

Diaphragm Valve, Plastic

Construction

The manually operated 2/2 way diaphragm valve GEMÜ 677 has a corrosion-resistant all plastic construction. The maintenance-free plastic bonnet has an ergonomically designed handwheel with integral optical position indicator.

Features

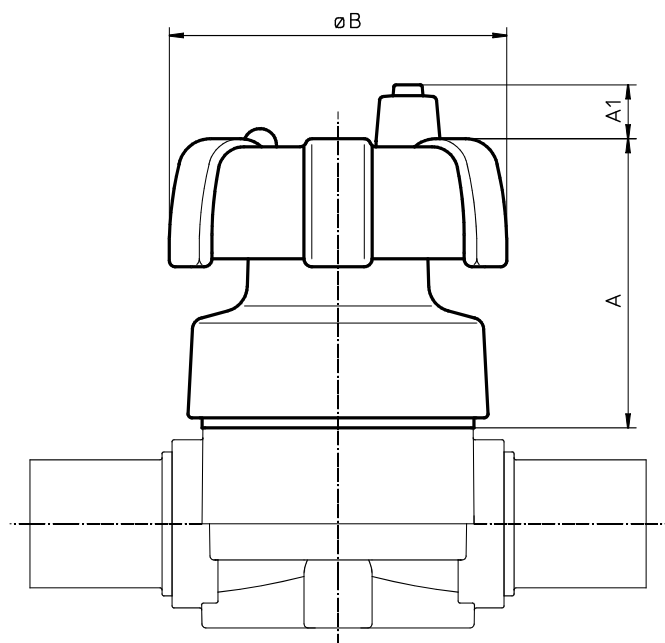
- Suitable for inert and corrosive liquid and gaseous media
- Available with various end connections and diaphragms, in a wide range of materials
- The valve is insensitive to highly contaminated abrasive media
- Optional flow direction and mounting position

Advantages

- Body and diaphragm sizes have coordinated diameters hence the fitting time is reduced because the pipe and fixing centres remain the same. Spares inventory is also reduced.
- Optional accessories
 - Electrical remote indication that the valve is in the open position
 - Lockable handwheel
- Compact, weight-saving design
- High specific flow capability
- Body with integrated mounting facility

Actuator dimensions GEMÜ 677 (mm)

DN	ø B	A	A1
15-25	90	73	14
32-40	114	90	14
50	140	111	8
65-80	214	144	27
100	214	188	27



Technical specifications

Working medium

Suitable for any inert or corrosive liquid or gas, subject to the correct choice of body and diaphragm material.

Max. perm. temperature of working medium:
See datasheet "Technical Information on Plastic Materials"

Nominal size	Working pressure	K _v value	Weight
(mm)	(bar)	(m³/h)	(kg)
15	0 - 10	5.6	0.7
20	0 - 10	8.2	0.7
25	0 - 10	10.5	0.7
32	0 - 10	18.0	1.4
40	0 - 10	25.0	1.4
50	0 - 10	46.0	2.4
65	0 - 10	78.0	7.3
80	0 - 10	120.0	7.3
100	0 - 10	189.0	9.0

The valve will seal against flow in either direction up to a working pressure of 10 bar.
All pressures are given as gauge pressures.

Order specifications

Body configuration

Ref. no.

Straight through D

Valve body material

Ref. no.

Polyvinyl chloride	PVC-U hard (grey)	1
Acrylonitrile-Butadiene-Styrene	ABS	4
Polypropylene	PP reinforced	5
Polyvinylidene fluoride	PVDF	20
Lining PP, Encasing PP reinforced	PP natural - PP - GR	70
Lining PP beige, Encasing PP reinforced	PP beige - PP - GR	71

Diaphragm material

Ref. no.

Hypalon	CSM	1
Perbunan	NBR	2
Viton®	FPM	4
Ethylene-Propylene	EPDM	14
PTFE/EPDM	PTFE laminated	52
PTFE/EPDM convex	PTFE loose	5E

Control function

Ref. no.

Manually operated	0
Manually operated (lockable handwheel)	L

Options

Ref. no.

Mounting thread for electrical position indicator	Z
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Connections

Ref. no.

Spigot ends for solvent / butt welding DIN (PVC-U, PP, PVDF)	0
Loose flange PN 10 (PP or PVDF - DIN 16962 T12) DIN 3442 T3 length	4
Union ends with metric sockets - DIN	7
Spigots for infrared PP or PVDF butt welding (IR)	20
Spigots for PVDF butt welding, BCF	28
Spigot ends for solvent / butt welding - inch, DIN length	30
Union ends with imperial sockets - inch	33
Union ends with inserts for IR butt welding	78

Order example

677

15

D

0

1

14

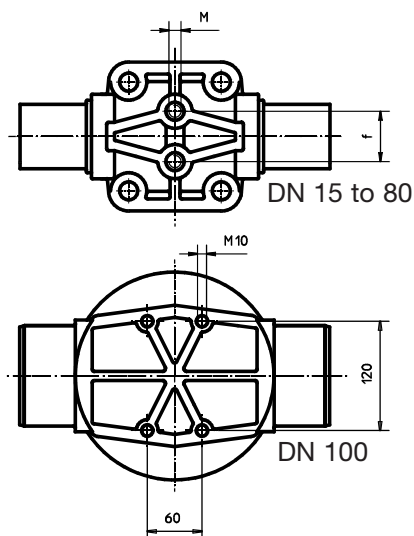
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Z

Type	677							
Nominal size (mm)		15						
Body configuration (D)			D					
Connection (reference number)				0				
Valve body material (reference number)					1			
Diaphragm material (reference number)						14		
Control function (reference number)							0	
Options (reference number)								Z

Mounting dimensions GEMÜ 677 (mm)

DN	M	f
15	M6	25.0
20	M6	25.0
25	M6	25.0
32	M8	44.5
40	M8	44.5
50	M8	44.5
65	M12	100.0
80	M12	100.0
100	see drawing below	

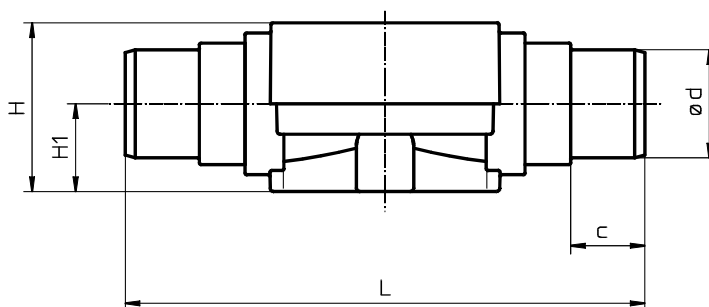


Body dimensions - Spigot ends for solvent / butt welding DIN (mm)

Connection ref. no. 0

Valve body material ref. no. 1, 5, 20, 70, 71

	Material ref. no. 1					Material ref. no. 5					Material ref. no. 20					Material ref. no. 70, 71				
DN	L	H	H1	ød	c	L	H	H1	ød	c	L	H	H1	ød	c	L	H	H1	ød	c
15	124	45	24	20	16	124	45	24	20	16	124	50	26	20	18	124	50	26	20	18
20	144	45	24	25	19	144	45	24	25	19	144	50	26	25	19	144	50	26	25	19
25	154	45	24	32	22	154	45	24	32	22	154	50	26	32	22	154	50	26	32	22
32	174	74	40	40	26	174	68	40	40	24	174	74	40	40	24	174	74	40	40	24
40	194	74	40	50	31	194	68	40	50	27	194	74	40	50	26	194	74	40	50	26
50	224	78	40	63	39	224	75	40	63	40	224	82	40	63	29	224	82	40	63	29
65	284	117	55	75	44	284	117	55	75	44	284	117	55	75	44	-	-	-	-	-
80	300	117	55	90	51	300	117	55	90	51	300	117	55	90	51	-	-	-	-	-
100	340	140	65	110	61	340	140	65	110	61	340	140	65	110	61	-	-	-	-	-



Body dimensions - Flanges (mm)

Connection ref. no. 4

Valve body material ref. no. 5, 20

DN	L	H (Ref. no. 5)	H (Ref. no. 20)	H1 (Ref. no. 5)	H1 (Ref. no. 20)	ø D	ø d2	ø d4	ø k	Number of bolt holes
15	150*	45	50	24	26	95	14	45	65	4
20	150	45	50	24	26	105	14	58	75	4
25	160	45	50	24	26	115	14	68	85	4
32	180	69	74	40	40	140	18	78	100	4
40	200	69	74	40	40	150	18	88	110	4
50	230	75	82	40	40	165	18	102	125	4
65	290	117	117	55	55	185	18	122	145	4
80	310	117	117	55	55	200	18	138	160	8
100	350	140	140	65	65	220	18	158	180	8

* no DIN length

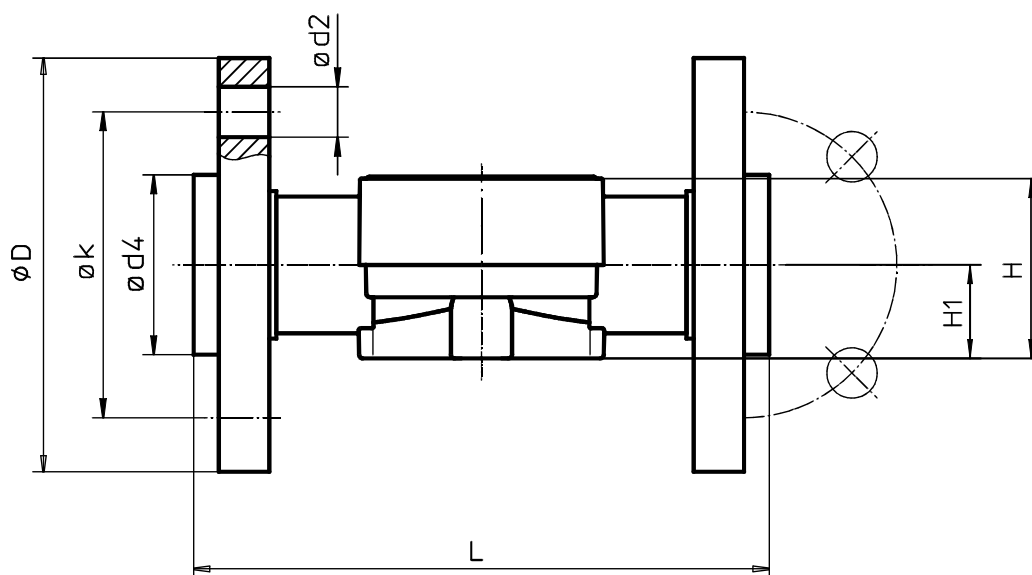
Body dimensions - Flanges (mm)

Connection ref. no. 4

Valve body material ref. no. 70, 71

DN	L	H	H1	ø D	ø d2	ø d4	ø k	Number of bolt holes
15	150*	50	26	95	14	45	65	4
20	150	50	26	105	14	58	75	4
25	160	50	26	115	14	68	85	4
32	180	74	40	140	18	78	100	4
40	200	74	40	150	18	88	110	4
50	230	82	40	165	18	102	125	4

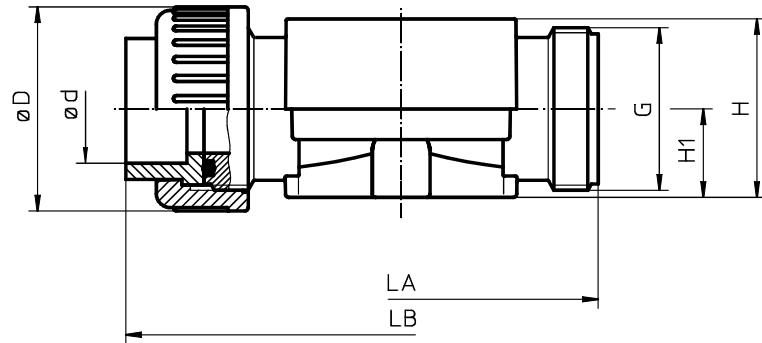
* no DIN length



Body dimensions - Union ends with metric sockets DIN (mm)

Connection ref. no. 7
Valve body material ref. no. 1, 20, 70, 71

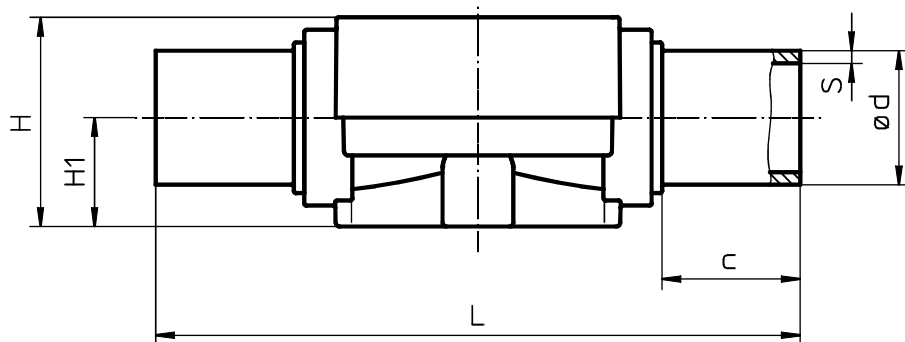
DN	Material ref. no. 1							Material ref. no. 20, 70, 71						
	LA	LB	H	H1	øD	ød	G	LA	LB	H	H1	øD	ød	G
15	108	146	50	26	43	20	G 1	108	144	50	26	43	20	G 1
20	108	152	50	26	53	25	G 1 1/4	108	146	50	26	53	25	G 1 1/4
25	116	166	50	26	60	32	G 1 1/2	116	162	50	26	60	32	G 1 1/2
32	134	192	74	40	74	40	G 2	134	186	74	40	74	40	G 2
40	154	222	74	40	83	50	G 2 1/4	154	210	74	40	83	50	G 2 1/4
50	182	264	82	40	103	63	G 2 3/4	182	248	82	40	103	63	G 2 3/4



Body dimensions - Spigots for infrared PP or PVDF butt welding (mm)

Connection ref. no. 20
Valve body material ref. no. 20, 70, 71

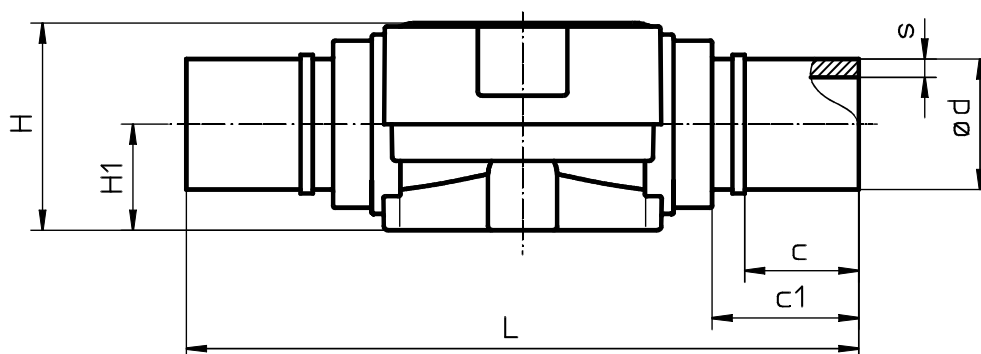
DN	Material ref. no. 20						Material ref. no. 70, 71					
	L	H	H1	ød	S	c	L	H	H1	ød	S	c
15	-	-	-	-	-	-	154	50	26	20	1.9	33
20	-	-	-	-	-	-	154	50	26	25	2.3	33
25	-	-	-	-	-	-	154	50	26	32	3.0	33
32	-	-	-	-	-	-	194	74	40	40	3.7	33
40	-	-	-	-	-	-	194	74	40	50	4.6	33
50	-	-	-	-	-	-	224	82	40	63	5.8	33
65	284	117	55	75	3.6	43	-	-	-	-	-	-
80	300	117	55	90	4.3	51	-	-	-	-	-	-
100	340	140	65	110	5.3	59	-	-	-	-	-	-



Body dimensions - Spigots for butt welding (mm)

Connection ref. no. 28
Valve body material ref. no. 20

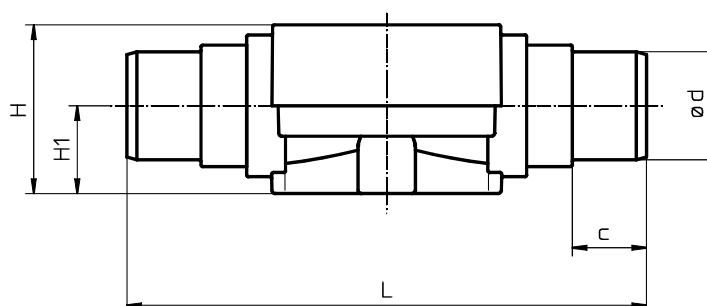
DN	L	H	H1	ød	c	c1	s
15	154	50	26	20	28	37	1.9
20	154	50	26	25	28	37	1.9
25	154	50	26	32	28	37	2.4
32	194	74	40	40	37	46	2.4
40	194	74	40	50	37	46	3.0
50	224	82	40	63	37	46	3.0



Body dimensions - Spigot ends for solvent / butt welding INCH (mm)

Connection ref. no. 30
Valve body material ref. no. 1, 4

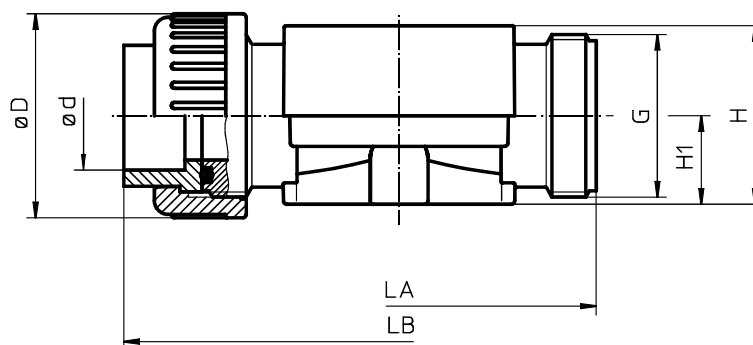
DN	L	H	H1	ød	c
15	141	45	24	21.4	24
20	145	45	24	26.7	27
25	154	45	24	33.6	30
32	174	68	40	42.2	33
40	194	68	40	48.3	39
50	224	75	40	60.3	40
65	284	117	55	75.2	44
80	300	117	55	88.9	51
100	340	140	65	114.3	61



Body dimensions - Union ends with imperial sockets INCH (mm)

Connection ref. no. 33
Valve body material ref. no. 1

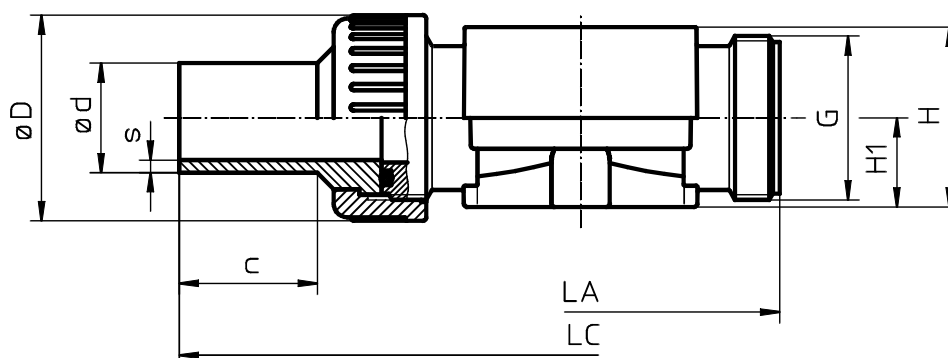
DN		LA	LB	H	H1	øD	ød	G
15	1/2"	108	150	50	26	43	21.4	G 1
20	3/4"	108	156	50	26	53	26.7	G 1 1/4
25	1"	116	170	50	26	60	33.6	G 1 1/2
32	1 1/4"	134	198	74	40	74	42.2	G 2
40	1 1/2"	154	220	74	40	83	48.3	G 2 1/4
50	2"	182	262	82	40	103	60.3	G 2 3/4



Body dimensions - Union ends with inserts for butt welding (mm)

Connection ref. no. 78
Valve body material ref. no. 20, 70, 71

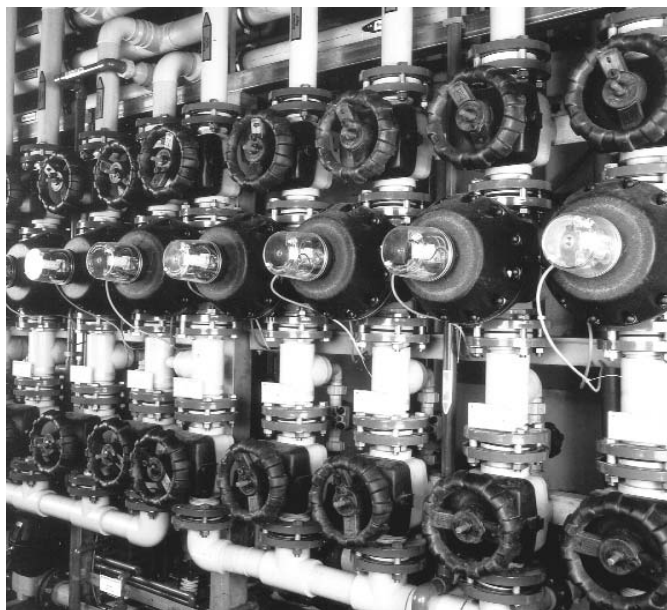
DN	LA	LC	H	H1	øD	ød	G	s	c
15	108	214	50	26	43	20	G 1	1.9	37
20	108	220	50	26	53	25	G 1 1/4	2.3	39
25	116	234	50	26	60	32	G 1 1/2	3.0	40
32	134	258	74	40	74	40	G 2	3.7	41
40	154	284	74	40	83	50	G 2 1/4	4.6	43
50	182	318	82	40	103	63	G 2 3/4	5.8	43



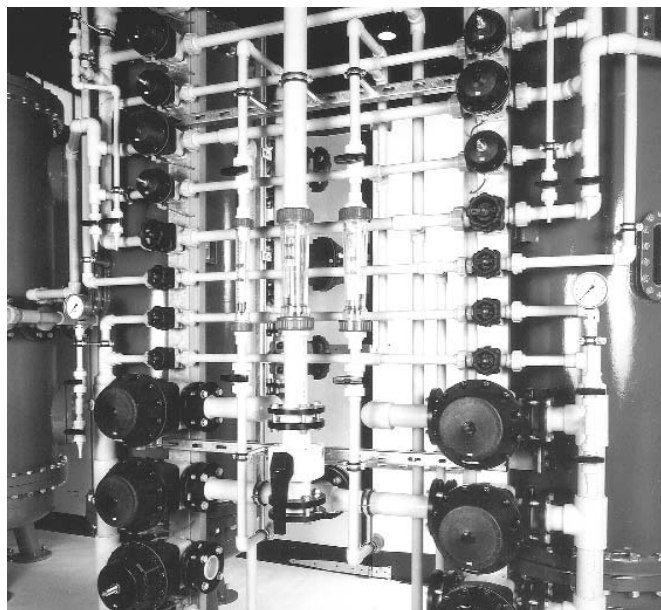
Overview of valve bodies for GEMÜ 677

Valve body material Connection (ref. no.)	Ref. no. 1				Ref. no. 5		Ref. no. 70 / Ref. no. 71					Ref. no. 20						Ref. no. 4
	0	7	30	33	0	4	0	4	7	20	78	0	4	7	20	28	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
DN 65	X	-	X	-	X	X	-	-	-	-	-	X	X	-	X	-	-	X
DN 80	X	-	X	-	X	X	-	-	-	-	-	X	X	-	X	-	-	X
DN 100	X	-	X	-	X	X	-	-	-	-	-	X	X	-	X	-	-	X

Application examples



Electroplating plants, chemical industry, general plants



Environmental technology, water treatment, flue gas desulfurization



GEMÜ® VALVES, ACTUATORS
AND CONTROL SYSTEMS