.88	0.06	8.50	2.44	3.03	2.97	M12	0.31
65	2.37	2.50	0.57	4.96	0.06	9.76	3.15	3.31	3.46	M12	0.31
80	2.87	3.00	0.69	5.75	0.06	10.51	3.54	3.48	4.13	M14	0.39
100	3.83	4.00	0.69	7.09	0.08	12.52	4.65	3.94	4.72	M14	0.39

Dimensions in inch

Dimensions

Spigot ISO (connection code 60)



DN	øc	ød	h	øk	s	L	LB	LS	H1	M1	T
8	0.41	0.53	0.35	1.81	0.06	4.72	0.94	1.89	1.59	M8	0.22
10	0.47	0.68	0.35	1.81	0.06	4.72	0.94	1.89	1.59	M8	0.22
15	0.59	0.84	0.35	1.81	0.06	5.52	0.94	2.28	1.59	M8	0.22
20	0.79	1.06	0.41	2.01	0.06	5.51	1.14	2.19	1.77	M8	0.22
25	0.98	1.33	0.49	2.32	0.08	5.99	1.38	2.30	2.05	M8	0.20
32	1.26	1.67	0.49	2.87	0.08	6.50	1.73	2.38	2.24	M10	0.26
40	1.50	1.90	0.63	3.27	0.08	7.50	2.09	2.70	2.72	M10	0.30
50	1.93	2.37	0.63	4.06	0.08	7.99	2.56	2.72	3.03	M12	0.33
65	2.52	3.00	0.59	5.12	0.08	10.00	3.19	3.41	3.54	M12	0.33
80	2.99	3.50	0.71	6.10	0.09	11.03	3.78	3.62	4.25	M14	0.39
100	3.94	4.50	0.71	7.36	0.09	12.48	4.88	3.80	4.84	M14	0.39

Dimensions in inch

Add-on components



GEMÜ LSF

Inductive dual sensor for quarter turn valves

The GEMÜ LSF inductive dual sensor 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.



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.

Accessories

GEMÜ ADH

Mounting sleeve

The mounting sleeve accessories are available in the square and star geometry designs. These are used for the shaft and hub support for quarter turn actuators. Both sleeves have an internal square drive (please observe stated measurement dimensions here). The sleeve material is sintered metal and they are chemically nickel plated with a surface of 25 µm.



GEMÜ 2022

Throttle valve

The GEMÜ 2022 throttle valves are available as throttle valve, throttle check valve and dual throttle check valve. In pneumatic actuators they are used to regulate the compressed air depending on the function for the supply or exhaust air and can be set independently of each other in the case of dual throttle check valves.



GEMÜ 8500

Electrically operated pilot solenoid valve

The GEMÜ 8500 servo assisted 3/2 or 5/2-way pilot solenoid valve is indirectly controlled. The body is made of aluminium. The plastic encapsulated coil is detachable. The piston valve has a soft elastomer seal.



GEMÜ 8500DRN

Throttle plate

Throttle plates can be used to continuously adjust the travel times of pneumatic quarter turn actuators in both the "OPEN" and "CLOSED" directions independently of one another. They are installed between the NAMUR valve and the quarter turn actuator.



GEMÜ 1751

Silencer

Damping of vent hole or suction noises and coarse filtering of the suction air for pneumatic applications

Certificates

Certificate	Standard	Item number
3.1 Material	EN 10204	88333336

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:

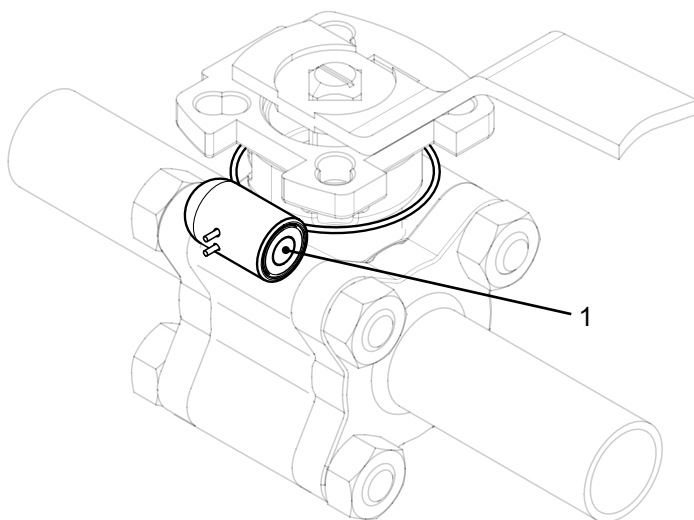
www.gemu-group.com/conexo

Ordering

GEMÜ Conexo must be ordered separately with the ordering option "CONEXO".

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.





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