

Diaphragm Valve, Plastic

Construction

All medium wetted parts, the bonnet and handwheel of the GEMÜ 677 2/2 way diaphragm valve are made of plastic. 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
- Valve body available with various connections and materials, diaphragm available in various materials
- Insensitive to particulate media
- Optional flow direction and mounting position

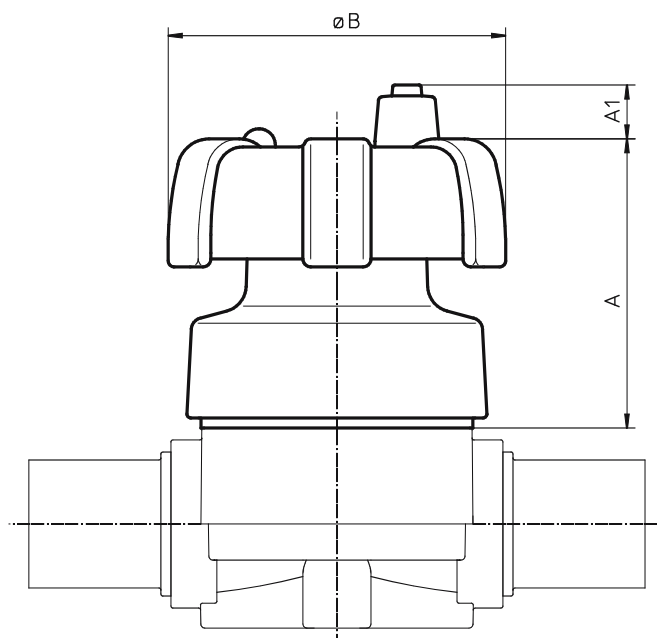
Advantages

- 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
- Good specific flow capability
- Body with integrated mounting facility

* see information on working medium on page 2

Bonnet dimensions GEMÜ 677 (mm)

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



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 materials.

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

Order data

Diaphragm size	DN	Working pressure		K _v value (m ³ /h)	Weight (kg)
		EPDM/FPM bar	PTFE bar		
25	15			5.6	0.7
25	20	0 - 10	0 - 6	8.2	0.7
25	25			10.5	0.7
40	32			18.0	1.4
40	40	0 - 10	0 - 6	25.0	1.4
50	50	0 - 10	0 - 6	46.0	2.4
80	65			78.0	7.3
80	80	0 - 10	0 - 6	120.0	7.3
100	100	0 - 10	0 - 6	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.

Body configuration

Straight through **D**

Connection

Connection	Code
Spigots - DIN	0
Flanges DIN 2501, Form C, Face-to-face EN 558-1, series 1	4
Union ends with DIN insert (socket)	7
Spigots for infrared butt welding (IR)	20
Spigots for infrared butt welding, BCF	28
Spigots - inch	30
Union ends with inch insert (socket)	33
Flanges ANSI B 16.5, class 150 RF Face-to-face EN 558-1, series 1	39
Union ends with DIN insert (IR butt welding)	78

Valve body material

Valve body material	Code
PVC-U	1
ABS	4
PP	5
PVDF	20
Lining PP-H, natural/outliner PP, reinforced	70
Lining PP-H RAL 7032, coloured/outliner PP, reinforced	71

Diaphragm material

Diaphragm material	Code
CSM	1
NBR	2
FPM	4
EPDM	14
PTFE/EPDM PTFE loose MG 25 - 50	5E*
PTFE/EPDM PTFE laminated MG 25 -100	52
PTFE/FPM PTFE loose MG 25 - 50	5F*
PTFE/FPM PTFE laminated MG 25 -100	56

*Usability see table on last page of data sheet
MG = diaphragm size

Control function

Control function	Code
Manually operated	0
Manually operated (lockable handwheel)	L

Options

Options	Code
Mounting thread for electrical position indicator	Z

Order example

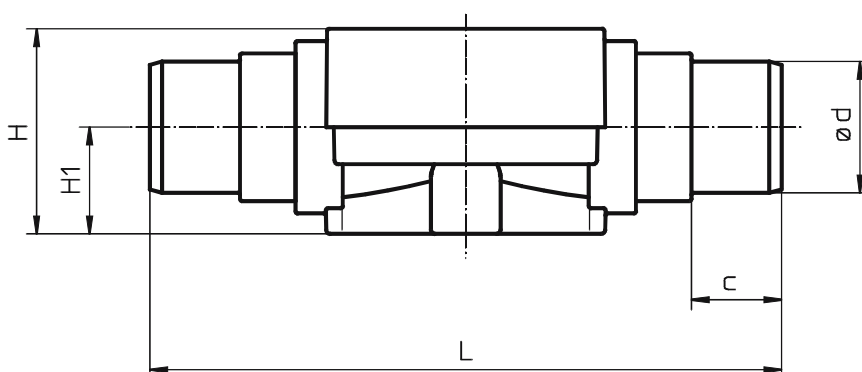
Order example	677	15	D	0	1	14	0	Z
Type	677							
Nominal size		15						
Body configuration (D)			D					
Connection (Code)				0				
Valve body material (Code)					1			
Diaphragm material (Code)						14		
Control function (Code)							0	
Options (Code)								Z

Body dimensions - Butt weld spigots DIN, connection code 0

*Diaphragm size		Material code 1					Material code 5					Material code 20					Material code 70, 71				
MG*	DN	L	H	H1	ød	c	L	H	H1	ød	c	L	H	H1	ød	c	L	H	H1	ød	c
25	15	124	45	26	20	16	124	45	26	20	16	124	50	26	20	18	124	50	26	20	18
25	20	144	45	26	25	19	144	45	26	25	19	144	50	26	25	19	144	50	26	25	19
25	25	154	45	26	32	22	154	45	26	32	22	154	50	26	32	22	154	50	26	32	22
40	32	174	74	40	40	26	174	68	40	40	24	174	74	40	40	24	174	74	40	40	24
40	40	194	74	40	50	31	194	68	40	50	27	194	74	40	50	26	194	74	40	50	26
50	50	224	78	40	63	39	224	75	40	63	40	224	82	40	63	29	224	82	40	63	29
80	65	284	117	55	75	44	284	117	55	75	44	284	117	55	75	44	-	-	-	-	-
80	80	300	117	55	90	51	300	117	55	90	51	300	117	55	90	51	-	-	-	-	-
100	100	340	140	65	110	61	340	140	65	110	61	340	140	65	110	61	-	-	-	-	-

Body dimensions - Butt weld spigots INCH, connection code 30, material code 1, 4 (mm)

Diaphragm size	DN	L	H	H1	ød	c
25	15	141	45	26	21.4	24
25	20	145	45	26	26.7	27
25	25	154	45	26	33.6	30
40	32	174	68	40	42.2	33
40	40	194	68	40	48.3	39
50	50	224	75	40	60.3	40
80	65	284	117	55	75.2	44
80	80	300	117	55	88.9	51
100	100	340	140	65	114.3	61



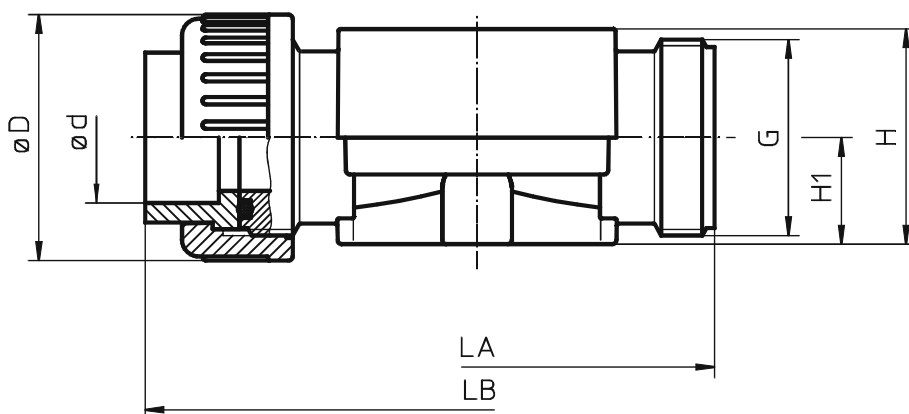
Body dimensions - Union ends with inserts for socket welding DIN
Connection code 7 (mm)

MG*	DN	Material code 1							Material code 20, 70, 71						
		LA	LB	H	H1	øD	ød	G	LA	LB	H	H1	øD	ød	G
25	15	108	146	50	26	43	20	1	108	144	50	26	43	20	1
25	20	108	152	50	26	53	25	1¼	108	146	50	26	53	25	1¼
25	25	116	166	50	26	60	32	1½	116	162	50	26	60	32	1½
40	32	134	192	74	40	74	40	2	134	186	74	40	74	40	2
40	40	154	222	74	40	83	50	2¼	154	210	74	40	83	50	2¼
50	50	182	264	82	40	103	63	2¾	182	248	82	40	103	63	2¾

* MG = Diaphragm size

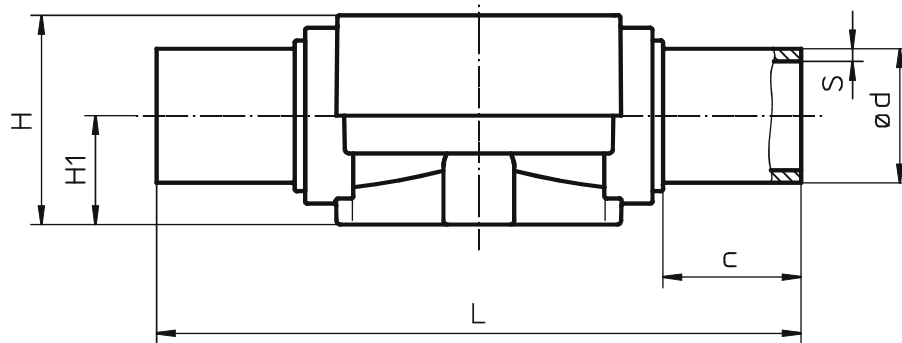
Body dimensions
Union ends with inserts for socket welding INCH
Connection code 33, material code 1 (mm)

Diaphragm size	DN	LA	LB	H	H1	øD	ød	G
25	15	½"	108	150	50	26	43	21.4
25	20	¾"	108	156	50	26	53	26.7
25	25	1"	116	170	50	26	60	33.6
40	32	1¼"	134	198	74	40	74	42.2
40	40	1½"	154	220	74	40	83	48.3
50	50	2"	182	262	82	40	103	60.3



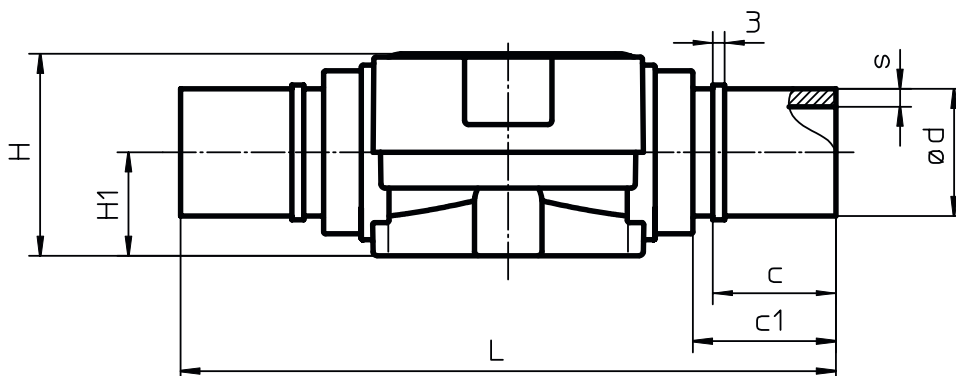
Body dimensions - Spigots for infrared butt welding (IR), connection code 20 (mm)

Diaphragm size	DN	Material code 20						Material code 70 and 71					
		L	H	H1	ød	S	c	L	H	H1	ød	s	c
25	15	-	-	-	-	-	-	154	50	26	20	1.9	33
25	20	-	-	-	-	-	-	154	50	26	25	2.3	33
25	25	-	-	-	-	-	-	154	50	26	32	3.0	33
40	32	-	-	-	-	-	-	194	74	40	40	3.7	33
40	40	-	-	-	-	-	-	194	74	40	50	4.6	33
50	50	-	-	-	-	-	-	224	82	40	63	5.8	33
80	65	284	117	55	75	3,6	43	-	-	-	-	-	-
80	80	300	117	55	90	4,3	51	-	-	-	-	-	-
100	100	340	140	65	110	5,3	59	-	-	-	-	-	-



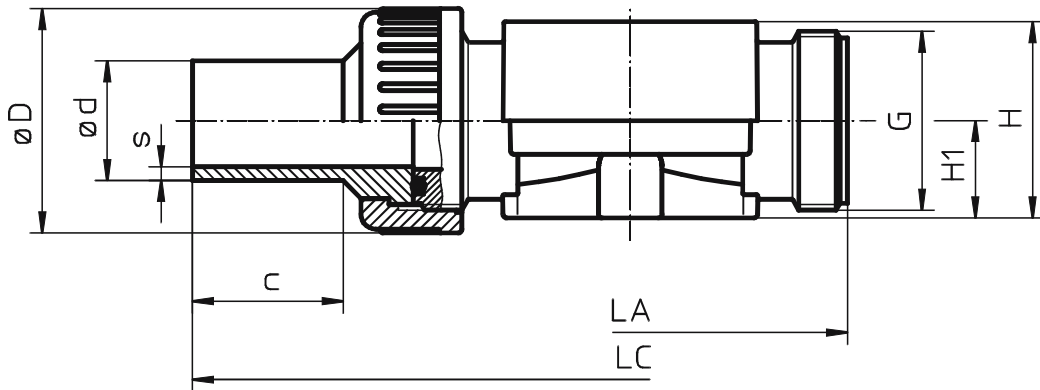
Body dimensions - Spigots for PVDF butt welding Connection code 28, material code 20 (mm)

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



Body dimensions - Union ends with inserts for butt welding
 Connection code 78, material code 20, 70, 71 (mm)

Diaphragm size	DN	LA	LC	H	H1	øD	ød	G	20 ^s	70, 71	C
25	15	108	214	50	26	43	20	1	1.9	1.9	37
25	20	108	220	50	26	53	25	1¼	1.9	2.3	39
25	25	116	234	50	26	60	32	1½	2.4	3.0	40
40	32	134	258	74	40	74	40	2	2.4	3.7	41
40	40	154	284	74	40	83	50	2¼	3.0	4.6	43
50	50	182	318	82	40	103	63	2¾	3.0	5.8	43

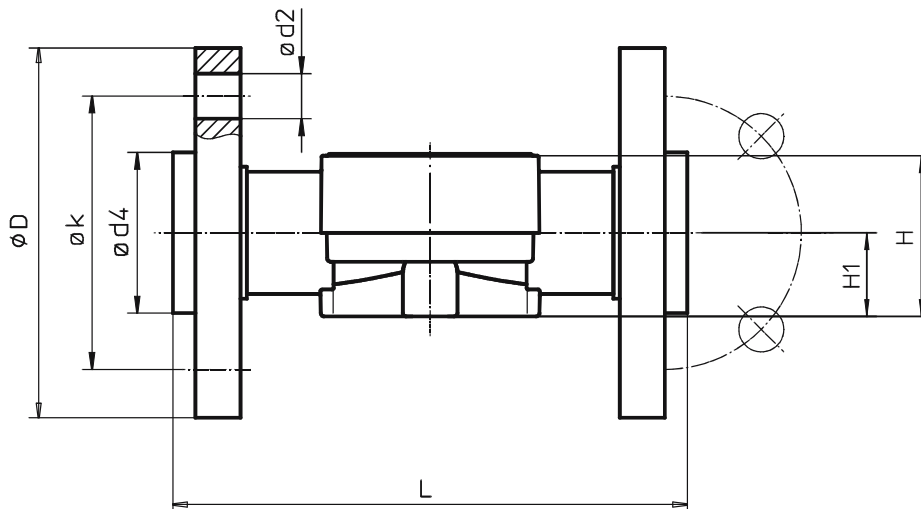


Body dimensions - Flanges Connection code 4, 39 material code 5, 20, 70, 71** (mm)**

MG	DN	L	H	H1	Connection code 4					Connection code 39					
					ø D	ø d2	ø d4	ø k	Number of bolt holes	ø D	ø d2	ø d4	ø k	Number of bolt holes	
25	15	1/2"	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	65	4	95	16	45	60	4
25	20	3/4"	150			105	14	58	75	4	105	16	54	70	4
25	25	1"	160			115	14	68	85	4	115	16	63	79	4
40	32	1 1/4"	180			140	18	78	100	4	140	16	73	89	4
40	40	1 1/2"	200			150	18	88	110	4	150	16	82	98	4
50	50	2"	230			165	18	102	125	4	165	19	102	121	4
80	65	2 1/2"	290			185	18	122	145	4	185	19	122	140	4
80	80	3"	310			200	18	138	160	8	200	19	133	152	4
100	100	4"	350			220	18	158	180	8	229	19	158	190	8

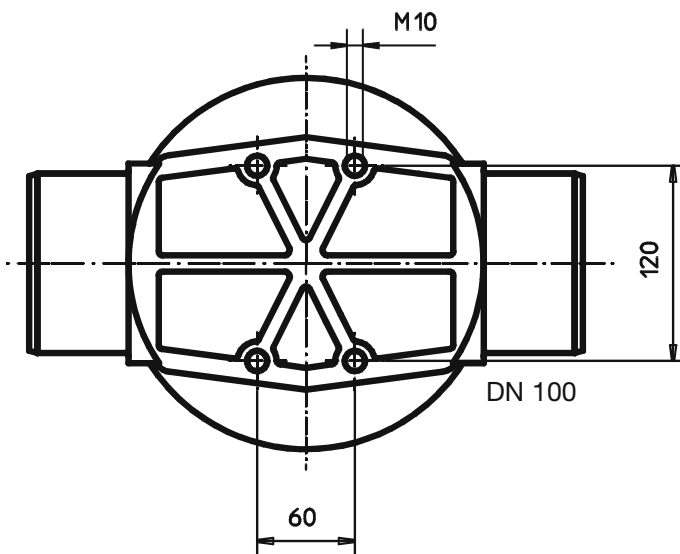
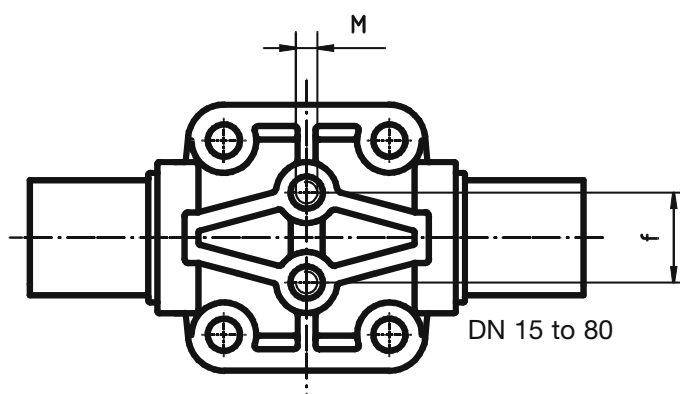
* no DIN length
 MG = diaphragm size

** Material code 70, 71 only DN 15-50



Mounting dimensions GEMÜ 677 (mm)

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



Overview of valve bodies for GEMÜ 677

Material code		PVC-U (Code 1)				PP (Code 5)			PP (Code 70, Code 71)*						PVDF (Code 20)*						ABS (Code 4)	
Connection Code		0	7	30	33	0	4	39	0	4	7	20	39	78	0	4	7	20	28	39	78	30
MG	DN																					
25	15	X	X	X	X	X	X	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	-	X*	X*	X*	X
25	20	X	X	X	X	X	X	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	-	X*	X*	X*	X
25	25	X	X	X	X	X	X	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	-	X*	X*	X*	X
40	32	X	X	X	X	X	X	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	-	X*	X*	X*	X
40	40	X	X	X	X	X	X	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	-	X*	X*	X*	X
50	50	X	X	X	X	X	X	X	X*	X*	X*	X*	X*	X*	X*	X*	X*	-	X*	X*	X*	X
80	65	X	-	X	-	X	X	X	-	-	-	-	-	-	X	X	-	X	-	X	-	X
80	80	X	-	X	-	X	X	X	-	-	-	-	-	-	X	X	-	X	-	X	-	X
100	100	X	-	X	-	X	X	X	-	-	-	-	-	-	X	X	-	X	-	X	-	X

*Valve bodies are suitable for use with diaphragms code 5E and 5F.

MG = diaphragm size

Technical data sheet

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

Subject to alteration · 01/2005 · 86048764

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



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