

Diaphragm Valve, Plastic

Construction

The GEMÜ 600 pneumatically operated 2/2-way diaphragm valve has a low-maintenance piston actuator which can be controlled by inert gaseous media. The valve is of a corrosion-resistant all plastic construction. GEMÜ 600 has a stroke limiter and an integral optical position indicator as standard. Normally Closed, Normally Open and Double Acting control functions are available.

Features

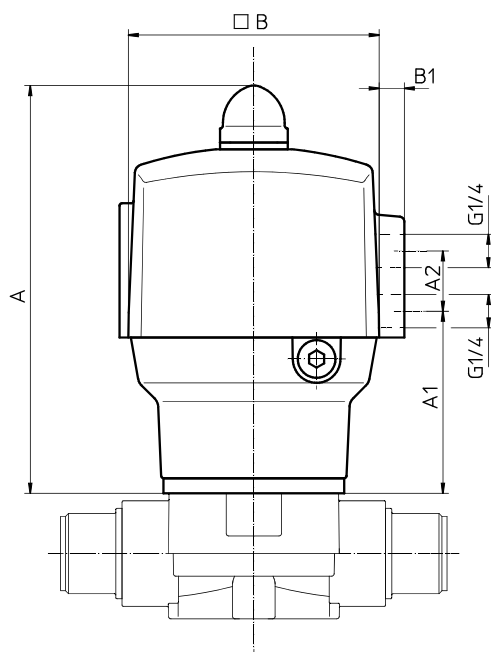
- Suitable for inert and corrosive* liquid and gaseous media
- Valve body and diaphragm are available in various materials
- Connection for pilot valves acc. to NAMUR
- Control connection positioned in-line with piping as standard, thus installable in extremely restricted spaces
- Optional flow direction and mounting position

Advantages

- Variable spring facility for operating pressures up to 10 bar upstream and downstream
- Mounting plate for height compensation of differing body dimensions
- Upper part of actuator rotatable 4 x 90°
- Optional accessories
 - Electrical position indicator
 - Electrical position indicator with microswitches or proximity switches
 - Pneumatic or electro-pneumatic positioner

* see information on working medium on page 2

Actuator dimensions [mm]



DN	B	B1	A	A1	A2
15-25	100	11	141	73	24
32-40	125	9	192	93	65
50	150	8	230	110	65



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.

Ambient temperature

Valve body PVC-U / PP	5 to 60° C
Valve body ABS / PVDF	-20 to 60° C

Working medium temperature

Valve body PVC-U	5 to 60° C
Valve body ABS	-20 to 60° C
Valve body PP	5 to 80° C
Valve body PVDF	-20 to 80° C

The permissible operating pressure depends on the working medium temperature.

Control medium

Inert gas	
Min. required control pressure	see table below
Max. permiss. control pressure	6 bar
Max. permiss. temp. of control medium	40° C

Pressure / temperature correlation for plastic

Temperature in °C (plastic body)		-20	-10	±0	5	10	20	25	30	40	50	60	70	80
Valve body material		permissible operating pressure in bar												
PVC-U	Code 1	-	-	-	10.0	10.0	10.0	10.0	8.0	6.0	3.5	1.5	-	-
ABS	Code 4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.0	6.0	4.0	2.0	-	-
PP-H	Code 70/71	-	-	-	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0	2.7	1.5
PVDF	Code 20	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	8.0	7.1	6.3	5.4	4.7

Data for extended temperature ranges on request.

Please note that the ambient temperature and medium temperature generate a combined temperature at the valve body which must not exceed the above values.

Nominal size	Control function 1 [bar]		Control function 2+3 [bar]		Kv value	Weight
[DN]	Operating pressure	Control pressure	Operating pressure	Control pressure	[m³/h]	[kg]
15	0 - 10	min. 4 bar max. 6 bar	0 - 10	min. 3 bar max. 6 bar	5.6	1.8
20	0 - 10		0 - 10		8.2	1.8
25	0 - 10		0 - 10		10.5	1.8
32	0 - 10		0 - 10		18.0	4.0
40	0 - 10		0 - 10		25.0	4.0
50	0 - 10	0 - 10	46.0	7.4		

All pressures are gauge pressures. Kv-values: Tolerance ±10%.

O-ring material for valve bodies with union ends

Diaphragm material	O-ring material
CSM	EPDM
NBR	EPDM
FPM	FPM
EPDM	EPDM
PTFE	FPM

Other combinations on request

Order data

Body configuration	Code
Straight through	D

Connection	Code
Spigots - DIN, for socket welding	0
Flanges EN 1092 / PN 10 / form B (ex DIN 2501 / PN 10 / form C) Face-to-face EN 558-1, series 1 ISO 5752, basic series 1 (ex DIN 3202-1, series F1)	4
Union ends with DIN insert (socket)	7
Spigots for IR butt welding	20
Spigots for IR butt welding, BCF	28
Spigots - inch	30
Union ends with inch insert (socket)	33
Flanges ANSI class 125/150 RF Face-to-face EN 558-2, series 1 ISO5752, basic series 1 (ex DIN 3202-1, series F1)	39
Union ends with DIN insert (for IR butt welding)	78

Valve body material	Code
PVC-U, grey	1
ABS	4
PVDF	20
Lining PPH natural	70
Lining PPH grey acc. RAL 7032	71

Diaphragm material	Code
NBR	2
FPM	4
EPDM	14
PTFE/EPDM PTFE laminated	52*

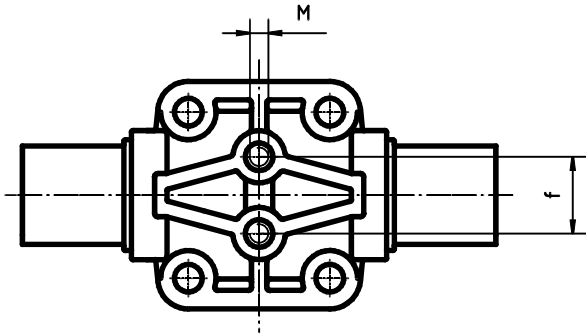
* Material complies with FDA requirements

Control function	Code
Normally closed (NC) (Diaphragm size 25 - 50)	1
Normally open (NO) (Diaphragm size 25 - 50)	2
Double acting (DA) (Diaphragm size 50)	3

Actuator size	Code
Diaphragm size 25	2/N
Diaphragm size 40	3/N
Diaphragm size 50	4/N

Order example	600	25	D	7	1	14	1	2/N
Type	600							
Nominal size		25						
Body configuration (Code)			D					
Connection (Code)				7				
Valve body material (Code)					1			
Diaphragm material (Code)						14		
Control function (Code)							1	
Actuator size (Code)								2/N

Dimensions [mm]



Mounting dimensions

DN	M8	ød
15	M6	25.0
20	M6	25.0
25	M6	25.0
32	M8	44.5
40	M8	44.5
50	M8	44.5

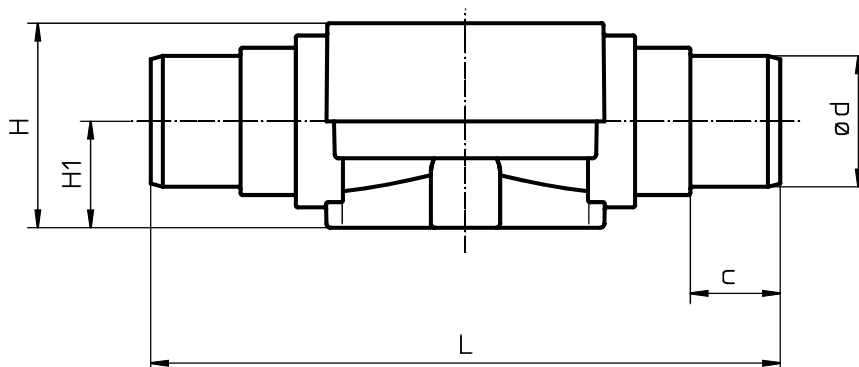
Body dimensions [mm]

Spigots DIN, connection code 0

DN	L	ød	Material code 1			Material code 20, 70, 71		
			H	H1	c	H	H1	c
15	124	20	45	26	16	50	26	18
20	144	25	45	26	19	50	26	19
25	154	32	45	26	22	50	26	22
32	174	40	74	40	26	74	40	24
40	194	50	74	40	31	74	40	26
50	224	63	78	40	39	82	40	29

Spigots INCH, connection code 30, material code 1, 4

DN	L	H	H1	ød	c	
15	1 1/2"	141	45	26	21.4	24
20	3/4"	145	45	26	26.7	27
25	1"	154	45	26	33.6	30
32	1 1/4"	174	68	40	42.2	33
40	1 1/2"	194	68	40	48.3	39
50	2"	224	75	40	60.3	40



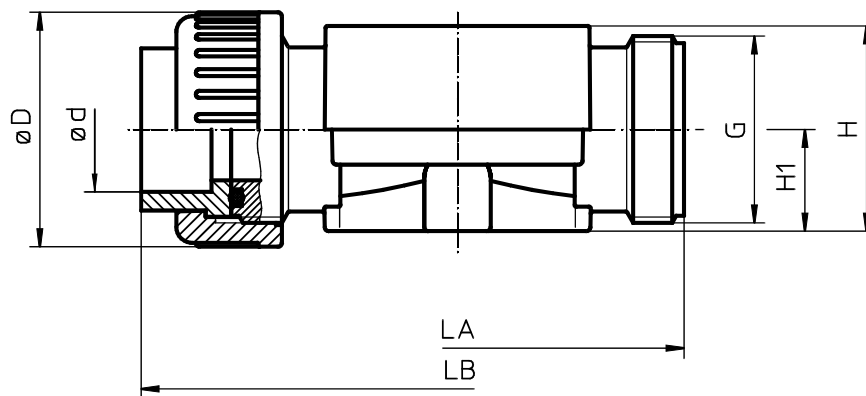
Body dimensions [mm]

Union ends with DIN insert (socket), connection code 7

DN	øD	ød	G	Material code 1				Material code 20, 70, 71			
				LA	LB	H	H1	LA	LB	H	H1
15	43	20	G 1	108	146	51	26	108	144	50	26
20	53	25	G 1 1/4	108	152	51	26	108	146	50	26
25	60	32	G 1 1/2	116	166	51	26	116	162	50	26
32	74	40	G 2	134	192	74	40	134	186	74	40
40	83	50	G 2 1/4	154	222	74	40	154	210	74	40
50	103	63	G 2 3/4	182	264	82	40	182	248	82	40

Union ends with INCH insert (socket), connection code 33, material code 1

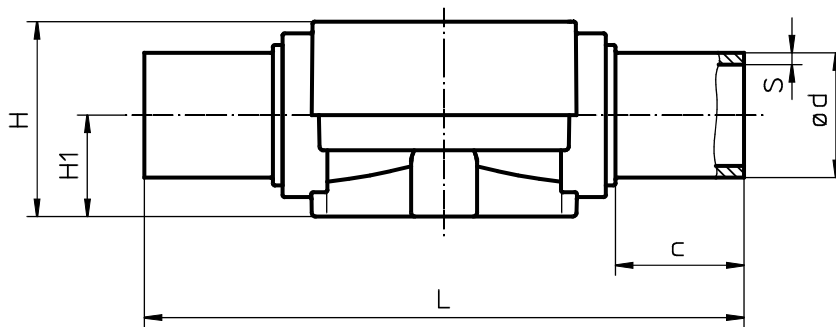
DN	LA	LB	H	H1	øD	ød	G
15	108	150	51	26	43	21.4	1
20	108	156	51	26	53	26.7	1 1/4
25	116	170	51	26	60	33.6	1 1/2
32	134	198	74	40	74	42.2	2
40	154	220	74	40	83	48.3	2 1/4
50	182	262	82	40	103	60.3	2 3/4



Body dimensions [mm]

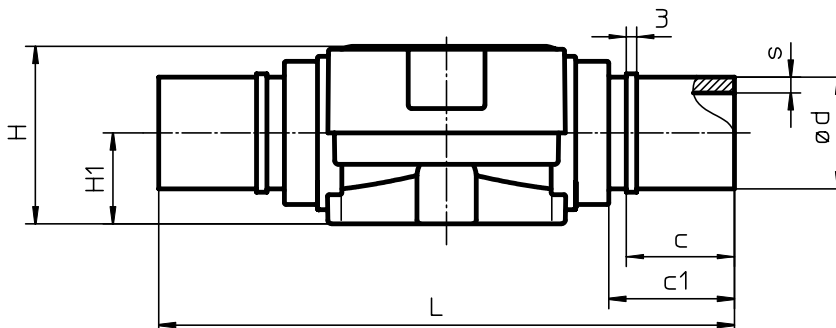
Spigots for IR butt welding, connection code 20, material code 70, 71

DN	L	H	H1	ød	s	c
15	154	50	26	20	1.9	33
20	154	50	26	25	2.3	33
25	154	50	26	32	3.0	33
32	194	74	40	40	3.7	33
40	194	74	40	50	4.6	33
50	224	82	40	63	5.8	33



Spigots for IR butt welding, BCF, connection code 28, material code 20

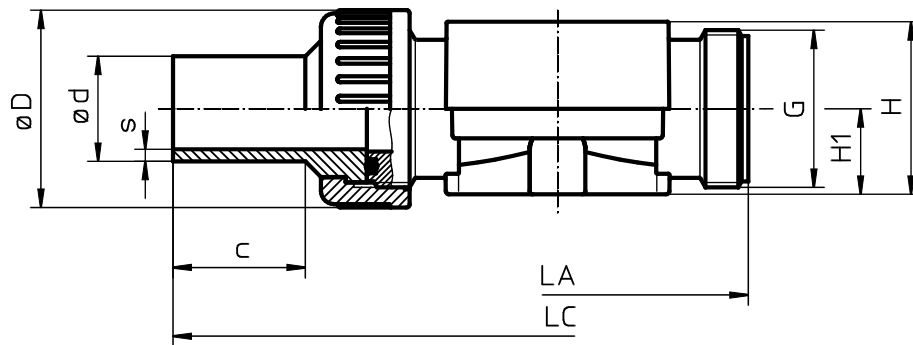
DN	L	H	H1	ød	c	c1	s
15	154	50	26	20	31	37	1.9
20	154	50	26	25	31	37	1.9
25	154	50	26	32	31	37	2.4
32	194	74	40	40	40	46	2.4
40	194	74	40	50	40	46	3.0
50	224	82	40	63	40	46	3.0



Body dimensions [mm]

Union ends with DIN insert (IR butt welding), connection code 78, material code 20, 70, 71

DN	LA	LC	H	H1	øD	ød	G	s	c
15	108	214	50	26	43	20	G 1	1.9	37
20	108	220	50	26	53	25	G 1 1/4	2.3	39
25	116	234	50	26	60	32	G 1 1/2	3.0	40
32	134	258	74	40	74	40	G 2	3.7	41
40	154	284	74	40	83	50	G 2 1/4	4.6	43
50	182	318	82	40	103	63	G 2 3/4	5.8	43



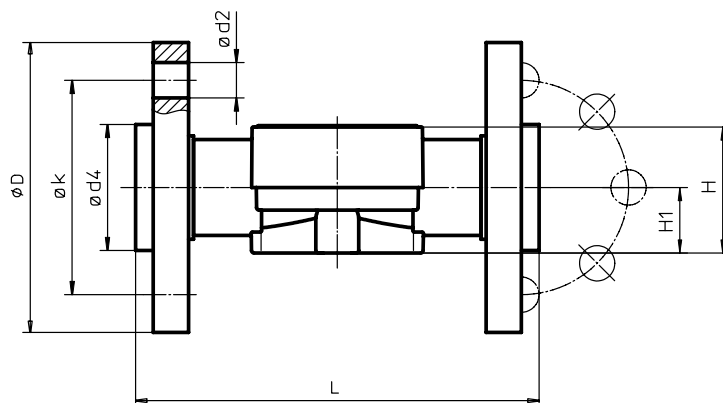
Flanges, connection code 4, 39 Valve body material PVDF (code 20), Lining PPH (code 71)

MG	DN	L	H	H1	Connection code 4					Connection code 39						
					øD	ød2	ød4	øk	Number of bolt holes	øD	ød2	ød4	øk	Number of bolt holes		
Material code							5, 71	20				5, 71	20			
25	15	150*	depending on material code see body dimensions page 4 Connection 0	depending on material code see body dimensions page 4 Connection 0	95	14	45	45	65	4	95	16	45	45	60	4
	20	150			105	14	58	58	75	4	105	16	54	58	70	4
	25	160			115	14	68	68	85	4	115	16	63	68	79	4
40	32	180	depending on material code see body dimensions page 4 Connection 0	depending on material code see body dimensions page 4 Connection 0	140	18	78	78	100	4	140	16	73	78	89	4
	40	200			150	18	88	88	110	4	150	16	82	88	98	4
50	50	230	165	18	102	102	125	4	165	19	102	102	121	4		

For materials see overview on last page.

MG = diaphragm size

* Length is not according to EN 558-1 series



Overview of valve bodies for GEMÜ 600

Material	PVC-U (Code 1)				PP (Code 70, Code 71)					PVDF (Code 20)					ABS (Code 4)		
	0	7	30	33	0	4	7	20	39	78	0	4	7	28	39	78	30
DN 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DN 20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DN 25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DN 32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DN 40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DN 50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Technical data sheet

Should there be any doubts or misunderstandings, the German version of this data sheet is the authoritative document!

Subject to alteration · 06/2008 · 88048802

Further plastic diaphragm valves , accessories and other products see our Product Range catalogue and Price List.
Contact GEMÜ.



GEMÜ® VALVES, MEASUREMENT
AND CONTROL SYSTEMS