

# Diaphragm Valve, Metal

## Construction

The GEMÜ 687 pneumatically operated 2/2-way diaphragm valve has a low maintenance actuator. Normally Closed, Normally Open and Double Acting control functions are available.

## Features

- Suitable for inert and corrosive\* liquid and gaseous media
- Chemical resistance of actuator
- Stainless steel body with CIP/SIP cleaning and sterilising capabilities
- Insensitive to particulate media
- Valve body and diaphragm available in various materials and designs
- Various connections available
- Surface finishes down to 0.25 µm, electropolished
- Versions according to ATEX on request
- Optical position indicator is standard for control function 1

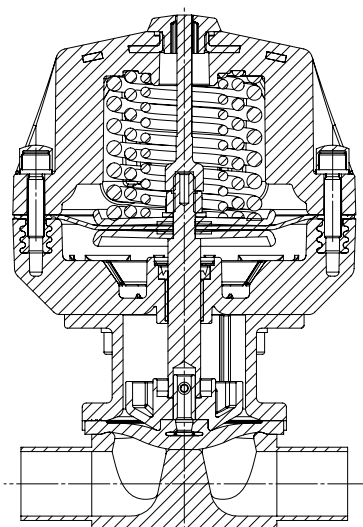
## Advantages

- The modular actuator system permits a variety of options to be used such as tank bottom valves, T valves, sampling valves, multi-port valves and tandem welded configurations
- Optional flow direction
- Installation for an optimized draining is possible
- Optional accessories:
  - Stroke limiter
  - Optical position indicator control function 2 + 3
  - Manual override (GEMÜ 1002, GEMÜ 1004)
  - Pilot valve with manual override (GEMÜ 0322 - 0326)
  - Electrical position indicators

\*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.

### Temperatures

#### Medium temperature

FPM (code 4)	-10 ... 90 °C
EPDM (code 13)	-10 ... 100 °C
EPDM (code 14)	-10 ... 90 °C
EPDM (code 17)	-10 ... 100 °C
PTFE/EPDM (code 54)	-10 ... 100 °C
PTFE/EPDM (code 5M)	-10 ... 100 °C

#### Sterilisation temperature <sup>(1)</sup>

FPM (code 4)	not applicable
EPDM (code 13)	max. 150 °C <sup>(2)</sup> , max. 60 min per cycle
EPDM (code 14)	not applicable
EPDM (code 17)	max. 150 °C <sup>(2)</sup> , max. 180 min per cycle
PTFE/EPDM (code 54)	max. 150 °C <sup>(2)</sup> , no time limit per cycle
PTFE/EPDM (code 5M)	max. 150 °C <sup>(2)</sup> , no time limit per cycle

<sup>1</sup> The sterilisation temperature is valid for steam (saturated steam) or superheated water.

<sup>2</sup> If the sterilisation temperatures listed above are applied to the EPDM diaphragms for longer periods of time, the service life of the diaphragms will be reduced. In these cases, maintenance cycles must be adapted accordingly. This also applies to PTFE diaphragms exposed to high temperature fluctuations.

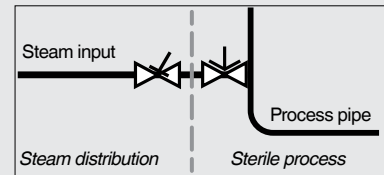
PTFE diaphragms can also be used as moisture barriers; however, this will reduce their service life.

The maintenance cycles must be adapted accordingly.

GEMÜ 555 and 505 globe valves are particularly suitable for use in the area of steam generation and distribution.

The following valve arrangement for interfaces between steam pipes and process pipes has proven itself over time:

A globe valve for shutting off steam pipes and a diaphragm valve as an interface to the process pipes.



#### Ambient temperature

0 ... 60 °C

### Control medium

#### Inert gases

#### Max. permissible temperature of control medium

40 °C

#### Filling volume

Actuator size	Control function 1	Control function 2
B/N	0.03 dm <sup>3</sup>	0.02 dm <sup>3</sup>
1/N	0.15 dm <sup>3</sup>	0.11 dm <sup>3</sup>
2/N	0.26 dm <sup>3</sup>	0.23 dm <sup>3</sup>
3/N	0.73 dm <sup>3</sup>	0.54 dm <sup>3</sup>
4/N	2.30 dm <sup>3</sup>	1.87 dm <sup>3</sup>
5/N	2.30 dm <sup>3</sup>	2.00 dm <sup>3</sup>

C.f. 3 = for filling volume in open position see c.f. 1, for filling volume in closed position see c.f. 2

## Technical data

MG	DN	Actuator size	Operating pressure [bar]				Control pressure [bar]		
			Control function 1		Control function 2 + 3		Control function 1	Control function 2	Control function 3
			EPDM / FPM	PTFE	EPDM / FPM	PTFE			
10	10, 15, 20	B/N	0 - 10	0 - 6	0 - 6	0 - 6	3.5 - 7.0	max. 6.0	max. 5.0
25	15, 20, 25	1/N	0 - 10	0 - 6	0 - 10	0 - 6	5.5 - 7.0	max. 5.5	max. 5.5
40	32, 40	2/N	0 - 10	0 - 6	0 - 10	0 - 6	5.5 - 7.0	max. 5.5	max. 5.5
50	50, 65	3/N	0 - 10	0 - 6	0 - 10	0 - 6	5.5 - 7.0	max. 5.0	max. 5.0
80	65, 80	4/N	0 - 8	0 - 5	0 - 8	0 - 6	5.5 - 7.0	max. 5.0	max. 4.5
		6A	-	-	-	0 - 10	-	max. 3.0	max. 3.0
		6A2	-	0 - 10	-	-	4.0 - 7.0	-	-
100	100	5/N	0 - 6	0 - 4	0 - 6	0 - 4	5.5 - 7.0	max. 5.0	max. 4.5
		7A	-	-	-	0 - 10	-	max. 3.5	max. 3.5
		7A3	-	0 - 10	-	-	4.5 - 7.0	-	-

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. Higher operating pressures on request.  
MG = diaphragm size

Kv values [m <sup>3</sup> /h]								
Pipe standard	DIN	EN 10357 series B (formerly DIN 11850 series 1)	EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A	DIN 11850 series 3	SMS 3008	ASME BPE / DIN 11866 series C	ISO 1127 / EN 10357 series C / DIN 11866 series B	
Connection code	0	16	17	18	37	59	60	
MG	DN							
10	10	-	2.4	2.4	2.4	-	2.2	3.3
	15	3.3	3.8	3.8	3.8	-	2.2	4.0
	20	-	-	-	-	-	3.8	-
25	15	4.1	4.7	4.7	4.7	-	-	7.4
	20	6.3	7.0	7.0	7.0	-	4.4	13.2
	25	13.9	15.0	15.0	15.0	12.6	12.2	16.2
40	32	25.3	27.0	27.0	27.0	26.2	-	30.0
	40	29.3	30.9	30.9	30.9	30.2	29.5	32.8
50	50	46.5	48.4	48.4	48.4	51.7	50.6	55.2
	65	-	-	-	-	62.2	61.8	-
80	65	-	-	77.0	-	68.5	68.5	96.0
	80	-	-	111.0	-	80.0	87.0	111.0
100	100	-	-	194.0	-	173.0	188.0	214.0

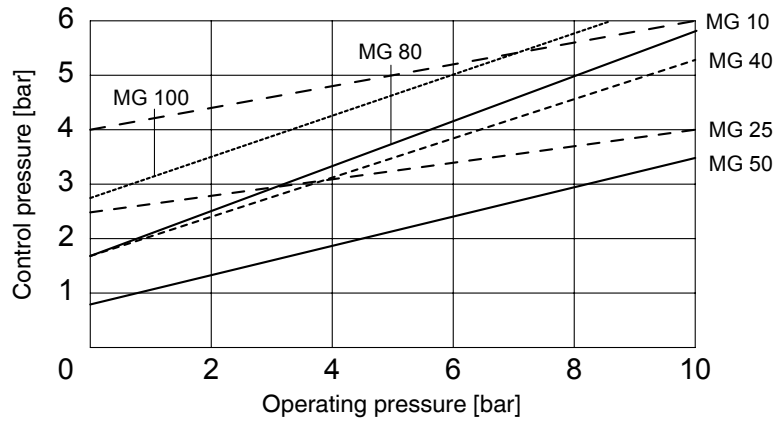
MG = diaphragm size

Kv values determined acc. to DIN EN 60534, inlet pressure 5 bar,  $\Delta p$  1 bar, stainless steel valve body (forged body) 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.

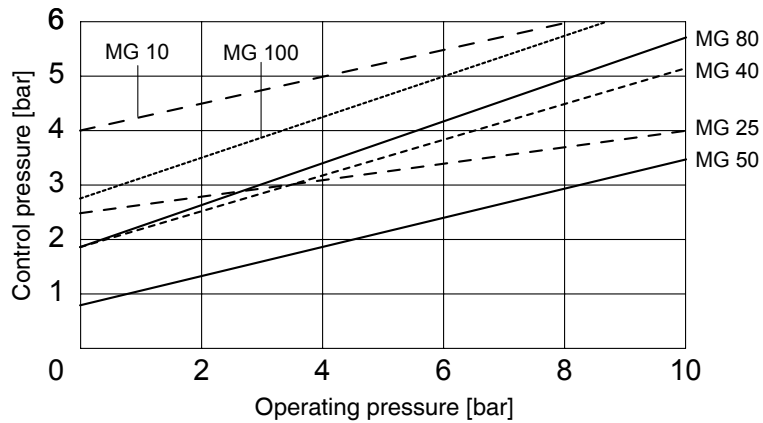
## Technical data

### Control pressure / operating pressure diagram

#### Control function 2 + 3 with elastomer diaphragm



#### Control function 2 + 3 with PTFE diaphragm



The control pressure depending on the prevailing operating pressure, as shown in the diagram, is intended as a guide for operating the system with low wear on the diaphragm.

## Order data

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

Connection	Code
<b>Butt weld spigots</b>	
Spigots DIN	0
Spigots EN 10357 series B (formerly DIN 11850 series 1)	16
Spigot EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A	17
Spigots DIN 11850 series 3	18
Spigots JIS-G 3447	35
Spigots JIS-G 3459	36
Spigots SMS 3008	37
Spigots BS 4825 Part 1	55
Spigot ASME BPE / DIN 11866 series C	59
Spigot ISO 1127 / EN 10357 series C / DIN 11866 series B	60
Spigots ANSI/ASME B36.19M Schedule 10s	63
Spigots ANSI/ASME B36.19M Schedule 40s	65
<b>Threaded connections</b>	
Threaded sockets DIN ISO 228	1
Threaded sockets NPT	31
Threaded spigots DIN 11851	6
One side threaded spigot, other side cone spigot and union nut, DIN 11851	62
Aseptic unions on request	
<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
<b>Clamp connections</b>	
Clamps ASME BPE for pipe ASME BPE, length ASME BPE	80
Clamps DIN 32676 series B for pipe EN ISO 1127, length EN 558, series 7	82
Clamps ASME BPE for pipe ASME BPE, length EN 558, series 7	88
Clamps DIN 32676 series A for pipe DIN 11850, length EN 558, series 7	8A
Clamps SMS 3017 for pipe SMS 3008, length EN 558, series 7	8E
Aseptic clamps on request	
For overview of available valve bodies see page 14/15	

Valve body material	Code
EN-GJS-400-18-LT (SG iron 40.3) PFA lined	17
EN-GJS-400-18-LT (SG iron 40.3) PP lined	18
1.4435, investment casting	C3
1.4408, investment casting	37
1.4408, PFA lined	39
1.4435 (316L), forged body	40
1.4435 (BN2), forged body $\Delta$ Fe<0.5%	42
EN-GJS-400-18-LT (SG iron 40.3) hard rubber lined	83
1.4539, forged body	F4

Diaphragm material	Code
FPM	4
EPDM	13
EPDM	14
EPDM	17
EPDM	36
PTFE/EPDM, one-piece	54
PTFE/EPDM, two-piece	5M
Material complies with FDA requirements, except code 4 and 14	

Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	3

Actuator version	Code
Diaphragm size 10	B/N
Diaphragm size 25	1/N
Diaphragm size 40	2/N
Diaphragm size 50	3/N
Diaphragm size 80	4/N
Diaphragm size 100	5/N
Diaphragm size 80, Control function 2	6A
Diaphragm size 80, Control function 1	6A2
Diaphragm size 100, Control function 2	7A
Diaphragm size 100, Control function 1	7A3
Diaphragm size 25 Control air connector in-line with flow direction	1RN
Diaphragm size 40 Control air connector in-line with flow direction	2RN
Diaphragm size 50 Control air connector in-line with flow direction	3RN
Diaphragm size 80 Control air connector in-line with flow direction	4RN
Diaphragm size 100 Control air connector in-line with flow direction	5RN

## Order data

### Internal surface finishes for forged and block material bodies <sup>1</sup>

Readings for Process Contact Surfaces	Mechanically polished <sup>2</sup>		Electropolished	
	Hygienic class DIN 11866	Code	Hygienic class DIN 11866	Code
Ra ≤ 0.80 µm	H3	1502	HE3	1503
Ra ≤ 0.60 µm	-	1507	-	1508
Ra ≤ 0.40 µm	H4	1536	HE4	1537
Ra ≤ 0.25 µm <sup>3</sup>	H5	1527	HE5	1516

Readings for Process Contact Surfaces acc. to ASME BPE 2016 <sup>4</sup>	Mechanically polished <sup>2</sup>		Electropolished	
	ASME BPE Surface Designation	Code	ASME BPE Surface Designation	Code
Ra Max. = 0.76 µm (30 µinch)	SF3	SF3	-	-
Ra Max. = 0.64 µm (25 µinch)	SF2	SF2	SF6	SF6
Ra Max. = 0.51 µm (20 µinch)	SF1	SF1	SF5	SF5
Ra Max. = 0.38 µm (15 µinch)	-	-	SF4	SF4

### Internal surface finishes for investment cast bodies

Readings for Process Contact Surfaces	Mechanically polished <sup>2</sup>	
	Hygienic class DIN 11866	Code
Ra ≤ 6.30 µm	-	1500
Ra ≤ 0.80 µm	H3	1502
Ra ≤ 0.60 µm <sup>5</sup>	-	1507

<sup>1</sup> Surface finishes of customized valve bodies may be limited in special cases.

<sup>2</sup> Or any other finishing method that meets the Ra value (acc. to ASME BPE).

<sup>3</sup> The smallest possible Ra finish for pipe connections with an internal pipe diameter < 6 mm is 0.38 µm.

<sup>4</sup> When using these surfaces, the bodies are marked according to the specifications of ASME BPE.

The surfaces are only available for valve bodies which are made of materials (e.g. GEMÜ material codes 40, 41, F4, 44) and use connections (e.g. GEMÜ connection codes 59, 80, 88) according to ASME BPE.

<sup>5</sup> Not possible for GEMÜ connection code 59, DN 8 and GEMÜ connection code 0, DN 4.

Ra acc. to DIN EN ISO 4288 and ASME B46.1

### Special function

Code

3-A compliant design

M

Order example	687	25	D	60	40	5M	1	1/N	1503	M
Type	687									
Nominal size		25								
Body configuration (code)			D							
Connection (code)				60						
Valve body material (code)					40					
Diaphragm material (code)						5M				
Control function (code)							1			
Actuator version (code)								1/N		
Surface finish (code)									1503	
Special function (code)										M

## Dimensions [mm]

**Actuator dimensions - control function 1 [mm]**

MG	Actuator size	ø B	B1	A	A1	G	Gewicht [kg]
10	B/N	67	44	125	62	G 1/4	0.53
25	1/N	128	-	164	65	G 1/4	2.00
40	2/N	158	-	204	86	G 1/4	3.90
50	3/N	213	-	244	97	G 1/4	7.00
80	4/N	259	-	368	173	G 1/4	15.00
	6A2	360	-	475	158	G 1/4	52.00
100	5/N	259	-	372	169	G 1/4	16.10
	7A3	360	-	477	154	G 1/4	63.00

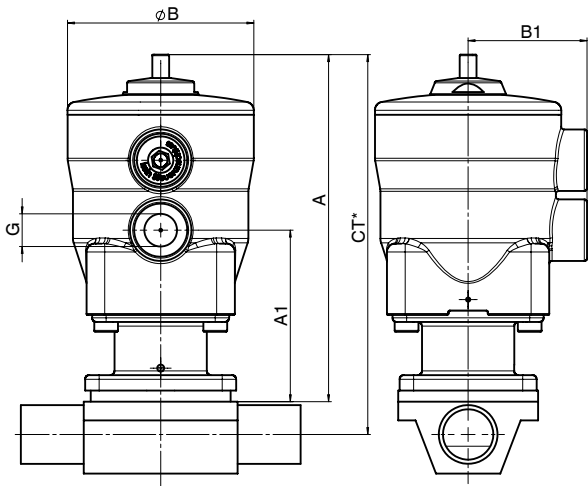
MG = diaphragm size

**Actuator dimensions - control functions 2 + 3 [mm]**

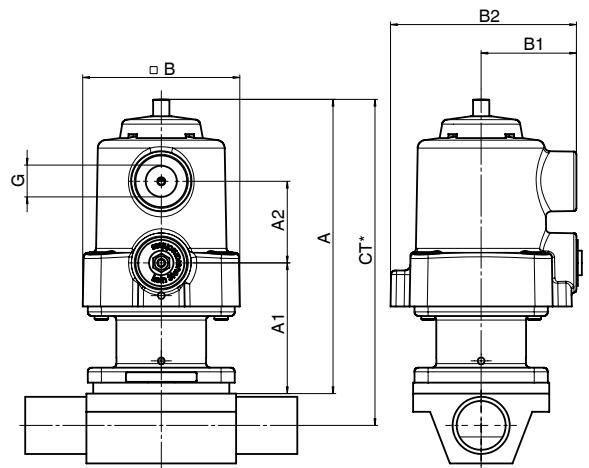
MG	Actuator size	ø B	A	A1	A2	B1	B2	G
10	B/N	57	110	49	30	35	68	G 1/4
25	1/N	128	117	66	28	-	-	G 1/4
40	2/N	158	143	84	27	-	-	G 1/4
50	3/N	213	167	96	28	-	-	G 1/4
80	4/N	258	282	170	45	-	-	G 1/4
	6A	360	323	158	110	-	-	G 1/4
100	5/N	258	278	165	45	-	-	G 1/4
	7A	360	319	154	110	-	-	G 1/4

MG = diaphragm size

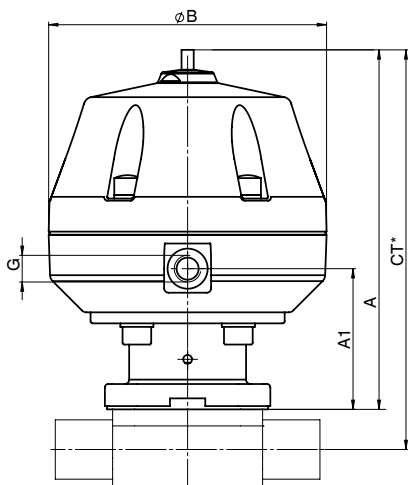
Control function 1 - Diaphragm size 10



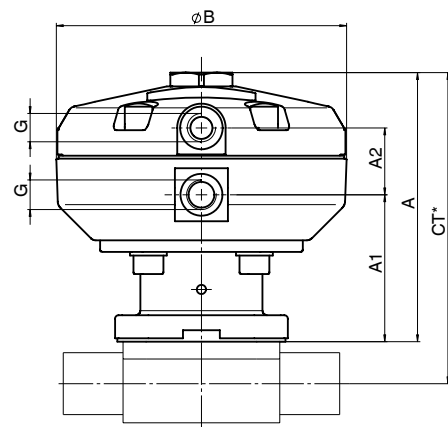
Control functions 2+3 - Diaphragm size 10



Control function 1 - Diaphragm size 25 - 100



Control functions 2+3 - Diaphragm size 25 - 100



\* CT = A + H1 (see body dimensions)

## Body dimensions [mm]

### Butt weld spigots, connection code 0, 16, 17, 18 Valve body material: Investment casting (code C3), forged body (code 40, F4)

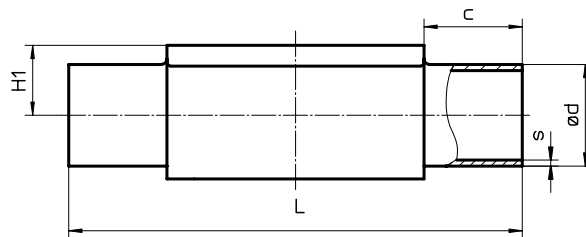
Pipe standard						DIN		EN 10357 series B (formerly DIN 11850 series 1)	EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A	DIN 11850 series 3		Weight [kg]			
Connection code						0		16		17			18		
MG	DN	NPS	L	c	H1*	H1**	ød	s	ød	s	ød		s	ød	s
10	10	3/8"	108	25	12.5		-	-	12	1.0	13	1.5	14	2.0	0.30
	15	1/2"	108	25	12.5		18	1.5	18	1.0	19	1.5	20	2.0	0.30
25	15	1/2"	120	25	13.0	19.0	18	1.5	18	1.0	19	1.5	20	2.0	0.62
	20	3/4"	120	25	16.0	19.0	22	1.5	22	1.0	23	1.5	24	2.0	0.58
	25	1"	120	25	19.0	19.0	28	1.5	28	1.0	29	1.5	30	2.0	0.55
40	32	1 1/4"	153	25	24.0	26.0	34	1.5	34	1.0	35	1.5	36	2.0	1.45
	40	1 1/2"	153	25	26.0	26.0	40	1.5	40	1.0	41	1.5	42	2.0	1.32
50	50	2"	173	30	32.0	32.0	52	1.5	52	1.0	53	1.5	54	2.0	2.25
80	65	2 1/2"	216	30	-	62.0	-	-	-	-	70	2.0	-	-	8.60
	80	3"	254	30	-	62.0	-	-	-	-	85	2.0	-	-	8.00
100	100	4"	305	30	-	76.0	-	-	-	-	104	2.0	-	-	24.10

\* only for investment cast design      \*\* only for forged design      MG = diaphragm size  
For materials see overview on page 14

### Butt weld spigots, connection code 60 Valve body material: Investment casting (code C3), forged body (code 40, F4)

Pipe standard							ISO 1127 / EN 10357 series C / DIN 11866 series B		Weight [kg]
Connection code							60		
MG	DN	NPS	L	c	H1*	H1**	ød	s	
10	10	3/8"	108	25	12.5	12.5	17.2	1.6	0.30
	15	1/2"	108	25	12.5	12.5	21.3	1.6	0.30
25	15	1/2"	120	25	13.0	19.0	21.3	1.6	0.62
	20	3/4"	120	25	16.0	19.0	26.9	1.6	0.58
	25	1"	120	25	19.0	19.0	33.7	2.0	0.55
40	32	1 1/4"	153	25	24.0	26.0	42.4	2.0	1.45
	40	1 1/2"	153	25	26.0	26.0	48.3	2.0	1.32
50	50	2"	173	30	32.0	32.0	60.3	2.0	2.25
80	65	2 1/2"	216	30	-	62.0	76.1	2.0	8.60
	80	3"	254	30	-	62.0	88.9	2.3	8.00
100	100	4"	305	30	-	76.0	114.3	2.3	24.10

\* only for investment cast design      \*\* only for forged design      MG = diaphragm size  
For materials see overview on page 14





## Body dimensions [mm]

### Butt weld spigots, connection code 35, 36, 37 Valve body material: Investment casting (code C3), forged body (code 40, F4)

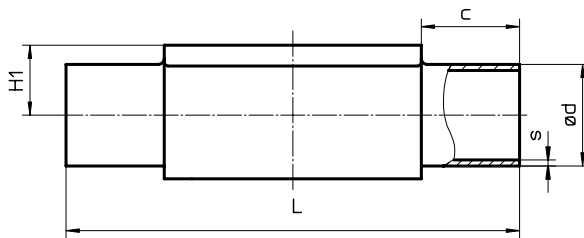
Pipe standard							JIS-G 3447	JIS-G 3459	SMS 3008		Weight [kg]		
Connection code							35	36	37				
MG	DN	NPS	L	c	H1*	H1**	ød	s	ød	s		ød	s
10	10	3/8"	108	25	-	12.5	-	-	17.3	1.65	-	-	0.30
	15	1/2"	108	25	-	12.5	-	-	21.7	2.10	-	-	0.30
25	15	1/2"	120	25	-	19.0	-	-	21.7	2.10	-	-	0.62
	20	3/4"	120	25	-	19.0	-	-	27.2	2.10	-	-	0.58
	25	1"	120	25	19.0	19.0	25.4	1.2	34.0	2.80	25.0	1.2	0.55
40	32	1 1/4"	153	25	-	26.0	31.8	1.2	42.7	2.80	33.7	1.2	1.45
	40	1 1/2"	153	25	26.0	26.0	38.1	1.2	48.6	2.80	38.0	1.2	1.32
50	50	2"	173	30	32.0	32.0	50.8	1.5	60.5	2.80	51.0	1.2	2.25
	65	2 1/2"	173	30	-	34.0	63.5	2.0	-	-	63.5	1.6	2.20
80	65	2 1/2"	216	30	-	62.0	63.5	2.0	76.3	3.00	63.5	1.6	8.60
	80	3"	254	30	-	62.0	76.3	2.0	89.1	3.00	76.1	1.6	8.00
100	100	4"	305	30	-	76.0	101.6	2.0	114.3	3.00	101.6	2.0	24.10

\* only for investment cast design      \*\* only for forged design      MG = diaphragm size  
For materials see overview on page 14

### Butt weld spigots, connection code 55, 59, 63, 65 Valve body material: Investment casting (code C3), forged body (code 40, F4)

Pipe standard							BS 4825 Part 1	ASME BPE / DIN 11866 series C	ANSI/ASME B36.19M Schedule 10s	ANSI/ASME B36.19M Schedule 40s	Weight [kg]				
Connection code							55	59	63	65					
MG	DN	NPS	L	c	H1*	H1**	ød	s	ød	s		ød	s	ød	s
10	10	3/8"	108	25	-	12.5	9.53	1.2	9.53	0.89	17.1	1.65	17.1	2.31	0.30
	15	1/2"	108	25	-	12.5	12.70	1.2	12.70	1.65	21.3	2.11	21.3	2.77	0.30
	20	3/4"	108	25	12.5	12.5	19.05	1.2	19.05	1.65	-	-	-	-	0.30
25	15	1/2"	120	25	-	19.0	-	-	-	-	21.3	2.11	21.3	2.77	0.62
	20	3/4"	120	25	16.0	19.0	19.05	1.2	19.05	1.65	26.7	2.11	26.7	2.87	0.58
	25	1"	120	25	19.0	19.0	-	-	25.40	1.65	33.4	2.77	33.4	3.38	0.55
40	32	1 1/4"	153	25	-	26.0	-	-	-	-	42.2	2.77	42.2	3.56	1.45
	40	1 1/2"	153	25	26.0	26.0	-	-	38.10	1.65	48.3	2.77	48.3	3.68	1.32
50	50	2"	173	30	32.0	32.0	-	-	50.80	1.65	60.3	2.77	60.3	3.91	2.25
	65	2 1/2"	173	30	-	34.0	-	-	63.50	1.65	-	-	-	-	2.10
80	65	2 1/2"	216	30	-	62.0	-	-	63.50	1.65	73.0	3.05	73.0	5.16	8.60
	80	3"	254	30	-	62.0	-	-	76.20	1.65	88.9	3.05	88.9	5.49	8.00
100	100	4"	305	30	-	76.0	-	-	101.60	2.11	114.3	3.05	114.3	6.02	24.10

\* only for investment cast design      \*\* only for forged design      MG = diaphragm size  
For materials see overview on page 14



## Body dimensions [mm]

### Threaded sockets, connection code 1 Valve body material: Investment casting (code 37)

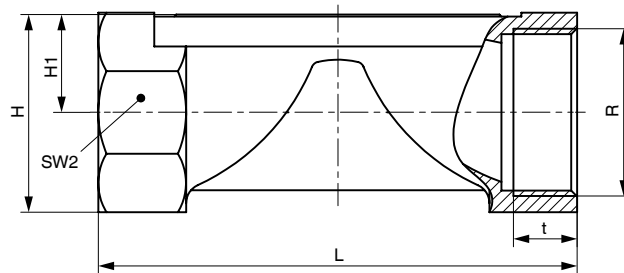
MG	DN	R	L	H	H1	t	SW2	Number of flats	Weight [kg]
10	12	G 3/8	55	25	13	12	22	2	0.17
	15	G 1/2	68	30	15	15	27	2	0.26
25	15	G 1/2	85	29	16	15	27	6	0.32
	20	G 3/4	85	32	16	16	32	6	0.34
	25	G 1	110	37	16	13	41	6	0.39
40	32	G 1 1/4	120	49	24	20	50	8	0.88
	40	G 1 1/2	140	52	24	18	55	8	0.93
50	50	G 2	165	68	33	26	70	8	1.56

MG = diaphragm size

### Threaded sockets, connection code 31 Valve body material: Investment casting (code 37)

MG	DN	R	L	H	H1	t	SW2	Number of flats	Weight [kg]
25	15	NPT 1/2	85	29	16	14	27	6	0.32
	20	NPT 3/4	85	32	16	14	32	6	0.34
	25	NPT 1	110	42	21	17	41	6	0.39
40	32	NPT 1 1/4	120	49	24	17	50	8	0.88
	40	NPT 1 1/2	140	52	24	17	55	8	0.93
50	50	NPT 2	165	68	33	18	70	8	1.56

MG = diaphragm size



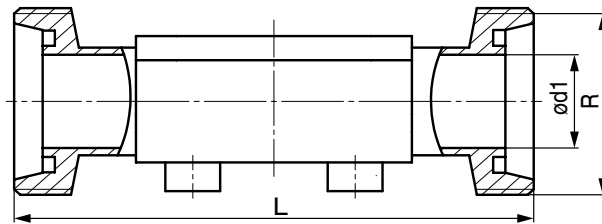
## Body dimensions [mm]

### Threaded connections, connection code 6, 62 Valve body material: Forged body (code 40)

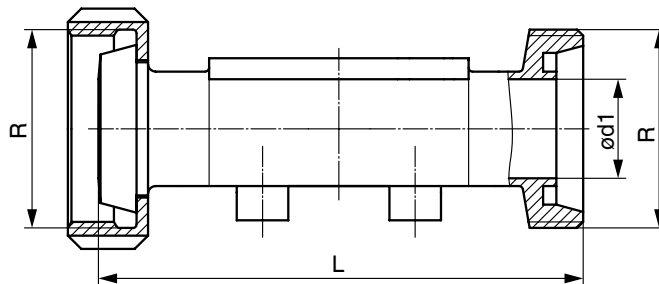
MG	DN	H1	ød1	Thread to DIN 405 R	Code 6 L	Code 62 L	Weight [kg]
10	10	12.5	10.0	RD 28 x 1/8	118	116	0.33
	15	12.5	16.0	RD 34 x 1/8	118	116	0.35
25	15	19.0	16.0	RD 34 x 1/8	118	116	0.71
	20	19.0	20.0	RD 44 x 1/6	118	114	0.78
	25	19.0	26.0	RD 52 x 1/6	128	127	0.79
40	32	26.0	32.0	RD 58 x 1/6	147	147	1.66
	40	26.0	38.0	RD 65 x 1/6	160	160	1.62
50	50	32.0	50.0	RD 78 x 1/6	191	191	2.70
80	65	62.0	66.0	RD 95 x 1/6	246	246	9.22
	80	62.0	81.0	RD 110 x 1/4	256	256	9.20

MG = diaphragm size

Code 6



Code 62



## Body dimensions [mm]

**Flanges - DIN EN 1092, connection code 8**  
**Valve body material: GGG 40.3 (code 17, 18, 83), investment casting (code C3),**  
**forged body (code 40), investment casting PFA lined (code 39)**

MG	DN	øD	øk	øL	Number of bolts	H1			FTF	Weight [kg]
						Material code 17, 18, 39, 83	Material code C3	Material code 40		
25	15	95	65	14	4	18.0	13.0	19.0	130*	1.85
	20	105	75	14	4	20.5	16.0	19.0	150	2.35
	25	115	85	14	4	23.0	19.0	19.0	160	2.85
40	32	140	100	19	4	28.7	24.0	26.0	180	4.90
	40	150	110	19	4	33.0	26.0	26.0	200	5.65
50	50	165	125	19	4	39.0	32.0	32.0	230	7.45
80	65	185	145	19	4	51.0	-	62.0	290	10.20
	80	200	160	19	8	59.5	-	62.0	310	14.20
100	100	220	180	19	8	73.0	-	76.0	350	21.00

\*Material code C3, 40 FTF = 150 (no DIN length)

MG = diaphragm size

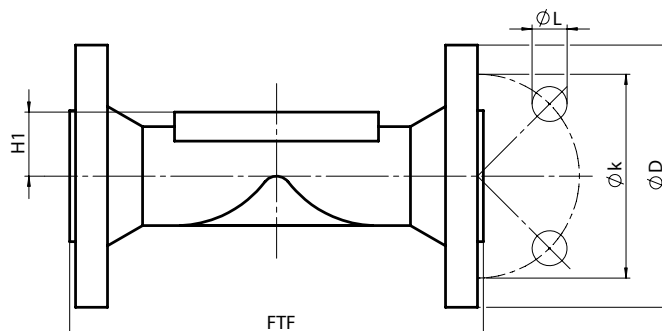
For materials see overview on page 15

**Flanges - ANSI Class 125/150 RF, connection code 38, 39**  
**Valve body material: GGG 40.3 (code 17, 18, 83), investment casting (code C3),**  
**forged body (code 40), investment casting PFA lined (code 39)**

MG	DN	øD	øk	øL	Number of bolts	H1			FTF		Weight [kg]	
						Connection code 38, 39			MSS Sp-88 Connection-code 38	EN 558 Series 1 Connection-code 39		
						Material code 17, 18, 39, 83	Material code C3	Material code 40	Material code 17, 18, 39, 83	Material code 83	Material code 17, 18, C3, 39, 40, 83	
25	15	90	60.3	15.9	4	18.0	13.0	19.0	-	-	130	1.85
	20	100	69.9	15.9	4	20.5	16.0	19.0	146	146.4	150	2.35
	25	110	79.4	15.9	4	23.0	19.0	19.0	146	146.4	160	2.85
40	32	115	88.9	15.9	4	28.7	24.0	26.0	-	-	180	4.90
	40	125	98.4	15.9	4	33.0	26.0	26.0	175	171.4	200	5.65
50	50	150	120.7	19.0	4	39.0	32.0	32.0	200	197.4	230	7.45
80	65	180	139.7	19.0	4	51.0	-	62.0	226	-	290	10.20
	80	190	152.4	19.0	4	59.5	-	62.0	260	260.4	310	14.20
100	100	230	190.5	19.0	8	73.0	-	76.0	327	324.4	350	21.00

MG = diaphragm size

For materials see overview on page 15

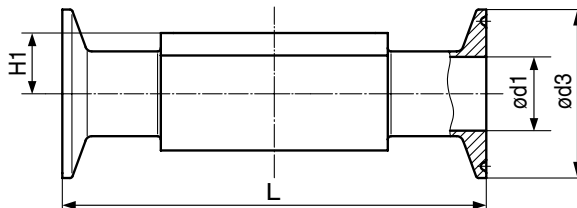


## Body dimensions [mm]

### Clamp connections, connection code 80, 82, 88, 8A, 8E Valve body material: Forged body (code 40, F4)

Pipe connection for clamp			ASME BPE						ISO 1127 / EN 10357 series C / DIN 11866 series B			EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A			SMS 3008			Weight [kg]	
Clamp connection			ASME BPE						DIN 32676 series B			DIN 32676 series A			ISO 2852 / SMS 3017				
Clamp connection code			80			88			82			8A			8E				
MG	DN	NPS	H1	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	ød1	ød3		L
10	10	3/8"	12.5	-	-	-	-	-	-	14.0	25.0	108.0	10	34.0	108.0	-	-	-	0.30
	15	1/2"	12.5	9.40	25.0	88.9	9.40	25.0	108	18.1	50.5	108.0	16	34.0	108.0	-	-	-	0.43
	20	3/4"	12.5	15.75	25.0	101.6	15.75	25.0	117	-	-	-	-	-	-	-	-	-	0.43
25	15	1/2"	19.0	-	-	-	-	-	-	18.1	50.5	108.0	16	34.0	108.0	-	-	-	0.75
	20	3/4"	19.0	15.75	25.0	101.6	15.75	25.0	117	23.7	50.5	117.0	20	34.0	117.0	-	-	-	0.71
	25	1"	19.0	22.10	50.5	114.3	22.10	50.5	127	29.7	50.5	127.0	26	50.5	127.0	22.6	50.5	127	0.63
40	32	1 1/4"	26.0	-	-	-	-	-	-	38.4	64.0	146.0	32	50.5	146.0	31.3	50.5	146	1.62
	40	1 1/2"	26.0	34.80	50.5	139.7	34.80	50.5	159	44.3	64.0	159.0	38	50.5	159.0	35.6	50.5	159	1.50
50	50	2"	32.0	47.50	64.0	158.8	47.50	64.0	190	56.3	77.5	190.0	50	64.0	190.0	48.6	64.0	190	2.50
	65	2 1/2"	34.0	60.20	77.5	193.8	60.20	77.5	216	-	-	-	-	-	-	60.3	77.5	216	2.30
80	65	2 1/2"	62.0	60.20	77.5	193.8	60.20	77.5	216	72.1	91.0	216.0	66	91.0	216.0	60.3	77.5	216	8.90
	80	3"	62.0	72.90	91.0	222.3	72.90	91.0	254	84.3	106.0	254.0	81	106.0	254.0	72.9	91.0	254	8.50
100	100	4"	76.0	97.38	119.0	292.1	97.38	119.0	305	109.7	130.0	305.0	100	119.0	305.0	97.6	119.0	305	24.80

MG = diaphragm size



## Overview of valve bodies for GEMÜ 687

		Spigots															
Connection code		0	16	17		18	35	36	37		55	59		60		63	65
Material code		40	40	C3	40	40	40	40	C3	40	40	C3	40	C3	40	40	40
MG	DN																
10	10	-	X	X	X	X	-	X	-	-	X	-	X	X	X	X	X
	15	X	X	X	X	X	-	X	-	-	X	-	X	X	X	X	X
	20	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-
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
40	32	X	X	X	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
50	50	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X
	65	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	-
80	65	-	-	-	X	-	X	X	-	X	-	-	X	-	X	X	X
	80	-	-	-	X	-	X	X	-	X	-	-	X	-	X	X	X
100	100	-	-	-	X	-	X	X	-	X	-	-	X	-	X	X	X

Availability of material code 42, F4: same as code 40

MG = diaphragm size

## Overview of valve bodies for GEMÜ 687

		Threaded connections				Clamps					Flanges																
Connection code		1	31	6	62	80	82	88	8A	8E	8						38				39						
Material code		37	37	40	40	40	40	40	40	40	17	18	C3	39	40	83	17	18	39	83	17	18	C3	39	40	83	
MG	DN																										
10	10	-	-	W	W	-	K	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	15	X	-	W	W	K	W	K	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	20	-	-	-	-	K	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	15	X	X	W	W	-	W	-	K	-	X	X	W	X	W	X	-	-	-	-	X	X	W	X	W	X	
	20	X	X	W	W	K	K	K	K	-	X	X	W	X	W	X	X	X*	X	X	X	X	W	X	W	X	
	25	X	X	W	W	K	K	K	K	K	X	X	W	X	W	X	X	X*	X	X	X	X	W	X	W	X	
40	32	X	X	W	W	-	W	-	K	K	X	X	W	X	W	X	-	-	-	-	X	X	W	X	W	X	
	40	X	X	W	W	K	W	K	K	K	X	X	W	X	W	X	X	X*	X	X	X	X	W	X	W	X	
50	50	X	X	W	W	K	W	K	K	K	X	X	W	X	W	X	X	X*	X	X	X	X	W	X	W	X	
	65	-	-	-	-	W	-	W	-	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
80	65	-	-	W	W	K	K	K	K	K	-	-	-	-	W	-	-	-	-	-	-	-	-	-	W	-	
	80	-	-	W	W	K	W	K	W	K	X	X	-	X	W	X	X	X*	X	X	X	X	-	X	W	X	
100	100	-	-	-	-	W	W	W	W	W	X	X	-	X	W	X	X	X*	X	X	X	X	-	X	W	X	

\* Connection code 38 / material code 18 on request  
 X = Standard  
 K = Connections completely machined (not welded)  
 W = Welded construction  
 Availability of material code 42, F4: same as code 40  
 MG = diaphragm size

## Overview of diaphragm materials for GEMÜ 687

Diaphragm size	Diaphragm material				
	FPM	EPDM	EPDM	EPDM	PTFE/EPDM
10	4	13	14	17	52
25	4	13	14	17	5E
40	4	13	14	17	5E
50	4	13	14	17	5E
80	4	13	14	17	5E
100	4	13	14	17	52

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