GEMÜ 615

Pneumatically operated diaphragm valve

Features

- CIP capable
- Wide range of adaptation options for add-on components and accessories
- Compact design (ideal when space is at a premium)
- Version according to ATEX on request

Description

The GEMÜ 615 2/2-way diaphragm valve has a low-maintenance plastic piston actuator and is pneumatically operated. An integrated optical position indicator is standard. Normally Closed (NC), Normally Open (NO) and Double Acting (DA) control functions are available.

Technical specifications

- **Media temperature :** -10 to 80 °C
- **Ambient temperature:** 0 to 60 °C
- **Operating pressure :** 0 to 6 bar
- **Nominal sizes:** DN 10 to 20
- **Body configurations:** Straight through body
- **Connection standards :** ANSI I ASME I BS I DIN I EN I JIS
- **Connection types:** Clamp I Spigot I thread
- **Body materials:** (316L), forging material I 1.4408, investment casting material I 1.4435 (BN2), forged material I 1.4435, investment casting material I 1.4539 (904L), forged material
- **Diaphragm materials:** EPDM I PTFE/EPDM I PTFE/FKM
- **Conformities:** Belgaqua I BSE/TSE I EAC I FDA I FMEDA I Oxygen I Reg. (EU) No. 10/2011 I Regulation (EC) No. 1935/2004 I Regulation (EC) No. 2023/2006 I TA Luft (German Clean Air Act) I USP

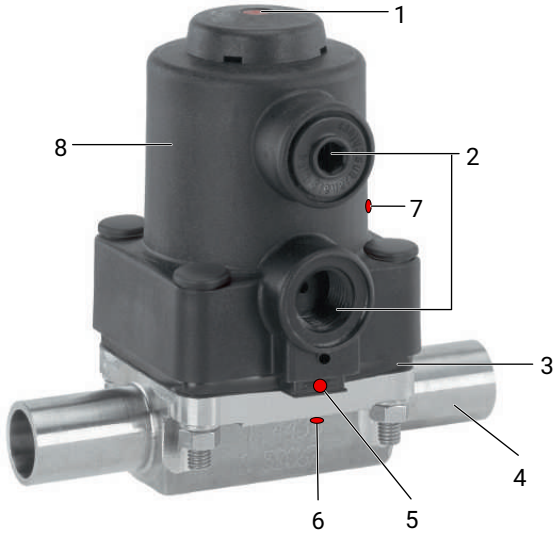
Technical data depends on the respective configuration

BELGAQUA EAC FDA

further information
webcode: GW-615

Product description

Construction



Position	Name	Materials
1	Position indicator	
2	Control air connectors	
3	Diaphragm	EPDM FKM PTFE/EPDM (one-piece)
4	Valve body	1.4408, investment casting 1.4435, investment casting 1.4435 (F316L), forged body 1.4435 (BN2), forged body, Δ Fe < 0.5% 1.4539, forged body
5	CONEXO diaphragm RFID chip (see Conexo information)	
6	CONEXO body RFID chip (see Conexo information)	
7	CONEXO actuator RFID chip (see Conexo information)	
8	Piston actuator	PP, glass fibre reinforced

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".

Availabilities

Availability of grades of surface finish

Internal surface finishes for forged and block material bodies [1)]

Process contact surfaces	Mechanically polished [2)]		Electropolished	
	Hygiene class DIN 11866	Code	Hygiene class DIN 11866	Code
Ra ≤ 0.80 µm	H3	1502	HE3	1503
Ra ≤ 0.60 µm	-	1507	-	1508
Ra ≤ 0.40 µm	H4	1536	HE4	1537
Ra [3)] ≤ 0.25 µm	H5	1527	HE5	1516

Process contact surfaces in accordance with ASME BPE 2016 [4)]	Mechanically polished [2)]		Electropolished	
	ASME BPE surface designation	Code	ASME BPE surface designation	Code
Ra Max. = 0.76 µm	SF3	SF3	-	-
Ra Max. = 0.64 µm	SF2	SF2	SF6	SF6
Ra Max. = 0.51 µm	SF1	SF1	SF5	SF5
Ra Max. = 0.38 µm	-	-	SF4	SF4

Internal surface finishes for investment cast bodies

Process contact surfaces	Mechanically polished [2)]	
	Hygiene class DIN 11866	Code
Ra ≤ 6.30 µm	-	1500
Ra ≤ 0.80 µm	H3	1502
Ra [5)] ≤ 0.60 µm	-	1507

Ra acc. to DIN EN ISO 4288 and ASME B46.1

1) Surface finishes of customized valve bodies may be limited in special cases.

2) Or any other finishing method that meets the Ra value (acc. to ASME BPE).

3) The smallest possible Ra value for pipe inside diameter < 6 mm is 0.38 µm.

4) When using these surfaces, the bodies are marked according to the specifications of ASME BPE.
The surfaces are only available for valve bodies which are made of materials (e.g. GEMÜ material codes 40, 41, F4, 44)) and use connections (e.g. GEMÜ connection codes 59, 80, 88) according to ASME BPE.

5) Not possible for GEMÜ connection code 59, DN 8 and GEMÜ connection code 0, DN 4.

Availability of valve bodies

Spigot

MG	DN	Connection type code [1]												
		0	16	17		18	36	55	59		60		63	64	65
		Material code [2]													
		40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	C3	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	C3	40, 42, 44, A1, A3, F4	C3	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4
10	**10**	-	X	X	X	X	X	X	-	X	X	X	X	-	X
	15	X	X	X	X	X	X	X	-	X	X	X	X	X	X
	20	-	-	-	-	-	-	X	X	X	-	-	-	-	-

MG = diaphragm size, X = standard

1) **Connection type**
Code 0: DIN spigot
Code 16: Spigots DIN EN 10357 Series B (2014 edition; formerly DIN 11850 Series 1)
Code 17: Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2
Code 18: Spigot DIN 11850 Series 3
Code 36: Spigot JIS-G 3459 Schedule 10s
Code 55: Spigot BS 4825, Part 1
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
Code 63: Spigot ANSI/ASME B36.19M Schedule 10s
Code 64: Spigot ANSI/ASME B36.19M Schedule 5s
Code 65: ANSI/ASME B36.19M Schedule 40s spigot

2) **Valve body material**
Code 40: 1.4435 (F316L), forged body
Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%
Code C3: 1.4435, investment casting
Code F4: 1.4539 / UNS N08904, forged body
Code A1: 3.7035, titanium

Threaded connection

MG	DN	Connection type code [1]		
		1	1L	6, 6K
		Material code [2]		
		37		40, 42
10	**10**	-	-	W
	12	X	-	-
	15	X	X	W

MG = diaphragm size, X = standard
W = welded assembly

1) **Connection type**
Code 1: Threaded socket DIN ISO 228
Code 1L: Threaded socket DIN ISO 228 body length (FTF): 75 mm
Code 6: Threaded spigot DIN 11851
Code 6K: Tapered connector and union nut DIN 11851

2) **Valve body material**
Code 37: 1.4408, investment casting
Code 40: 1.4435 (F316L), forged body
Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

Clamp

MG	DN	Connection type code [1]											
		80, 8P		82		84		86	88, 8T		8A		8H	
		Material code												
		40, 42	F4	40, 42	F4	40, 42	F4	40, 42, F4	40, 42	F4	40, 42	F4	40, 42	F4
10	**10**	K	W	K	W	-	-	W	-	-	K	W	K	W
	15	K	W	W	W	K	W	W	K	W	K	W	K	W
	20	K	W	-	-	K	W	-	K	W	-	-	-	-

MG = diaphragm size
K = connections completely machined (not welded)
W = welded assembly

1) **Connection type**
Code 82: Clamp DIN 32676 Series B, Overall length FTF EN 558 Series 7, Overall length only for housing type D
Code 86: Clamp DIN 32676 series A
Code 8A: Clamp DIN 32676 Series A, Overall length FTF according to EN 558 Series 7, Overall length only for housing type D

Aseptic connections

MG	DN	Connection type code [1]								
		Flange			Threaded connection			Clamp		
		A1, A2	A4, A5	A7, A8	C1, C2	C4, C5	C7, C8	E1, E2	E4, E5	E7, E8
		Material code 40, 42, A1 [2]								
10	10	X	X	-	X	X	-	X	X	-
	15	X	X	X	X	X	X	X	X	X
	20	-	-	X	-	-	X	-	-	X

MG = diaphragm size

1) **Connection type**
Code A1: Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 Series A and EN 10357 Series A, overall length FTF EN 558 Series 1, overall length only for housing form D
Code A2: Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 Series A and EN 10357 Series A, overall length FTF EN 558 Series 1, overall length only for housing form D
Code A4: Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series B and EN ISO 1127, overall length FTF EN 558 series 1, overall length only for housing form D
Code A5: Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series B and EN ISO 1127 Overall length FTF EN 558 series 1, Overall length only for housing form D
Code A7: Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series C and ASME BPE, face-to-face dimension FTF EN 558 series 1, length only for body configurations D & F
Code A8: Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series C and ASME BPE, face-to-face dimension FTF EN 558 series 1, length only for body configurations D & F
Code C1: Aseptic threaded spigot DIN 11864-GS, for pipe DIN 11866 Series A and EN 10357 Series A
Code C2: Aseptic union nipple with groove cap nut DIN 11864-BS, for pipe DIN 11866 Series A and EN 10357 Series A
Code C4: Aseptic threaded spigot DIN 11864-GS, for pipe DIN 11866 series B and EN ISO 1127
Code C5: Aseptic union nipple with groove cap nut DIN 11864-BS, for pipe DIN 11866 series B and EN ISO 1127
Code C7: Aseptic threaded spigot DIN 11864-GS, for pipe DIN 11866 series C and ASME BPE
Code C8: Aseptic union nipple with groove cap nut DIN 11864-BS, for pipe DIN 11866 series C and ASME BPE
Code E1: Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series A and EN 10357 series A, overall length FTF EN 558 series 7, overall length only for housing form D
Code E2: Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series A and EN 10357 series A, overall length FTF EN 558 series 7, overall length only for housing form D
Code E4: Grooved clamp DIN 11864-NKS, for pipe DIN 11866 series B and EN ISO 1127, overall length FTF EN 558 series 7, overall length only for housing form D
Code E5: Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series B and EN ISO 1127, overall length FTF EN 558 series 7, overall length only for housing form D
Code E7: Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series C/ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configurations D & F
Code E8: Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series C/ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configurations D & F

2) **Valve body material**
Code 40: 1.4435 (F316L), forged body
Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%
Code A1: 3.7035, titanium

Availability of product conformity

	Diaphragm material code [1]	Body material code
Drinking water		
Belgaqua (B)	28	37, C3

1) **Diaphragm material**
Code 28: EPDM

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
Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator	615

2 DN	Code
DN 10	10
DN 12	12
DN 15	15
DN 20	20

3 Body configuration	Code
2/2-way body	D

4 Connection type	Code
Spigot	
DIN spigot	0
Spigots DIN EN 10357 Series B (2014 edition; formerly DIN 11850 Series 1)	16
Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2	17
Spigot DIN 11850 Series 3	18
Spigot JIS-G 3459 Schedule 10s	36
Spigot BS 4825, Part 1	55
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
Spigot ANSI/ASME B36.19M Schedule 10s	63
Spigot ANSI/ASME B36.19M Schedule 5s	64
ANSI/ASME B36.19M Schedule 40s spigot	65
Threaded connection	
Threaded socket DIN ISO 228	1
Threaded socket DIN ISO 228 body length (FTF): 75 mm	1L
Threaded spigot DIN 11851	6
Tapered connector and union nut DIN 11851	6K
Clamp	
Clamp ASME BPE, face-to-face dimension FTF ASME BPE, length only for body configurations D & F	80
Clamp DIN 32676 Series B, Overall length FTF EN 558 Series 7, Overall length only for housing type D	82
Clamp for tube BS 4825 Part 1, DN 15 and DN 20, clamp OD 25.0 mm, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	84
Clamp DIN 32676 series A	86

4 Connection type	Code
Clamp ASME BPE, for pipe ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configurations D & F	88
Clamp DIN 32676 Series A, Overall length FTF according to EN 558 Series 7, Overall length only for housing type D	8A
Clamp IDF/ISO for tube JIS-G 3459, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	8H
Clamp DIN 32676 series C, face-to-face dimension FTF ASME BPE, length only for body configurations D & F	8P
Clamp DIN 32676 series C, face-to-face dimension FTF EN 558 series 7, length only for body configurations D & F	8T

5 Valve body material	Code
Investment casting material	
1.4408, investment casting	37
1.4435, investment casting	C3
Forged material	
1.4435 (F316L), forged body	40
1.4435 (BN2), forged body, Δ Fe < 0.5%	42
1.4539 / UNS N08904, forged body	F4

6 Diaphragm material	Code
Elastomer	
FKM	4
EPDM	13
EPDM	17
EPDM	19
EPDM	28
EPDM	29
PTFE	
PTFE/EPDM one-piece	54

7 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	3

8 Actuator version	Code
Actuator size 1/N control air connector 90° offset to flow direction	1/N

9 Surface	Code
Ra ≤ 6.3 µm for surfaces in contact with media, mechanically polished on the inside	1500

9 Surface	Code
Ra ≤ 0.8 µm for surfaces in contact with media, in accordance with DIN 11866 H3 mechanically polished on the inside	1502
Ra ≤ 0.8 µm for surfaces in contact with media, in accordance with DIN 11866 HE3, electropolished inside/outside	1503
Ra ≤ 0.6 µm for surfaces in contact with media, mechanically polished on the inside	1507
Ra ≤ 0.6 µm for surfaces in contact with media, electropolished inside/outside	1508
Ra ≤ 0.25 µm for surfaces in contact with media *), in accordance with DIN 11866 HE5, electropolished inside/outside, *) for pipe inner diameter < 6 mm, Ra ≤ 0.38 µm in the spigot	1516
Ra ≤ 0.25 µm for surfaces in contact with media *), in accordance with DIN 11866 H5, mechanically polished on the inside, *) for pipe inner Ø < 6 mm, Ra ≤ 0.38 µm in the spigot	1527
Ra ≤ 0.4 µm for surfaces in contact with media, in accordance with DIN 11866 H4, mechanically polished on the inside	1536
Ra ≤ 0.4 µm for surfaces in contact with media, in accordance with DIN 11866 HE4, electropolished inside/outside	1537
Ra max. 0.51 µm (20 µin.) for surfaces in contact with media, in accordance with ASME BPE SF1, internally mechanically polished	SF1
Ra max. 0.64 µm (25 µin.) for surfaces in contact with media, in accordance with ASME BPE SF2, internally mechanically polished	SF2

9 Surface	Code
Ra max. 0.76 µm (30 µin.) for surfaces in contact with media, in accordance with ASME BPE SF3, mechanically polished interior	SF3
Ra max. 0.38 µm (15 µin.) for surfaces in contact with media, in accordance with ASME BPE SF4, electropolished inside/outside	SF4
Ra max. 0.51 µm (20 µin.) for surfaces in contact with media, in accordance with ASME BPE SF5, electropolished inside/outside	SF5
Ra max. 0.64 µm (25 µin.) for surfaces in contact with media, in accordance with ASME BPE SF6, electropolished inside/outside	SF6

10 Special version	Code
Without	
BELGAQUA certification	B
Special version for oxygen applications. Operating temperature restricted according to product label. Media wetted materials cleaned. Seals and oxygen grease used tested according to DIN EN 1797 / ISO 21010	S

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

Order example

Ordering option	Code	Description
1 Type	615	Diaphragm valve, pneumatically operated, plastic piston actuator, optical position indicator
2 DN	15	DN 15
3 Body configuration	D	2/2-way body
4 Connection type	60	Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B
5 Valve body material	C3	1.4435, investment casting
6 Diaphragm material	17	EPDM
7 Control function	1	Normally closed (NC)
8 Actuator version	1/N	Actuator size 1/N control air connector 90° offset to flow direction
9 Surface	1500	Ra ≤ 6.3 µm for surfaces in contact with media, mechanically polished on the inside
10 Special version	S	Special version for oxygen applications. Operating temperature restricted according to product label. Media wetted materials cleaned. Seals and oxygen grease used tested according to DIN EN 1797 / ISO 21010
11 CONEXO		Without

Technical data

Medium

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

For special oxygen version (code S): only gaseous oxygen

Control medium: Inert gases

Temperature

Media temperature:

Diaphragm material	Standard	Special version for oxygen
FKM (code 4)	-10 — 80 °C	-
EPDM (code 13)	-10 — 80 °C	0 — 60 °C
EPDM (code 17)	-10 — 80 °C	-
EPDM (code 19)	-10 — 80 °C	0 — 60 °C
EPDM (code 28)	-10 — 80 °C	-
EPDM (code 29)	-10 — 80 °C	-
PTFE/EPDM (code 54)	-10 — 80 °C	0 — 60 °C

Ambient temperature: 0 — 60 °C

Control medium temperature: 0 — 40 °C

Storage temperature: 0 — 40 °C

Pressure

Operating pressure:

MG	DN	Diaphragm material	
		Elastomer	PTFE
10	**10 - 20**	0 - 6	0 - 6

MG = diaphragm size
All pressures are gauge pressures. Operating pressure values were determined with static operating pressure applied on one side of a closed valve. Sealing at the valve seat and atmospheric sealing is ensured for the given values.
Information on operating pressures applied on both sides and for high purity media on request.

Pressure rating: PN 16

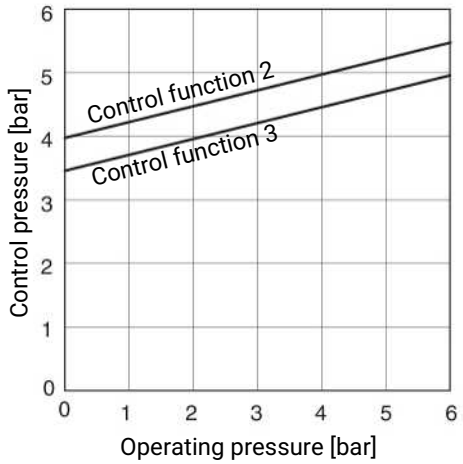
Leakage rate: Leakage rate A to P11/P12 EN 12266-1

Control pressure:

MG	DN	Control function 1	Control function 2	Control function 3
10	**10 - 20**	5 - 7	max. 5.5	max. 5.0

MG = diaphragm size
All pressures are gauge pressures.

Control pressure/operating pressure diagram – Control function 2 and 3



The control pressure depending on the prevailing operating pressure, as shown in the diagram, is intended as a guide for operating the system with low wear on the diaphragm.

Filling volume: 0.02 dm³

Kv values:

MG	DN	Connection type code						
		0	16	17	18	59	60	1, 1L
10	**10**	-	2.4	2.4	2.4	2.2	3.3	-
	12	-	-	-	-	-	-	3.2
	15	3.3	3.8	3.8	3.8	2.2	4.0	3.4
	20	-	-	-	-	3.8	-	-

MG = diaphragm size
Kv values in m³/h
Kv values determined in accordance with DIN EN 60534 standard, inlet pressure 5 bar, Δp 1 bar, stainless steel valve body and soft elastomer diaphragm. The Kv values for other product configurations (e.g. other diaphragm or body materials) may differ. In general, all diaphragms are subject to the influences of pressure, temperature, the process and their tightening torques. Therefore the Kv values may exceed the tolerance limits of the standard.

Product conformity

Machinery Directive: 2006/42/EC

Food: Regulation (EC) No. 1935/2006
Regulation (EC) No. 10/2011*
FDA*
USP* Class VI

Drinking water: Belgaqua*
* depending on version and/or operating parameters

Mechanical data

Weight:

Actuator

0.18 kg

Body

MG	DN	Spigot	Threaded socket	Threaded spigot	Clamp
		Connection type code			
		0, 16, 17, 18, 36, 55, 59, 60, 63, 64, 65	1L	6, 6K	80, 82, 84, 86, 88, 8A, 8H, 8P, 8T
10	10	0.30	-	0.33	0.30
	12	-	0.17	-	-
	15	0.30	0.26	0.35	0.43
	20	-	-	-	0.43

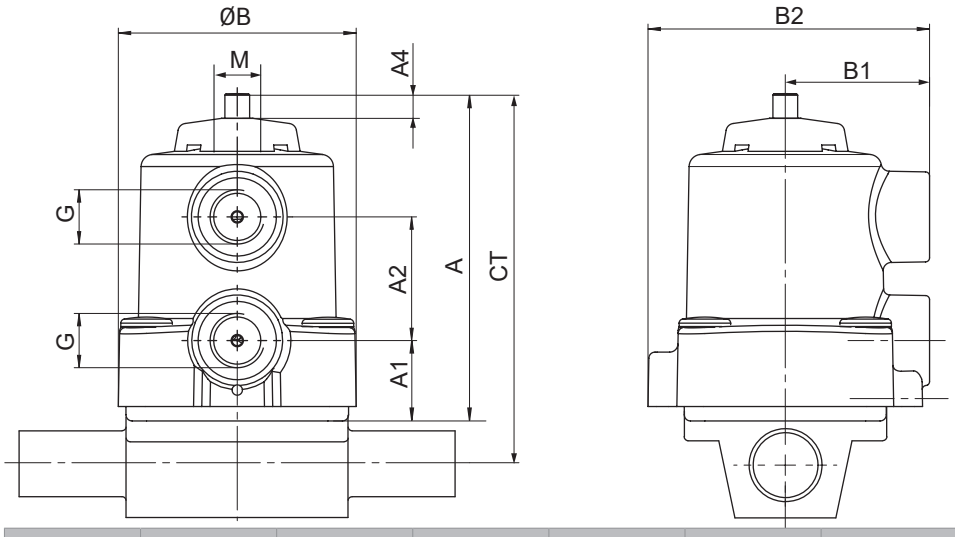
Weights in kg
MG = diaphragm size

Installation position: Optional

Observe the angle of rotation for optimized draining when it comes to installation.
See separate document, "Angle of rotation technical information".

Dimensions

Actuator dimensions

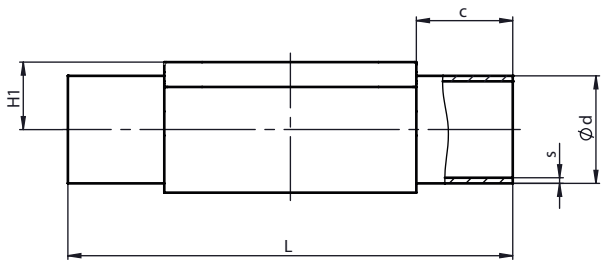


MG	A	A1	A2	ø B	B1	B2	A4	G	M
10	80.0	21.0	30.0	57.0	35.0	68.0	4.0	G 1/4	M12x1

Dimensions in mm
MG = diaphragm size
* CT = A + H1 (see body dimensions)

Body dimensions

Spigot DIN/EN/ISO (code 0, 16, 17, 18, 60)



Connection type spigot DIN/EN/ISO (code 0, 16, 17, 18, 60) [1], forged material (code 40, 42, F4) [2]

MG	DN	NPS	c (min)	ød					H1	L	s				
				Connection type							Connection type				
				0	16	17	18	60			0	16	17	18	60
10	**10**	**3/8"**	25.0	-	12.0	13.0	14.0	17.2	12.5	108.0	-	1.0	1.5	2.0	1.6
	15	**1/2"**	25.0	18.0	18.0	19.0	20.0	21.3	12.5	108.0	1.5	1.0	1.5	2.0	1.6

Dimensions in mm
MG = diaphragm size

1) **Connection type**
Code 0: DIN spigot
Code 16: Spigots DIN EN 10357 Series B (2014 edition; formerly DIN 11850 Series 1)
Code 17: Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2
Code 18: Spigot DIN 11850 Series 3
Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B

2) **Valve body material**
Code 40: 1.4435 (F316L), forged body
Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%
Code F4: 1.4539 / UNS N08904, forged body
Code A1: 3.7035, titanium

Connection type spigot DIN/EN/ISO (code 17, 60) [1], investment casting material (code C3) [2]

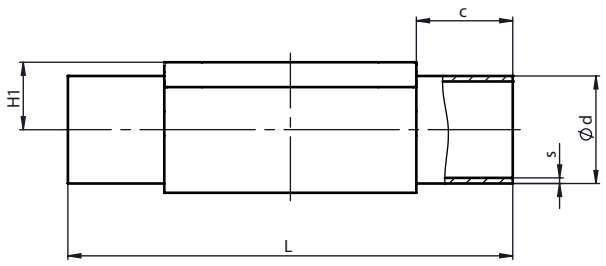
MG	DN	NPS	c (min)	ød		H1	L	s	
				Connection type				Connection type	
				17	60			17	60
10	**10**	**3/8"**	25.0	13.0	17.2	12.5	108.0	1.5	1.6
	15	**1/2"**	25.0	19.0	21.3	12.5	108.0	1.5	1.6

Dimensions in mm
MG = diaphragm size

1) **Connection type**
Code 17: Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2
Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B

2) **Valve body material**
Code C3: 1.4435, investment casting

Spigot ASME/BS (code 55, 59, 63, 64, 65)



Connection type spigot ASME/BS (code 55, 59, 63, 64, 65)[1], forged material (code 40, 42, F4)[2]

MG	DN	NPS	c (min)	ød					H1	L	s				
				Connection type							Connection type				
				55	59	63	64	65			55	59	63	64	65
10	**10**	**3/8"**	25.0	9.53	9.53	17.1	-	17.1	12.5	108.0	1.2	0.89	1.65	-	2.31
	15	**1/2"**	25.0	12.70	12.70	21.3	21.3	21.3	12.5	108.0	1.2	1.65	2.11	1.65	2.77
	20	**3/4"**	25.0	19.05	19.05	-	-	-	12.5	108.0	1.2	1.65	-	-	-

Connection type spigot ASME BPE (code 59)[1], investment casting material (code C3)[2]

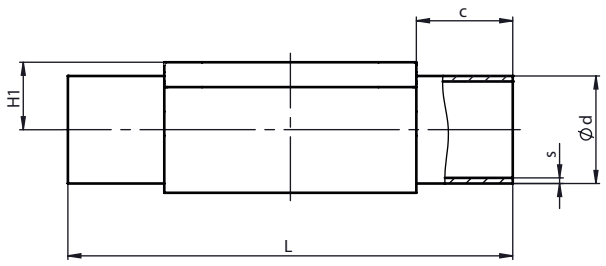
MG	DN	NPS	c (min)	ød	H1	L	s
10	**20**	**3/4"**	25.0	19.05	12.5	108.0	1.65

Dimensions in mm
MG = diaphragm size

1) **Connection type**
Code 55: Spigot BS 4825, Part 1
Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C
Code 63: Spigot ANSI/ASME B36.19M Schedule 10s
Code 64: Spigot ANSI/ASME B36.19M Schedule 5s
Code 65: ANSI/ASME B36.19M Schedule 40s spigot

2) **Valve body material**
Code 40: 1.4435 (F316L), forged body
Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%
Code C3: 1.4435, investment casting
Code F4: 1.4539 / UNS N08904, forged body
Code A1: 3.7035, titanium

Spigot JIS/SMS (code 36)



Connection type spigot JIS/SMS (code 36) [1], forged material (code 40, 42, F4) [2]

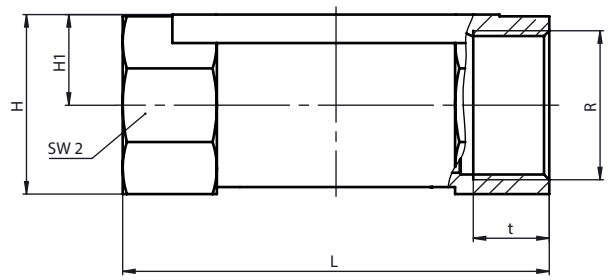
MG	DN	NPS	c (min)	ød	H1	L	s
10	**10**	**3/8"**	25.0	17.3	12.5	108.0	1.65
	15	**1/2"**	25.0	21.7	12.5	108.0	2.10

Dimensions in mm
MG = diaphragm size

1) **Connection type**
Code 36: Spigot JIS-G 3459 Schedule 10s

2) **Valve body material**
Code 40: 1.4435 (F316L), forged body
Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%
Code F4: 1.4539 / UNS N08904, forged body
Code A1: 3.7035, titanium

Threaded socket DIN (code 1)



Connection type threaded socket (code 1) [1], investment casting material (code 37) [2]

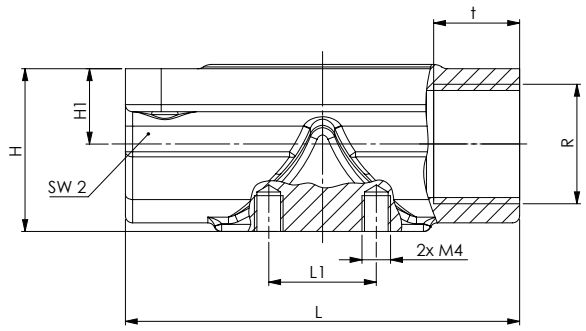
MG	DN	NPS	H	H1	L	n	R	SW 2	t
10	**15**	**1/2"**	30.0	15.0	68.0	2	G 1/2	27	15.0

Dimensions in mm
MG = diaphragm size
n = number of flats

1) **Connection type**
Code 1: Threaded socket DIN ISO 228

2) **Valve body material**
Code 37: 1.4408, investment casting

Threaded socket DIN (code 1, 1L)



Connection type threaded socket (code 1) [1], investment casting material (code 37) [2], body configuration D

MG	DN	NPS	H	H1	L	n	R	SW 2	t	L1
10	**12**	**3/8"**	22.7	10.5	55.0	2	G3/8	28	12.0	15

Connection type threaded socket (code 1L) [3], investment casting material (code 37) [2], body configuration D

MG	DN	NPS	H	H1	L	n	R	SW 2	t	L1
10	**15**	**1/2"**	28.1	13.0	75.0	2	G 1/2	32	15.0	15

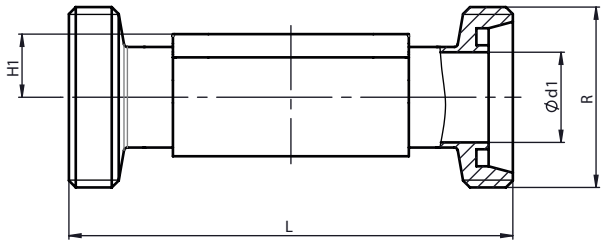
Dimensions in mm
MG = diaphragm size
n = number of flats

1) **Connection type**
Code 1: Threaded socket DIN ISO 228

2) **Valve body material**
Code 37: 1.4408, investment casting

3) **Connection type**
Code 1L: Threaded socket DIN ISO 228 body length (FTF): 75 mm

Threaded spigot DIN (code 6)



Connection type threaded spigot DIN (code 6) [1], forged material (code 40, 42) [2]

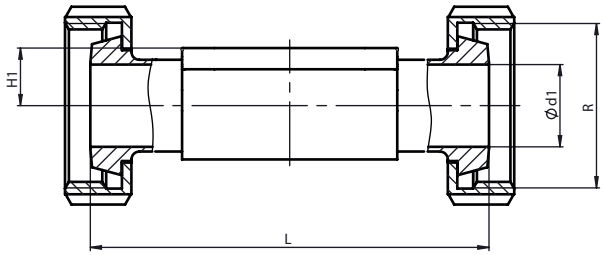
MG	DN	NPS	ød1	H1	L	R
10	**10**	**3/8"**	10.0	12.5	118.0	Rd 28 x 1/8
	15	**1/2"**	16.0	12.5	118.0	Rd 34 x 1/8

Dimensions in mm
MG = diaphragm size

1) **Connection type**
Code 6: Threaded spigot DIN 11851

2) **Valve body material**
Code 40: 1.4435 (F316L), forged body
Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%
Code A1: 3.7035, titanium

Cone spigot DIN (code 6K)



Connection type cone spigot DIN (code 6K) [1], forged material (code 40, 42) [2]

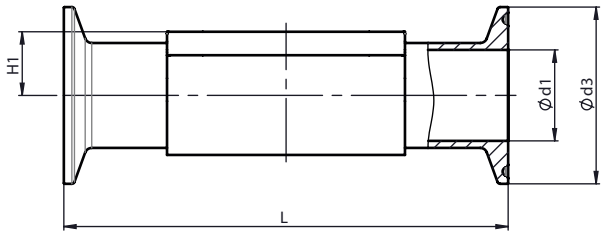
MG	DN	NPS	ød1	H1	L	R
10	**10**	**3/8"**	10.0	12.5	116.0	Rd 28 x 1/8
	15	**1/2"**	16.0	12.5	116.0	Rd 34 x 1/8

Dimensions in mm
MG = diaphragm size

1) **Connection type**
Code 6K: Tapered connector and union nut DIN 11851

2) **Valve body material**
Code 40: 1.4435 (F316L), forged body
Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%
Code A1: 3.7035, titanium

Clamp (code 80, 82, 84, 86, 88, 8A, 8E, 8H, 8P, 8T)



Connection type clamp DIN/ASME (code 80, 88, 8P, 8T) [1], forged material (code 40, 42, F4) [2]

MG	DN	NPS	ød1		ød3		H1	L	
			Connection type					Connection type	
			80, 8P	88, 8T	80, 8P	88, 8T		80, 8P	88, 8T
10	**15**	**1/2"**	9.40	9.40	25.0	25.0	12.5	88.9	108.0
	20	**3/4"**	15.75	15.75	25.0	25.0	12.5	101.6	117.0

Connection type clamp DIN/ISO (code 82, 86, 8A) [3], forged material (code 40, 42, F4) [2]

MG	DN	NPS	ød1			ød3			H1	L		
			Connection type							Connection type		
			82	86	8A	82	86	8A		82	86	8A
10	**10**	**3/8"**	14.0	10.0	10.0	25.0	34.0	34.0	12.5	108.0	151.0	108.0
	15	**1/2"**	18.1	16.0	16.0	50.5	34.0	34.0	12.5	108.0	151.0	108.0

Connection type clamp BS/JIS (code 84, 8H) [4], forged material (code 40, 42, F4) [2]

MG	DN	NPS	ød1		ød3		H1	L	
			Connection type					Connection type	
			84	8H	84	8H		84	8H
10	**10**	**3/8"**	-	14.0	-	34.0	12.5	-	108.0
	15	**1/2"**	10.3	17.5	25.0	34.0	12.5	108.0	108.0
	20	**3/4"**	16.7	-	25.0	-	12.5	117.0	-

Dimensions in mm
MG = diaphragm size

1) **Connection type**
Code 80: Clamp ASME BPE, face-to-face dimension FTF ASME BPE, length only for body configurations D & F
Code 88: Clamp ASME BPE, for pipe ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configurations D & F
Code 8P: Clamp DIN 32676 series C, face-to-face dimension FTF ASME BPE, length only for body configurations D & F
Code 8T: Clamp DIN 32676 series C, face-to-face dimension FTF EN 558 series 7, length only for body configurations D & F

2) **Valve body material**
Code 40: 1.4435 (F316L), forged body
Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%
Code F4: 1.4539 / UNS N08904, forged body
Code A1: 3.7035, titanium

3) **Connection type**
Code 82: Clamp DIN 32676 Series B, Overall length FTF EN 558 Series 7, Overall length only for housing type D
Code 86: Clamp DIN 32676 series A
Code 8A: Clamp DIN 32676 Series A, Overall length FTF according to EN 558 Series 7, Overall length only for housing type D

4) **Connection type**
Code 84: Clamp for tube BS 4825 Part 1, DN 15 and DN 20, clamp OD 25.0 mm, face-to-face dimension FTF EN 558 series 7, length only for body configuration D
Code 8H: Clamp IDF/ISO for tube JIS-G 3459, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Subject to alteration | 06.2026 | 88048754

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