

Diaphragm Valve, Metal

Construction

The GEMÜ 615 2/2-way diaphragm valve has a low maintenance piston actuator which can be controlled by inert gases. Normally Closed, Normally Open and Double Acting control functions are available. An optical position indicator is integrated as standard.

Features

- Suitable for inert and corrosive* liquid and gaseous media
- Insensitive to particulate media
- Valve body and diaphragm available in various materials and designs
- Compact design (ideal when space is at a premium)
- Versions according to ATEX on request

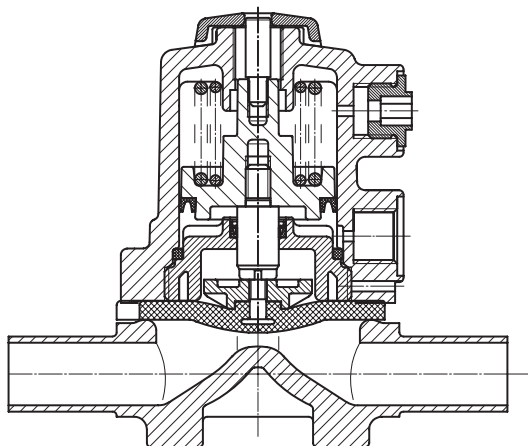
Advantages

- Hermetic separation between medium and actuator
- Optional flow direction, will seal in either flow direction up to full operating pressure
- Optional mounting position
- Optional accessories:
 - Stroke limiter
 - Electrical position indicators with microswitches or proximity switches

*see information on working medium on page 2



Sectional drawing



Technical data

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.

Operating temperature max. 80° C
(dependent on medium wetted materials)

Control medium

Inert gases

Max. perm. temperature of control medium 40° C

Filling volume 0.02 dm³

Ambient conditions

Max. ambient temperature 60° C

Diaphragm size	Operating pressure [bar]		Control pressure [bar]		Weight (only actuator)
	EPDM/FPM	PTFE	C.f. 1	C.f. 2 + 3	[kg]
10	0 - 6	0 - 6	5 - 7	max. 5 bar see diagram	0,18

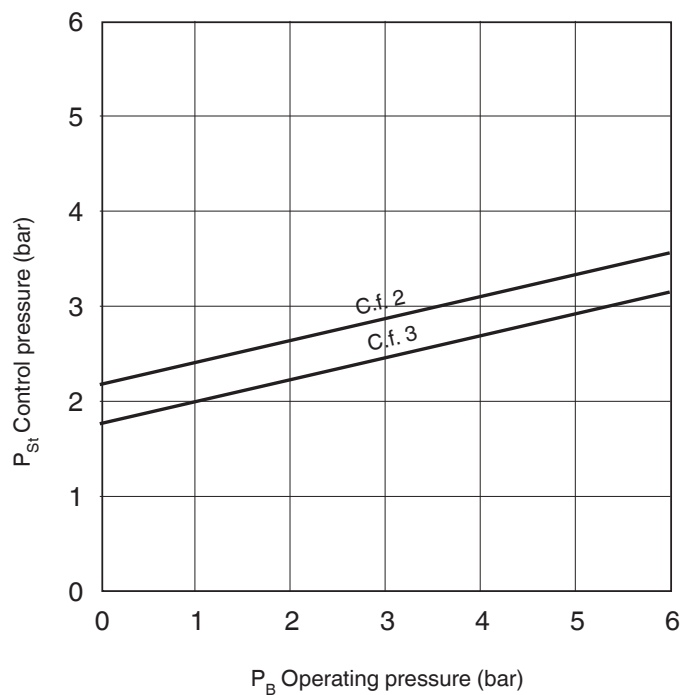
All pressures are gauge pressures. Operating pressure values were determined with static operating pressure applied on one side of a closed valve. Sealing at the valve seat and atmospheric sealing is ensured for the given values. Information on operating pressures applied on both sides and for high purity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

Kv values [m³/h]

Diaphragm size	DN	DIN Code 0	DIN 11850 series 1 Code 16	DIN 11850 series 2 Code 17	DIN 11850 series 3 Code 18	ASME BPE Code 59	EN ISO 1127 Code 60
10	10	-	2.4	2.4	2.4	2.2	3.3
	15	3.3	3.8	3.8	3.8	2.2	4.0
	20	-	-	-	-	3.8	-

Kv values determined acc. to IEC 534 standard, inlet pressure 6 bar, Δp 1 bar, stainless steel valve body and soft elastomer diaphragm.

Control pressure/operating pressure diagram



Order data

Body configuration	Code
2/2-way body	D

Valve body material	Code
MS, Brass	12
1.4435 - BN2 (CF3M), investment casting Fe<0.5%	32
1.4435 (ASTM A 351 CF3M \triangle 316L), investment casting	34
1.4435 (316 L), forged body	40
1.4435 (BN2), forged body Fe<0.5%	42

Connection	Code
Butt weld spigots	
Spigots DIN	0
Spigots DIN 11850, series 1	16
Spigots DIN 11850, series 2	17
Spigots DIN 11850, series 3	18
Spigots DIN 11866, series A	1A
Spigots JIS-G 3459	36
Spigots BS 4825, part 1	55
Spigots ASME BPE	59
Spigots EN ISO 1127	60
Threaded connections	
Threaded sockets DIN ISO 228	1
Threaded spigots DIN 11851	6
One side threaded spigot, other side cone spigot and union nut, DIN 11851	62
Aseptic unions on request	
Clamp connections	
Clamps ASME BPE for pipe ASME BPE, short design	80
Clamp DIN 32676 series B for pipe EN ISO 1127, length EN 558, series 7	82
Clamp ASME BPE for pipe ASME BPE, length EN 558, series 7	88
Clamps DIN 32676 series A for pipe DIN 11850, length EN 558, series 7	8A

For overview of available valve bodies for GEMÜ 615 see page 6

Diaphragm material	Code
FPM	4
EPDM	12
EPDM	13
EPDM	17
PTFE/EPDM PTFE laminated	52
Material complies with FDA requirements, except code 4	

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

Actuator size	Code
Standard version	1/N

Valve body surface finish, internal contour	Code
Ra \leq 6.3 μ m blasted internal/external	1500*
Ra \leq 6.3 μ m electropolished internal/external	1509*
Ra \leq 0.8 μ m mechanically polished internal, blasted external	1502
Ra \leq 0.8 μ m electropolished internal/external	1503
Ra \leq 0.6 μ m mechanically polished internal, blasted external	1507
Ra \leq 0.6 μ m electropolished internal/external	1508
Ra \leq 0.4 μ m mechanically polished internal, blasted external	1536
Ra \leq 0.4 μ m electropolished internal/external	1537
Ra \leq 0.25 μ m mechanically polished internal, blasted external	1527
Ra \leq 0.25 μ m electropolished internal/external	1516

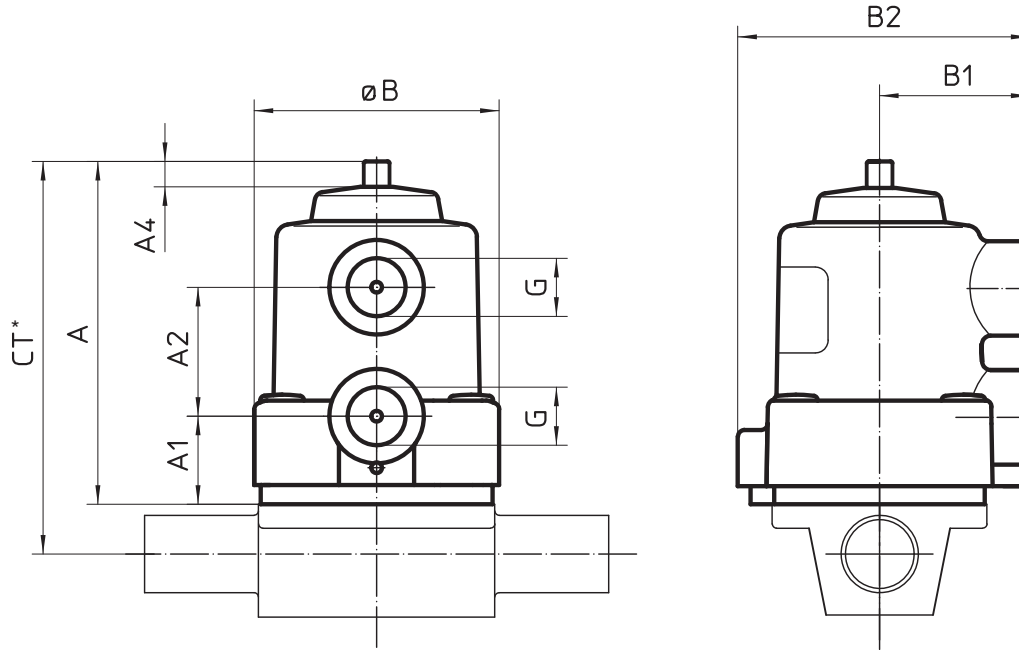
Ra acc. to DIN 4768; at defined reference points
Surface finish data refer to medium wetted surfaces

* only investment cast design

Order example	615	15	D	60	34	12	1	1/N	1500
Type	615								
Nominal size		15							
Body configuration (code)			D						
Connection (code)				60					
Valve body material (code)					34				
Diaphragm material (code)						12			
Control function (code)							1		
Actuator size (code)								1/N	
Surface finish (code)									1500

Actuator dimensions [mm]

Diaphragm size	A	A1	A2	B	B1	B2	A4	G
10	80	21	30	57	35	68	5,5	G 1/4



* CT = A + H1 (see body dimensions)

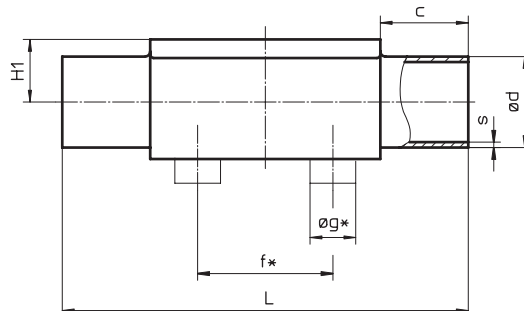
Body dimensions [mm]

Butt weld spigots, connection code 0, 16, 17, 18, 1A, 36, 55, 59, 60
Valve body material: investment casting (code 34), forged body (code 40)

MG	DN	NPS	f*	øg*	L	c	H1*	H1**	DIN Series 0 Code 0		DIN 11850 Series 1 Code 16		DIN 11850 Series 2 Code 17		DIN 11850 Series 3 Code 18		DIN 11866 Series A Code 1A		JIS-G 3459 Code 36		BS 4825 Code 55		ASME BPE Code 59		EN ISO 1127 Code 60	
									ød	s	ød	s	ød	s	ød	s	ød	s	ød	s	ød	s	ød	s	ød	s
10	10	3/8"	30	13.5	108	25	12.5	-	-	12	1.0	13	1.5	14	2.0	13	1.5	17.3	1.65	9.53	1.2	9.53	0.89	17.2	1.6	
	15	1/2"	30	13.5	108	25	12.5	18	1.5	18	1.0	19	1.5	20	2.0	19	1.5	21.7	2.10	12.70	1.2	12,70	1.65	21.3	1.6	
	20	3/4"	30	13.5	108	25	12.5	-	-	-	-	-	-	-	-	-	-	-	-	19,05	1.2	19,05	1.65	-	-	

* only for investment cast design ** only for forged design
 For materials see overview on last page

MG = diaphragm size

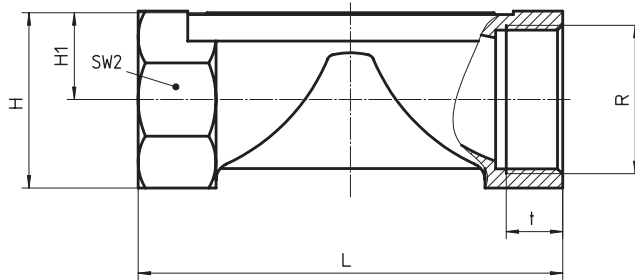


Body dimensions [mm]

**Threaded sockets, connection code 1
Valve body material: investment casting (code 34)**

MG	DN	R	H	H1	t	L	SW2	Number of flats
10	12	G3/8	23	10.5	13	55	22	2
	15	G1/2	29	13.5	15	68	24	2

MG = diaphragm size



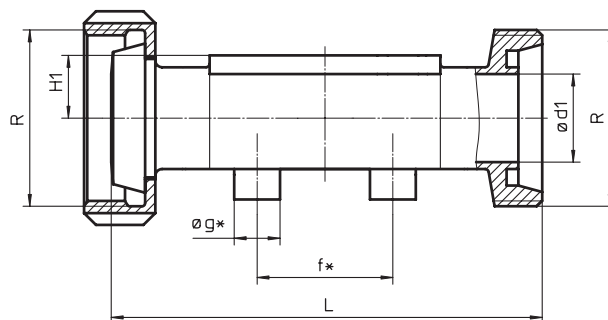
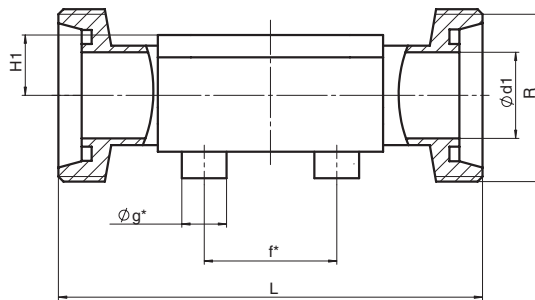
**Threaded connections, connection code 6, 62
Valve body material: investment casting (code 34), forged body (code 40)**

MG	DN	H1	f*	øg*	ød1	Thread to DIN 405 R	Code 6 L	Code 62 L
10	10	12.5	30	13.5	10	Rd 28 x 1/8	118	116
	15	12.5	30	13.5	16	Rd 34 x 1/8	118	116

For materials see overview on last page

* only for investment cast design

MG = diaphragm size

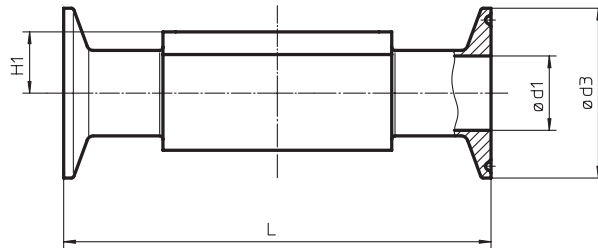


Body dimensions [mm]

Clamp connections, connection code 80, 82, 88, 8A Valve body material: forged body (code 40)

				for pipe ASME BPE Code 80			for pipe EN ISO 1127 Code 82			for pipe ASME BPE Code 88			for pipe DIN 11850 Code 8A		
MG	DN	NPS	H1	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L
10	10	3/8"	12.5	-	-	-	14.00	25.0	108	-	-	-	10	34	108
	15	1/2"	12.5	9.40	25	88.9	18.10	50.5	108	9.40	25	108	16	34	108
	20	3/4"	12.5	15.75	25	101.6	-	-	-	15.75	25	117	-	-	-

MG = diaphragm size



Overview of valve bodies for GEMÜ 615

		Threaded connections						Spigots												Clamps							
Connection code		1		6		62		0		16		17		18		1A	36	55		59		60		80	82	88	8A
Material code		12	34	34	40	34	40	34	40	34	40	34	40	34	40	40	40	34	40	34	40	34	40	40	40	40	40
MG	DN																										
10	10	-	-	W	W	W	W	-	-	X	X	X	X	X	X	X	X	-	X	-	X	X	X	-	K	-	K
	12	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15	X	X	W	W	W	W	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	K	W	K	K
	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	K	-	K	-

X Standard
K Connections completely machined (not welded) in material code 40
W Welded construction

MG = diaphragm size

Availability of material code 32: same as code 34

For further metal diaphragm valves, accessories and other products,
please see our Product Range catalogue and Price List.
Contact GEMÜ.

GEMÜ® VALVES, MEASUREMENT
AND CONTROL SYSTEMS

