

Diaphragm Valve, Metal

Construction

The GEMÜ 601 manually operated 2/2 way diaphragm valve has a metal bonnet and a plastic handwheel with a seal adjuster. GEMÜ 602 has a stainless steel handwheel.

Features

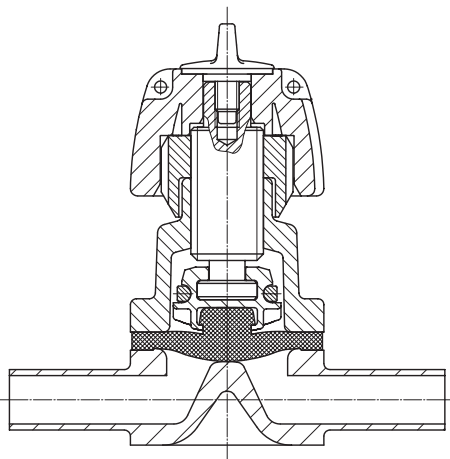
- Suitable for inert, corrosive*, liquid and gaseous media
- Stepless minimum flow regulation possible
- CIP / SIP cleaning and sterilizing capabilities
- Autoclavable
- Insensitive to particulate media
- Compact design (when space is at a premium)

Advantages

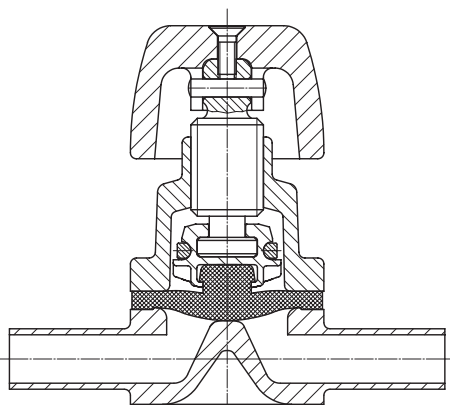
- Hermetic sealing
- Optional flow direction, will seal in either flow direction up to full working pressure
- Optional mounting position
- Long service life of the diaphragm due to patented seal adjuster for GEMÜ 601 (US-Pat. 5 377 956)

* see information on working medium on page 2

Sectional drawing - GEMÜ 601



Sectional drawing - GEMÜ 602



Technical data

Working medium

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

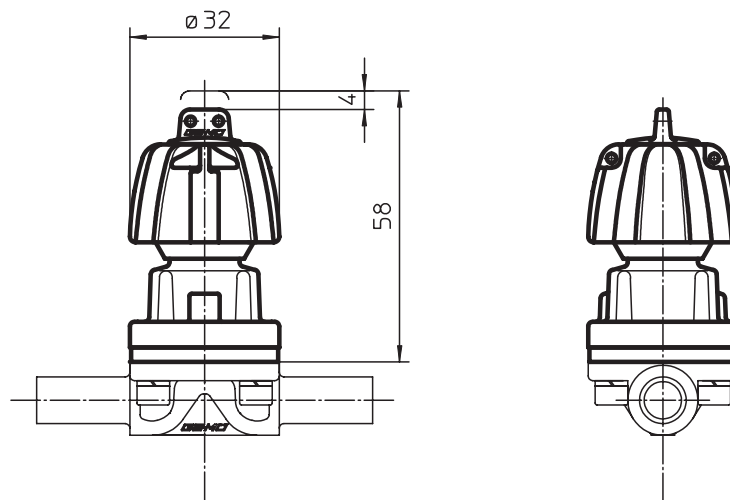
The valve will seal against flow in either direction up to full working pressure (gauge pressure).

Diaphragm size	DN [mm]	Working pressure [bar]		K _v value*		Weight [g]	
		EPDM/FPM	PTFE	[m ³ /h]	Connection code	GEMÜ 601	GEMÜ 602
8	4	10	10	1.3	0	160	220
	6			1.3	0		
	8			1.5	60		
	10			1.5	16		
	15			1.5	59		

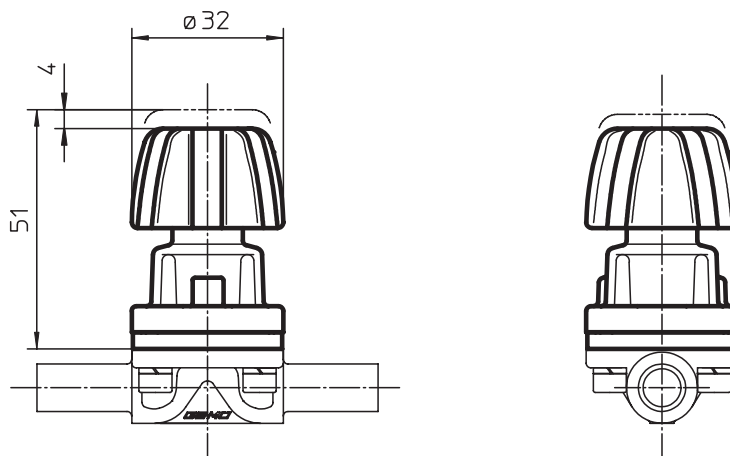
All pressures are given as gauge pressures, when applied upstream only.

* Given K_v values are valid for EPDM diaphragm material, K_v values determined at p₁ = 6 bar.

Bonnet dimensions - GEMÜ 601 [mm]



Bonnet dimensions - GEMÜ 602 [mm]



Order data

Body configuration	Code
Tank valve body**	B
2/2 way	D
Multi-port design**	M
T valve body*	T
* For dimensions see T Valves brochure	
** Dimensions and versions upon request or according to customer requirements	

Valve body material	Code
1.4539 Investment casting	33*
1.4435 (316 L) Investment casting	34
1.4435 (316 L) Forged body	40
1.4435 (316 L) Block material	41
* Material code 33 only upon request	

Connections	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 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 with union nut, DIN 11851	62
Aseptic unions upon request	

Clamp connections	
Clamps ASME BPE for pipe ASME BPE, short design	80
Clamps following ASME BPE for pipe EN ISO 1127, length EN 558-1, series 7	82
Clamps ASME BPE for pipe ASME BPE, length EN 558-1, series 7	88
Clamps DIN 32676 for pipe DIN 11850, length EN 558-1, series 7	8A

For overview of available valve bodies for GEMÜ 601, 602 see page 6

Diaphragm material	Code
FPM	4A
EPDM max. 150°C*	3A**
EPDM max. 150°C*	6A**
PTFE/EPDM PTFE laminated max. 150°C*	5A**
* Steam sterilisation temperature / 20 min	
** Material complies with FDA requirements	

Control function	Code
Manually operated	0

Bonnet design (only GEMÜ 601)	Code
With seal adjuster	S

Surface finish	Code
See top of page 4	

Order example	601	8	D	60	34	3A	0	S	1500
Type	601								
Nominal size		8							
Body configuration (D)			D						
Connection (Code)				60					
Valve body material (Code)					34				
Diaphragm material (Code)						3A			
Control function (Code)							0		
Bonnet design (Code)								S	
Surface finish (for code see top of page 4)									1500

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

* Ra acc. to DIN 4768; at defined reference points

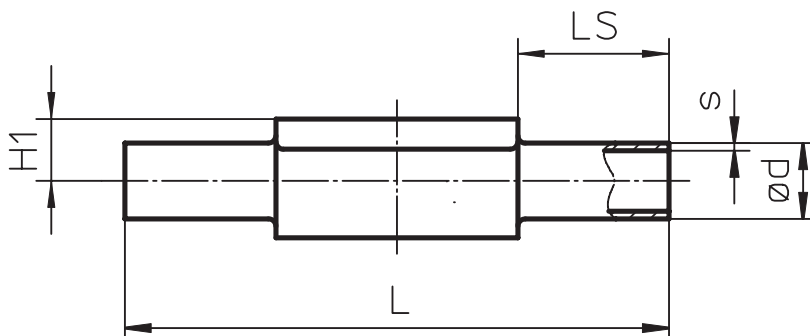
Body dimensions

Butt weld spigots, connection code 0, 16, 17, 18, 55, 59, 60 [mm] Valve body material: investment casting (Code 34), forged body (Code 40)

Dia- phragm size	DN	NPS	L	LS	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		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
8	4	-	72	20	8.5		6	1.0	-	-	-	-	-	-	-	-	-	-	-	-
	6	-	72	20	8.5		8	1.0	-	-	-	-	-	-	-	-	-	-	-	-
	8	1/4"	72	20	8.5		10	1.0	-	-	-	-	-	6.35	1.2	6.35	0.89	13.5	1.6	
	10	3/8"	72	20	8.5		-	-	12	1.0	13	1.5	14	2.0	9.53	1.2	9.53	0.89	-	-
	15	1/2"	72	20	8.5		-	-	-	-	-	-	-	-	12.70	1.2	12.70	1.65	-	-

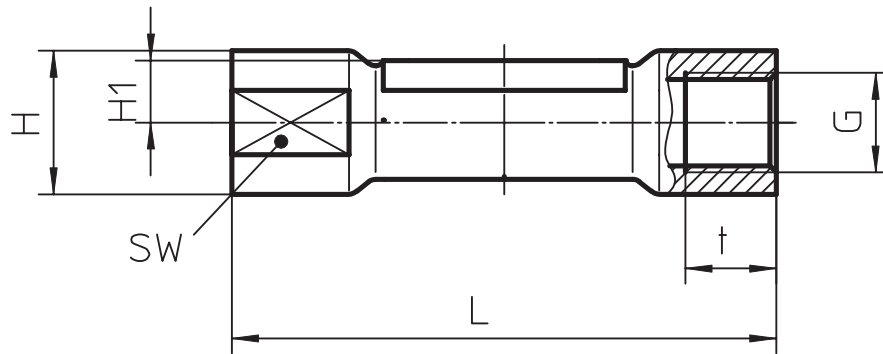
* valid for investment cast design

** valid for forged design



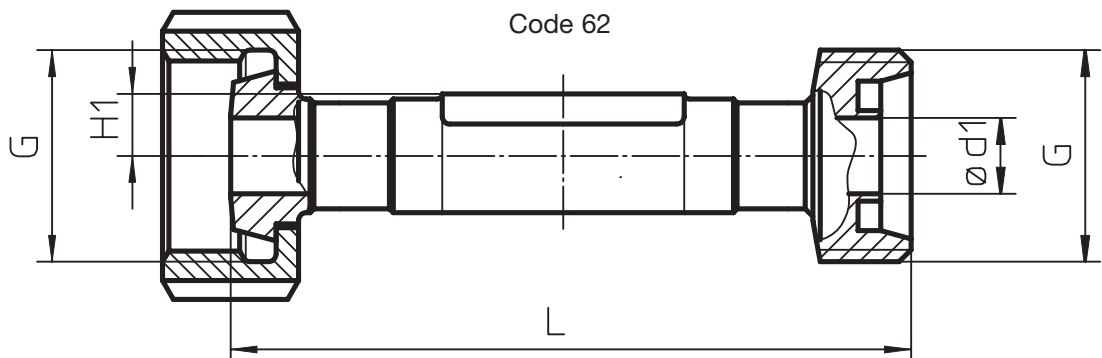
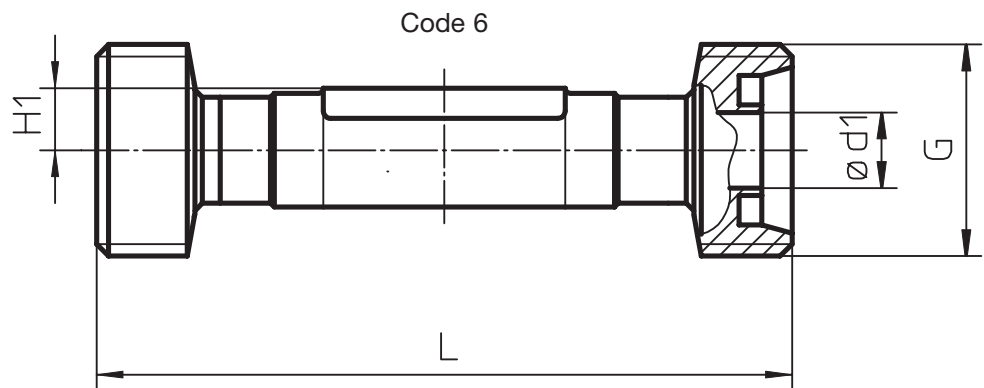
Threaded sockets, connection code 1 [mm]
 Valve body material: investment casting (Code 34)

Diaphragm size	DN	G	H	H1	t	L	SW	Number of wrench surfaces
8	8	G1/4	19	8.5	120	72	17	2



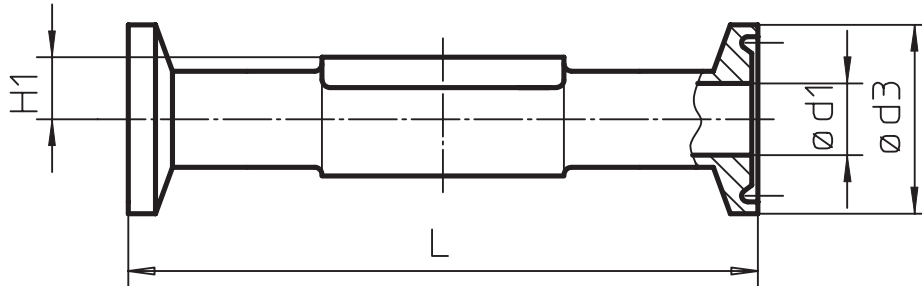
Threaded connections, connection code 6, 62 [mm]
 Valve body material: investment casting (Code 34), forged body (Code 40)

				Thread according to DIN 405	Code 6	Code 62
Diaphragm size	DN	H1	Ød1	G	L	L
8	10	8.5	10	Rd 28 x 1/8	92	90



Clamp connections, connection code 80, 82, 88, 8A [mm]
 Valve body material: forged body (Code 40), block material (Code 41)

MG	DN	NPS	H1	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		
				ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L
8	8	1/4"	8.5	4.57	25	63.5	10.30	25.4	63.5	--	--	--	--	--	--
	10	3/8"	8.5	7.75	25	63.5	--	--	--	--	--	--	10.00	34	88,9
	15	1/2"	8.5	9.40	25	63.5	--	--	--	9.40	25	108	--	--	--



Overview of valve bodies for GEMÜ 601, 602

		Threaded connections				Spigots										Clamps								
Connection code		1	6	62		0		16		17		18		55		59		60		80	82	88	8A	
Material code		34	34	40	34	40	34	40	34	40	34	40	34	40	34	40	34	40	34	40	41	41	40	40
Diaphragm size	DN																							
8	4					X	X																	
	6					X	X																	
	8	X				X	X							X	X	X	X	X	X	V	V			
	10		W	W	W	W			X	X	X	X	X	X	X	X	X			V				W
	15													X	X	X	X			V			W	

V Block material in material code 41
 W Welded construction in material code 40
 X Spigot body in material code 34 and 40

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



GEMÜ® VALVES, ACTUATORS AND CONTROL SYSTEMS