

# Diaphragm Valve, Metal

## Construction

The GEMÜ 675 manually operated 2/2-way metal diaphragm valve has a non-rising handwheel and an integral optical position indicator 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
- Various connections available

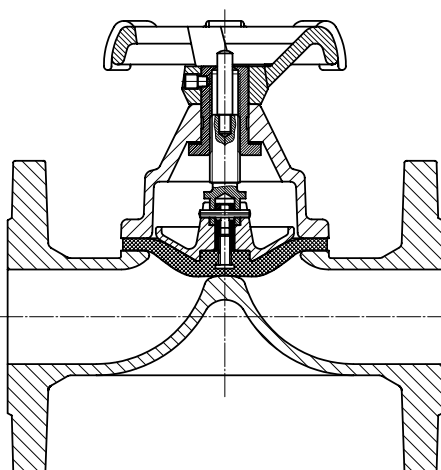
## Advantages

- Optional flow direction
- Compact design (when space is at a premium)

\* 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.

Max. perm. temperature of working medium 150 °C  
(depending on medium, diaphragm and valve body material)

### Ambient conditions

Ambient temperature 0 to 60 °C

Diaphragm size	DN	Operating pressure [bar]		Kv Value [m <sup>3</sup> /h]		
		EPDM	PTFE	GG 25	PFA / PP	Hard rubber
25	15	0 - 10	0 - 6	7	5	6
	20			14	9	11
	25			20	13	15
40	32	0 - 10	0 - 6	36	23	29
	40			40	26	32
50	50	0 - 10	0 - 6	80	47	64
65	65	0 - 10	0 - 6	100	72	80
80	80	0 - 10	0 - 6	160	110	128
100	100	0 - 10	0 - 6	238	177	190
125	125	0 - 10	0 - 6	270	214	230
150	150	0 - 8	0 - 5	480	365	397

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 determined acc. to DIN EN 60534, inlet pressure 5 bar,  $\Delta p$  1 bar, with flanges EN 1092 length EN 558 series 1 and soft elastomer diaphragm.

The Kv values for other product configurations (e.g. other diaphragm or body materials) may differ. In general, all diaphragms are subject to the influences of pressure, temperature, the process and their tightening torques. Therefore the Kv values may exceed the tolerance limits of the standard.

## Order data

Body configuration	Code
2/2-way	D

Connection	Code
<b>Threaded connections</b>	
Threaded sockets DIN ISO 228	1
<b>Flanges</b>	
Flanges EN 1092 / PN16 / form B, length EN 558, series 1, ISO 5752, basic series 1	8
Flanges ANSI Class 150 RF, length MSS SP-88	38
Flanges ANSI Class 125/150 RF, length EN 558, series 1, ISO 5752, basic series 1	39
Flanges BS 10 Table "E", length EN 558, series 7, ISO 5752, basic series 7	51
Flanges EN 1092 / PN16 / form A, length EN 558, series 7, ISO 5752, basic series 7	53
Flanges ANSI Class 125/150 RF, length EN 558, series 7, ISO 5752, basic series 7	56
Flange ratings refer to flange class only. For valve operating pressures see Technical data on page 2.	

Valve body material	Code
EN-GJL-250 GG 25 (Cast iron)	8
EN-GJS-400-18-LT GGG 40.3 (SG iron) PFA lined	17
EN-GJS-400-18-LT GGG 40.3 (SG iron) PP lined	18
EN-GJS-500-7 GGG 50 (Ductile iron) PFA lined	81
EN-GJS-400-18-LT GGG 40.3 (SG iron) Hard rubber lined	83
EN-GJS-500-7 GGG 50 (Ductile iron) PP lined	91

Diaphragm material	Code
NBR	2
FPM	4
CR	8
EPDM, Ethylene Propylene Diene Monomer	14
PTFE/EPDM, fully laminated	52
PTFE/EPDM convex, PTFE loose	5E*
The combination of PFA lining with 5E diaphragms is only conditionally suitable for gaseous media. If low seat leakage rates are required for gaseous media, other combinations are preferable.	
*For use with valve bodies see page 8	

Control function	Code
Manually operated	0
Manually operated with lockable handwheel (with padlock)	L
Manually operated with lockable handwheel (without padlock)	B

Actuator version	Code
Actuator size 0 (DN 15 - 25)	0
Actuator size 1 (DN 32 - 40)	1
Actuator size 2 (DN 50)	2
Actuator size 3 (DN 65)	3
Actuator size 4 (DN 80)	4
Actuator size 5 (DN 100)	5
Actuator size 6 (DN 125)	6
Actuator size 7 (DN 150)	7

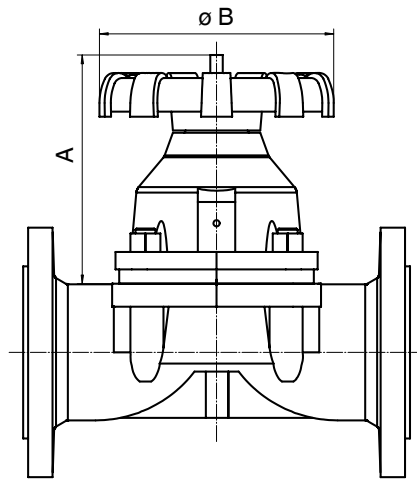
Order example	675	50	D	8	8	14	0	4
Type	675							
Nennweite		50						
Body configuration (code)			D					
Connection (code)				8				
Valve body material (code)					8			
Diaphragm material (code)						14		
Diaphragm material (code)							0	
Actuator version (code)								4

Other connections, valve body materials, linings and diaphragm materials on request.

## Dimensions [mm]

### Bonnet dimensions

Actuator version	Diaphragm size	DN	$\varnothing B$	A	Weight [kg]
0	25	15 - 25	90	87	1.0
1	40	32 - 40	118	109	1.8
2	50	50	128	127	2.7
3	65	65	188	171	5.9
4	80	80	188	196	7.6
5	100	100	238	227	11.3
6	125	125	316	300	15.0
7	150	150	316	325	25.0



## Body dimensions [mm]

### Flanges - DIN EN 1092 - series 1, connection code 8 Valve body material: GG 25 (code 8), GGG 40.3 (code 17, 18, 83)

MG	DN	øD	øk	øL	Number of bolt	H1		FTF	Weight [kg]
						Material code 8	Material code 17, 18, 83		
25	15	95	65	14	4	19.0	18.0	130.0	1.9
	20	105	75	14	4	19.0	20.5	150.0	2.4
	25	115	85	14	4	19.0	23.0	160.0	2.9
40	32	140	100	19	4	28.0	28.7	180.0	4.9
	40	150	110	19	4	28.0	33.0	200.0	5.7
50	50	165	125	19	4	35.0	39.0	230.0	7.5
65	65	185	145	19	4	27.5	51.0	290.0	10.2
80	80	200	160	19	8	33.0	59.5	310.0	14.2
100	100	220	180	19	8	43.0	73.0	350.0	21.0
125	125	250	210	19	8	65.0	87.0	400.0	30.0
150	150	285	240	23	8	58.0	109.0	480.0	35.0

MG = diaphragm size

For materials see overview on page 8

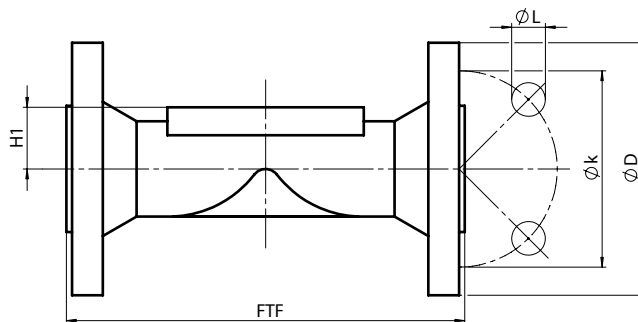
### Flanges - DIN EN 1092 - series 7, connection code 53 Valve body material: GG 25 (code 8), GGG 40.3 (code 17)

MG	DN	øD		øk	øL	Anzahl Schrauben	H1		FTF		Weight [kg]
		Material code 8	Material code 17				Material code 8	Material code 17			
25	15	95	-	65	14	4	19.0	-	117.0	-	1.9
	20	105	-	75	14	4	19.0	-	117.0	-	2.4
	25	115	-	85	14	4	19.0	-	127.0	-	2.9
40	32	140	-	100	19	4	28.0	-	-	-	4.9
	40	150	-	110	19	4	28.0	-	159.0	-	5.7
50	50	165	-	125	19	4	35.0	-	191.0	-	7.5
65	65	185	-	145	19	4	27.5	-	216.0	-	10.2
80	80	200	-	160	19	8	33.0	-	254.0	-	14.2
100	100	220	-	180	19	8	43.0	-	305.0	-	21.0
125	125	250	-	210	19	8	65.0	-	356.0	-	30.0
150	150	285	280*	240	23	8	58.0	109.0	406.0	416.0	35.0

\* Diameter differs from standard

MG = diaphragm size

For materials see overview on page 8



## Body dimensions [mm]

**Flanges - ANSI Class 125/150 RF, connection code 38, 39**  
**Valve body material: GG 25 (code 8), GGG 40.3 (code 17, 18, 83)**

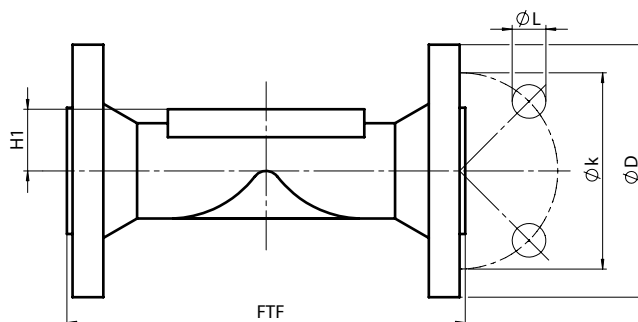
MG	DN	øD	øk	øL	Number of bolt	H1		FTF			Weight [kg]
						Connection code 38, 39		Connection code 38		Connection code 39	
						Material code 8	Material code 17, 18, 83	Material code 17, 18	Material code 83	Material code 8, 17, 18, 83	
25	15	90	60.3	15.9	4	19.0	18.0	-	-	130.0	1.9
	20	100	69.9	15.9	4	19.0	20.5	146.0	146.4	150.0	2.4
	25	110	79.4	15.9	4	19.0	23.0	146.0	146.4	160.0	2.9
40	32	115	88.9	15.9	4	28.0	28.7	-	-	180.0	4.9
	40	125	98.4	15.9	4	28.0	33.0	175.0	171.4	200.0	5.7
50	50	150	120.7	19.0	4	35.0	39.0	200.0	197.4	230.0	7.5
65	65	180	139.7	19.0	4	27.5	51.0	226.0	222.4	290.0	10.2
80	80	190	152.4	19.0	4	33.0	59.5	260.0	260.4	310.0	14.2
100	100	230	190.5	19.0	8	43.0	73.0	327.0	324.4	350.0	21.0
125	125	255	215.9	22.2	8	65.0	87.0	-	-	400.0	30.0
150	150	280	241.3	22.2	8	58.0	109.0	416.0	416.0	480.0	35.0

MG = diaphragm size      For materials see overview on page 8

**Flanges - ANSI Class 125/150 RF, connection code 56**  
**Valve body material: GGG 40.3 (code 17), GGG 50 (code 81, 91)**

MG	DN	øD	øk	øL	Number of bolt	H1	FTF	Weight [kg]
25	25	110	79.4	15.9	4	23.0	127.0	2.9
40	40	125	98.4	15.9	4	32.0	165.0	5.7
50	50	150	120.7	19.0	4	40.0	191.0	7.5
80	80	190	152.4	19.0	4	58.0	254.0	14.2
100	100	230	190.5	19.0	8	70.0	311.0	21.0
150	150	280	241.3	22.2	8	109.0	416.0	35.0

MG = diaphragm size      For materials see overview on page 8

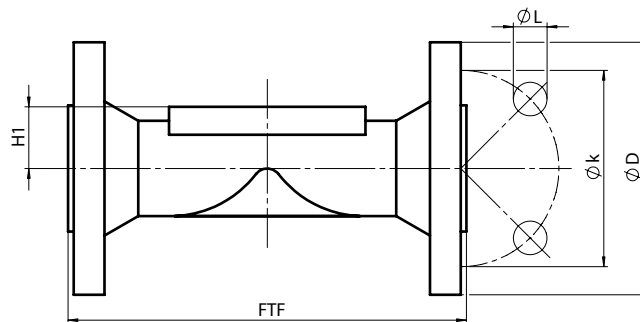


## Body dimensions [mm]

### Flanges - BS 10 Table "E", connection code 51 Valve body material: GGG 40.3 (code 17), GGG 50 (code 81, 91)

MG	DN	øD	øk	øL	Number of bolt	H1	FTF	Weight [kg]
25	25	114	83	14	4	23	127	2.9
40	40	125*	98	14	4	32	165	5.7
50	50	152	114	17	4	40	191	7.5
80	80	184	146	17	4	58	254	14.2
100	100	216	178	17	8	70	311	21.0
150	150	279	235	22	8	109	416	55.0

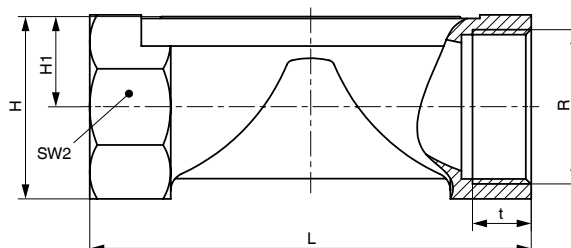
\* Diameter differs from standard BS 10      MG = diaphragm size      For materials see overview on page 8



### Threaded sockets - DIN ISO 228, connection code 1 Valve body material: GG 25 (code 8)

MG	DN	R	H	H1	t	L	SW2	Number of flats	Weight [kg]
25	15	G 1/2	35	19	12	85	32	6	0.5
	20	G 3/4	40	19	13	85	41	6	0.6
	25	G 1	42	19	16	110	46	6	0.9
40	32	G 1 1/4	56	28	16	120	55	6	1.2
	40	G 1 1/2	61	28	18	140	65	6	1.8
50	50	G 2	73	35	18	165	75	6	2.6

MG = diaphragm size



## Overview of valve bodies for GEMÜ 675

		Threaded connections	Flanges																		
Connection code		1	8				38			39				51			53		56		
Material code		8	8	17	18	83	17	18	83	8	17	18	83	17	81	91	8	17	17	81	91
MG	DN																				
25	15	X	X*	X	X	X	-	-	-	X*	X	X	X	-	-	-	X*	-	-	-	-
	20	X	X*	X	X	X	X	X**	X	X*	X	X	X	-	-	-	X*	-	-	-	-
	25	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	-	-	-	-	-	-	-	-
	40	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**
65	65	-	X*	X*	X*	X*	X*	X*/**	X*	X*	X*	X*	X*	-	-	-	X*	-	-	-	-
80	80	-	X*	X	X	X	X	X**	X	X*	X	X	X	-	X	X**	X*	-	-	X	X**
100	100	-	X*	X	X	X	X	X**	X	-	X	X	X	-	X	X**	X*	-	-	X	X**
125	125	-	X*	X	-	X	-	-	-	X*	X	-	X	-	-	-	X*	-	-	-	-
150	150	-	X*	X	-	X	X	-	X	X*	X	-	X	X	-	-	X*	X	X	-	-

\* Valve bodies are not suitable for use with diaphragm code 5E

\*\* Connection code 38 / material code 18 on request

\*\* Connection code 51 / material code 91 on request

\*\* Connection code 56 / material code 91 on request

MG = diaphragm size

For further metal diaphragm valves, accessories and other products,  
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