

Diaphragm Valve, Metal

Construction

The GEMÜ 650 piston actuated 2/2-way diaphragm valve is designed for use in sterile areas of application. All metallic actuator components are made of stainless steel. The compression springs of diaphragm sizes 80 and 100 are made of epoxy coated spring steel. Normally closed, Normally open and Double acting control functions are available. The valve has an optical position indicator as standard.

Features

- Suitable for inert and corrosive* liquid and gaseous media
- Valve body and diaphragm available in various materials and designs
- Compact design (ideal when space is at a premium)
- Various connections available
- CIP/SIP cleaning and sterilizing capabilities
- Autoclave capability, dependent on version
- Surface finishes down to 0.25 µm, electropolished
- Versions according to ATEX on request

Advantages

- Hermetic separation between medium and actuator
- Optional flow direction
- Installation for an optimized draining is possible
- Control air connectors positioned in-line with piping (option: 90° offset)
- Expelled air from spring chamber can optionally be piped to other locations
- Extensive range of accessories, easily retrofitted

* see information on working medium on page 2

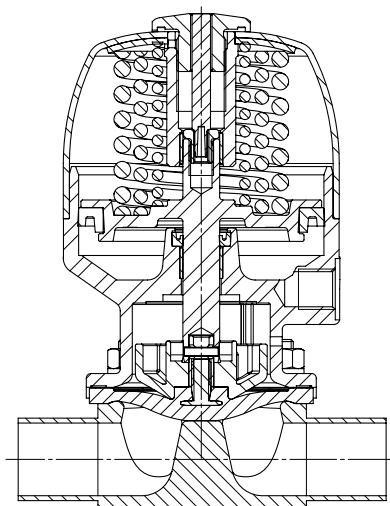


Actuator version "T"



Actuator version "D"

Sectional view



DN 100 „T“

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.

The valve will seal in both flow directions up to full operating pressure (gauge pressure).

Temperatures

Medium temperature -10 to 100 °C

Sterilisation temperature ⁽¹⁾

EPDM (code 13/3A)	max. 150 °C ⁽²⁾ , max. 60 min per cycle
EPDM (code 17)	max. 150 °C ⁽²⁾ , max. 180 min per cycle
PTFE (code 52/5A)	max. 150 °C ⁽²⁾ , no time limit per cycle
PTFE (code 5E)	max. 150 °C ⁽²⁾ , no time limit per cycle

¹ The sterilisation temperature is valid for steam (saturated steam) or superheated water.

² 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.

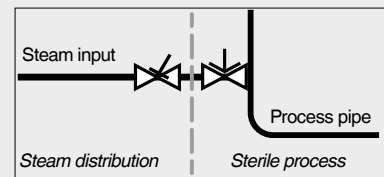
PTFE diaphragms can also be used as moisture barriers; however, this will reduce their service life.

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

60 °C

Filling volume

Diaphragm size	DN	Actuator size	Actuator version	Spring set	Control function 1	Control function 2
8	4 ... 15	0	T/R	1	0.01 dm ³	0.01 dm ³
			T/R	A	0.02 dm ³	0.01 dm ³
10	10 ... 20	1	D/T/R	1	0.03 dm ³	0.07 dm ³
25	15 ... 25	2	D/T/R	1	0.13 dm ³	0.22 dm ³
40	32 ... 40	3	D/T/R	1	0.23 dm ³	0.50 dm ³
50	50	4	D/T/R	1	0.50 dm ³	1.20 dm ³
80	65 ... 80	5	T/R	1	2.68 dm ³	3.20 dm ³
100	100	6	T/R	1	2.78 dm ³	3.40 dm ³

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

Actuator		Operating pressure [bar]			Control pressure [bar]	
Code	MG	DN	EPDM	PTFE	C.f. 1	C.f. 2 + 3
0T1	8	4 ... 15	0 - 8	0 - 6	5.0 - 7	max. 4.5
0TA	8	4 ... 15	0 - 10	0 - 6	3.5 - 7	max. 4.5
1T1	10	10 ... 20	0 - 10	0 - 6	4.5 - 7	max. 4.5
2T1	25	15 ... 25	0 - 10	0 - 6	5.0 - 7	max. 4.5
3T1	40	32 ... 40	0 - 10	0 - 6	4.5 - 7	max. 5.5
4T1	50	50	0 - 10	0 - 6	4.5 - 7	max. 4.5
5T1	80	65 ... 80	0 - 8	0 - 5	3.5 - 7	max. 3.5
6T1	100	100	0 - 6	0 - 4	3.5 - 7	max. 3.5

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

MG = diaphragm size

Version with PTFE diaphragm up to 10 bar with actuator special function "H" and forged valve body possible on request

Kv values [m³/h]

Diaphragm size	DN	DIN	EN 10357 Series B	EN 10357 Series A	DIN 11850 Series 3	SMS 3008	ASME BPE	ISO 1127 / EN 10357 Series C
		Code 0	Code 16	Code 17	Code 18	Code 37	Code 59	Code 60
8	4	0.5	-	-	-	-	-	-
	6	1.1	-	-	-	-	-	1.2
	8	1.3	-	-	-	-	0.6	2.2
	10	-	2.1	2.1	2.1	-	1.3	-
	15	-	-	-	-	-	2.0	-
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
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

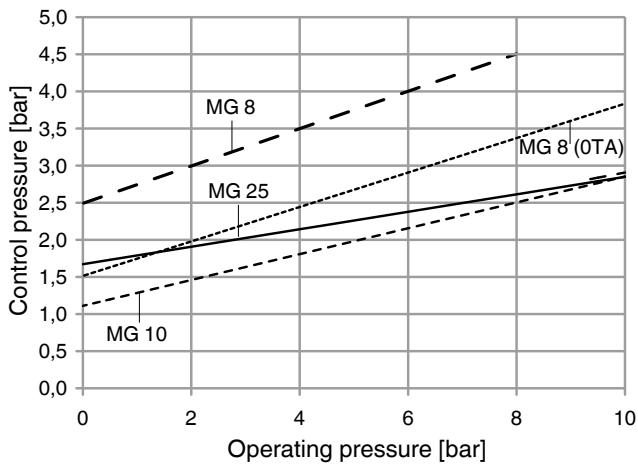
Kv values determined acc. to DIN EN 60534, inlet pressure 5 bar, Δp 1 bar, stainless steel valve body and soft elastomer diaphragm.

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.

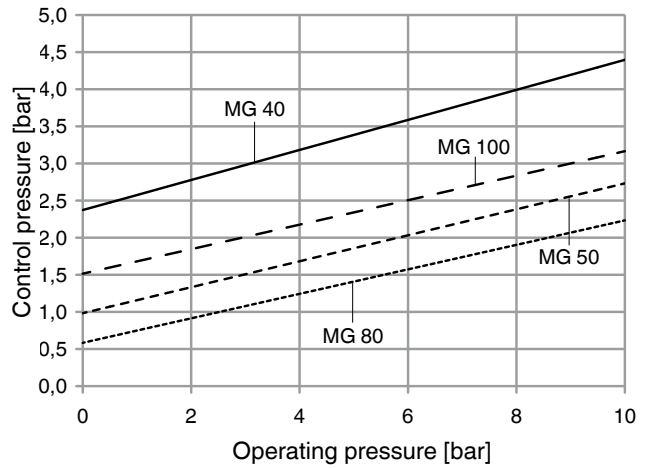
Autoclavability

Actuator size 0	Standard version with autoclave capability
Actuator size 1	Standard version with autoclave capability
Actuator size 2	Standard version with autoclave capability
Actuator size 3	with special version
Actuator size 4	with special version
Actuator size 5	not possible
Actuator size 6	not possible

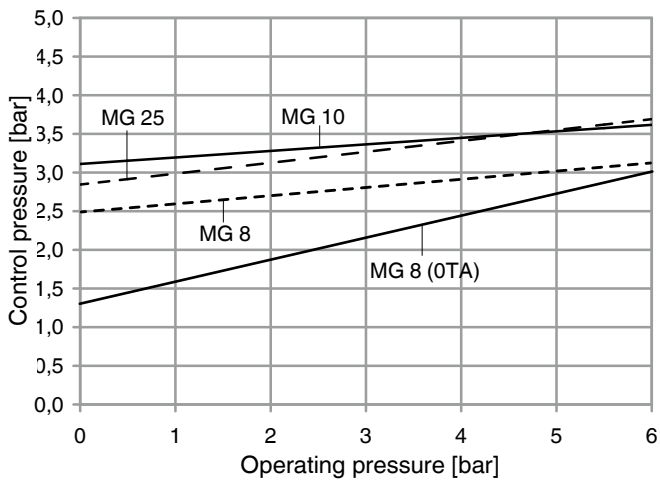
**Control function 2 + 3
with elastomer diaphragm
Diaphragm size 8 - 25**



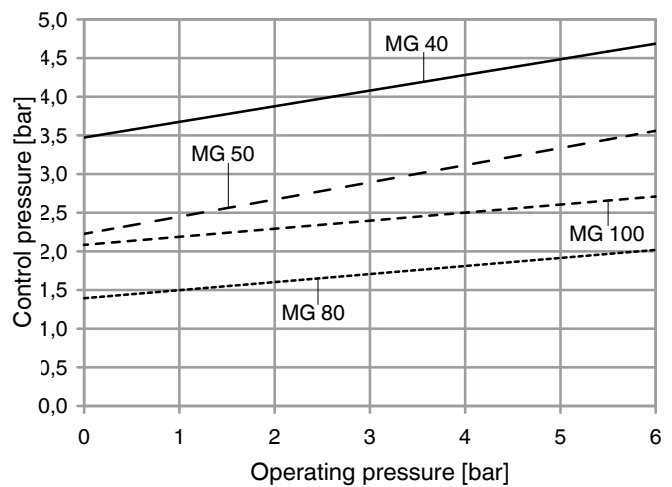
**Control function 2 + 3
with elastomer diaphragm
Diaphragm size 40 - 100**



**Control function 2 + 3
with PTFE diaphragm
Diaphragm size 8 - 25**



**Control function 2 + 3
with PTFE diaphragm
Diaphragm size 40 - 100**



Order data (2/2-way valves)

Body configuration	Code
Tank bottom valve body (actuator version T)	B**
2/2-way body (actuator version D and T)	D
Multi-port design (actuator version T)	M**
T body (actuator version T)	T*
* For dimensions see T Valves brochure	
** Dimensions and versions on request	

Valve body material	Code
1.4435 - BN2 (CF3M), investment casting Fe<0.5%	32
1.4435 (ASTM A 351 CF3M \cong 316L), investment casting	34
1.4408, investment casting	37
1.4408, PFA lined	39
1.4435 (316L), forged body	40
1.4435 (BN2), forged body Fe<0.5%	42
1.4539, forged body	F4

Connection	Code
Butt weld spigots	
Spigots DIN	0
Spigots EN 10357 series B	16
Spigots EN 10357 series A	17
Spigots DIN 11850 series 3	18
Spigots DIN 11866 series A	1A
Spigots DIN 11866 series B	1B
Spigots JIS-G 3447	35
Spigots JIS-G 3459	36
Spigots SMS 3008	37
Spigots BS 4825 Part 1	55
Spigots ASME BPE	59
Spigots ISO 1127 / EN 10357 series C	60
Spigots ANSI/ASME B36.19M Schedule 10s	63
Spigots ANSI/ASME B36.19M Schedule 40s	65
Threaded connections	
Threaded sockets DIN ISO 228	1
Threaded spigots DIN 11851	6
One side threaded spigot, other side cone spigot and union nut, DIN 11851	62
Aseptic unions on request	
Flanges	
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*
Clamp connections	
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	
* Connection code 8, 38, 39 only possible in conjunction with actuator version code B / R	
For overview of available valve bodies see page 13/14	

Diaphragm material	Code
EPDM	13 3A*
EPDM	17
PTFE/EPDM convex, PTFE loose	5E
PTFE/EPDM, PTFE lamin.	52** 5A*
* for diaphragm size 8 ** for diaphragm size 10 and 100	
Material complies with FDA requirements	

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

Actuator size	Code
Actuator size 0 (diaphragm size 8)	0
Actuator size 1 (diaphragm size 10)	1
Actuator size 2 (diaphragm size 25)	2
Actuator size 3 (diaphragm size 40)	3
Actuator size 4 (diaphragm size 50)	4
Actuator size 5 (diaphragm size 80)	5
Actuator size 6 (diaphragm size 100)	6

Actuator version	Code
Only for body configuration D (diaphragm size 10 - 50)	D
For body config. D (diaphragm size 10 - 50) Control air connector 90° offset to flow direction	B
For body config. B, D, M and T (diaphragm size 8 - 100)	T
For body config. B, D, M and T (diaphragm size 8 - 100) Control air connector 90° offset to flow direction	R

Spring set	Code
Standard	1
For higher operating pressure (diaphragm size 8)	A

Order data (2/2-way valves)

Valve body surface finish, internal contour

	Hygienic class DIN 11866	Designation ASME BPE (2014)	Forged body Code 40, 42, F4	Investment casting Code 32, 34	Code
Ra ≤ 6,3 µm (250 µinch) for media wetted surfaces, blasted internal/external	-	-	-	X	1500
Ra ≤ 0,8 µm (30 µinch) for media wetted surfaces, mechanically polished internal	H3	SF3	X	X	1502
Ra ≤ 0,8 µm (30 µinch) for media wetted surfaces, electropolished internal/external	HE3	-	X	-	1503
Ra ≤ 0,6 µm (25 µinch) for media wetted surfaces, mechanically polished internal	-	SF2	X*	X*	1507
Ra ≤ 0,6 µm (25 µinch) for media wetted surfaces, electropolished internal/external	-	SF6	X*	-	1508
Ra ≤ 0,5 µm (20 µinch) for media wetted surfaces, mechanically polished internal	-	SF1	X*	-	1927
Ra ≤ 0,5 µm (20 µinch) for media wetted surfaces, electropolished internal/external	-	SF5	X*	-	1928
Ra ≤ 0,4 µm (15 µinch) for media wetted surfaces, mechanically polished internal	H4	-	X*	-	1536
Ra ≤ 0,4 µm (15 µinch) for media wetted surfaces, electropolished internal/external	HE4	-	X*	-	1537
Ra ≤ 0,4 µm (15 µinch) for media wetted surfaces, electropolished internal/external	-	SF4	X*	-	1929
Ra ≤ 0,25 µm (10 µinch) for media wetted surfaces, electropolished internal/external	HE5	-	X*	-	1516
Ra ≤ 0,25 µm (10 µinch) for media wetted surfaces, mechanically polished internal	H5	-	X*	-	1527

Ra acc. to DIN 4768; at defined reference points.

* For pipe inside diameter < 6 mm, the surface inside the spigot is Ra ≤ 0.8 µm.

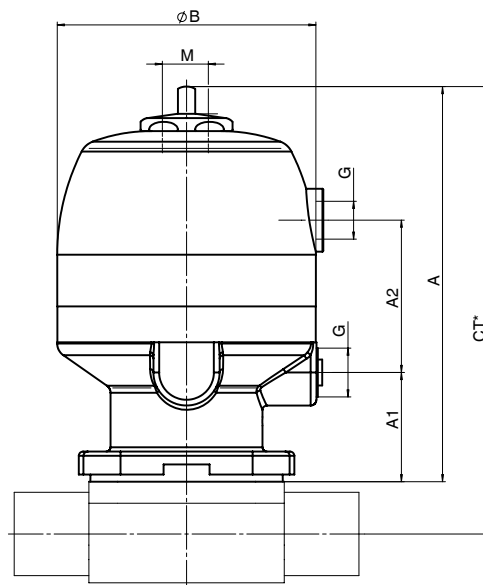
Order data (2/2-way valves)

Special function	Code
3-A compliant design	M

Order example	650	50	D	60	40	5E	1	4	T	1	1503	M
Type	650											
Nominal size		50										
Body configuration (code)			D									
Connection (code)				60								
Valve body material (code)					40							
Diaphragm material (code)						5E						
Control function (code)							1					
Actuator size (code)								4				
Actuator version (code)									T			
Spring set (code)										1		
Surface finish (code)											1503	
Special function (Code)												M

Dimensions [mm]

Actuator dimensions									
Actuator size	Diaphragm size	A	A1	A2	ø B	G	M	Weight [kg]	
								Version D	Version T
0T1	8	80.5	28	37.8	42	G 1/8	M12x1	-	0.5
0TA	8	89.5	28	39.1	47	G 1/8	M12x1	-	0.5
1T1	10	116.0	37	42.5	61	G 1/4	M16x1	1.1	0.9
2T1	25	137.5	38	53.0	90	G 1/4	M16x1	2.5	1.9
3T1	40	173.0	53	56.5	114	G 1/4	M16x1	5.0	3.0
4T1	50	223.0	52	70.5	144	G 1/4	M16x1	9.5	7.7
5T1	80	283.0	78	-	240	G 1/4	M26x1.5	-	18.5
6T1	100	298.0	87	-	240	G 1/4	M26x1.5	-	20.0



* CT = A + H1 (see body dimensions)

Body dimensions [mm]

Butt weld spigots, connection code 0, 16, 17, 18
Valve body material: Investment casting (code 34), forged body (code 40, F4)

MG	DN	NPS	f*	øg*	L	c	H1*	H1**	DIN Series 0 Code 0		EN 10357 Series B Code 16		EN 10357 Series A Code 17		DIN 11850 Series 3 Code 18		Weight [kg]
									ød	s	ød	s	ød	s	ød	s	
8	4	-	-	-	72	20	8.5		6	1.0	-	-	-	-	-	-	0.09
	6	-	-	-	72	20	8.5		8	1.0	-	-	-	-	-	-	0.09
	8	1/4"	-	-	72	20	8.5		10	1.0	-	-	-	-	-	-	0.09
	10	3/8"	-	-	72	20	8.5		-	-	12	1.0	13	1.5	14	2.0	0.09
	15	1/2"	-	-	72	20	8.5		-	-	-	-	-	-	-	-	0.09
10	10	3/8"	30	13.5	108	25	12.5		-	-	12	1.0	13	1.5	14	2.0	0.30
	15	1/2"	30	13.5	108	25	12.5		18	1.5	18	1.0	19	1.5	20	2.0	0.30
	20	3/4"	30	13.5	108	25	12.5		-	-	-	-	-	-	-	-	0.30
25	15	1/2"	40	13.5	120	25	13.0	19.0	18	1.5	18	1.0	19	1.5	20	2.0	0.62
	20	3/4"	40	13.5	120	25	16.0	19.0	22	1.5	22	1.0	23	1.5	24	2.0	0.58
	25	1"	40	13.5	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"	68	13.5	153	25	24.0	26.0	34	1.5	34	1.0	35	1.5	36	2.0	1.45
	40	1 1/2"	75	13.5	153	25	26.0	26.0	40	1.5	40	1.0	41	1.5	42	2.0	1.32
50	50	2"	90	13.5	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 last page

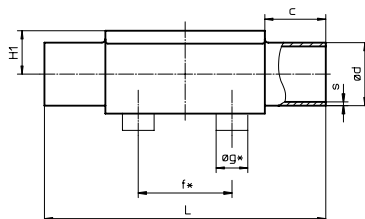
Butt weld spigots, connection code 1A, 1B, 60
Valve body material: Investment casting (code 34), forged body (code 40, F4)

MG	DN	NPS	f*	øg*	L	c	H1*	H1**	DIN 11866 Series A Code 1A		DIN 11866 Series B Code 1B		ISO 1127 / EN 10357 Series C Code 60		Weight [kg]
									ød	s	ød	s	ød	s	
8	4	-	-	-	72	20	8.5		-	-	-	-	-	-	0.09
	6	-	-	-	72	20	8.5		8	1.0	10.2	1.6	10.2	1.6	0.09
	8	1/4"	-	-	72	20	8.5		10	1.0	13.5	1.6	13.5	1.6	0.09
	10	3/8"	-	-	72	20	8.5		13	1.5	-	-	-	-	0.09
	15	1/2"	-	-	72	20	8.5		-	-	-	-	-	-	0.09
10	10	3/8"	30	13.5	108	25	12.5		13	1.5	17.2	1.6	17.2	1.6	0.30
	15	1/2"	30	13.5	108	25	12.5		19	1.5	21.3	1.6	21.3	1.6	0.30
	20	3/4"	30	13.5	108	25	12.5		-	-	-	-	-	-	0.30
25	15	1/2"	40	13.5	120	25	13.0	19.0	19	1.5	21.3	1.6	21.3	1.6	0.62
	20	3/4"	40	13.5	120	25	16.0	19.0	23	1.5	26.9	1.6	26.9	1.6	0.58
	25	1"	40	13.5	120	25	19.0	19.0	29	1.5	33.7	2.0	33.7	2.0	0.55
40	32	1 1/4"	68	13.5	153	25	24.0	26.0	35	1.5	42.4	2.0	42.4	2.0	1.45
	40	1 1/2"	75	13.5	153	25	26.0	26.0	41	1.5	48.3	2.0	48.3	2.0	1.32
50	50	2"	90	13.5	173	30	32.0	32.0	53	1.5	60.3	2.0	60.3	2.0	2.25
80	65	2 1/2"	-	-	216	30	-	62.0	70	2.0	76.1	2.0	76.1	2.0	8.60
	80	3"	-	-	254	30	-	62.0	85	2.0	88.9	2.3	88.9	2.3	8.00
100	100	4"	-	-	305	30	-	76.0	104	2.0	114.3	2.3	114.3	2.3	24.10

* only for investment cast design

** only for forged design

MG = diaphragm size For materials see overview on last page



Body dimensions [mm]

Butt weld spigots, connection code 35, 36, 37 Valve body material: Investment casting (code 34), forged body (code 40, F4)

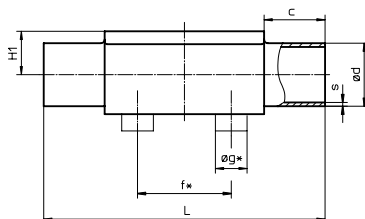
MG	DN	NPS	f*	øg*	L	c	H1*	H1**	JIS-G 3447 Code 35		JIS-G 3459 Code 36		SMS 3008 Code 37		Weight [kg]
									ød	s	ød	s	ød	s	
8	4	-	-	-	72	20	8.5		-	-	-	-	-	-	0.09
	6	-	-	-	72	20	8.5		-	-	10.5	1.20	-	-	0.09
	8	1/4"	-	-	72	20	8.5		-	-	13.8	1.65	-	-	0.09
	10	3/8"	-	-	72	20	8.5		-	-	-	-	-	-	0.09
	15	1/2"	-	-	72	20	8.5		-	-	-	-	-	-	0.09
10	10	3/8"	30	13.5	108	25	12.5		-	-	17.3	1.65	-	-	0.30
	15	1/2"	30	13.5	108	25	12.5		-	-	21.7	2.10	-	-	0.30
	20	3/4"	30	13.5	108	25	12.5		-	-	-	-	-	-	0.30
25	15	1/2"	40	13.5	120	25	13.0	19.0	-	-	21.7	2.10	-	-	0.62
	20	3/4"	40	13.5	120	25	16.0	19.0	-	-	27.2	2.10	-	-	0.58
	25	1"	40	13.5	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"	68	13.5	153	25	24.0	26.0	31.8	1.2	42.7	2.80	33.7	1.2	1.45
	40	1 1/2"	75	13.5	153	25	26.0	26.0	38.1	1.2	48.6	2.80	38.0	1.2	1.32
50	50	2"	90	13.5	173	30	32.0	32.0	50.8	1.5	60.5	2.80	51.0	1.2	2.25
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 last page

Butt weld spigots, connection code 55, 59, 63, 65 Valve body material: Investment casting (code 34), forged body (code 40, F4)

MG	DN	NPS	f*	øg*	L	c	H1*	H1**	BS 4825 Code 55		ASME BPE Code 59		ANSI/ASME B36.19M 10s Code 63		ANSI/ASME B36.19M 40s Code 65		Weight [kg]
									ød	s	ød	s	ød	s	ød	s	
8	4	-	-	-	72	20	8.5		-	-	-	-	-	-	-	-	0.09
	6	-	-	-	72	20	8.5		-	-	10.3	1.24	10.3	1.73	-	-	0.09
	8	1/4"	-	-	72	20	8.5		6.35	1.2	6.35	0.89	13.7	1.65	13.7	2.24	0.09
	10	3/8"	-	-	72	20	8.5		9.53	1.2	9.53	0.89	-	-	-	-	0.09
	15	1/2"	-	-	72	20	8.5		12.70	1.2	12.70	1.65	-	-	-	-	0.09
10	10	3/8"	30	13.5	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"	30	13.5	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"	30	13.5	108	25	12.5		19.05	1.2	19.05	1.65	-	-	-	-	0.30
25	15	1/2"	40	13.5	120	25	13.0	19.0	-	-	-	-	21.3	2.11	21.3	2.77	0.62
	20	3/4"	40	13.5	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"	40	13.5	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"	68	13.5	153	25	24.0	26.0	-	-	-	-	42.2	2.77	42.2	3.56	1.45
	40	1 1/2"	75	13.5	153	25	26.0	26.0	-	-	38.10	1.65	48.3	2.77	48.3	3.68	1.32
50	50	2"	90	13.5	173	30	32.0	32.0	-	-	50.80	1.65	60.3	2.77	60.3	3.91	2.25
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 last page



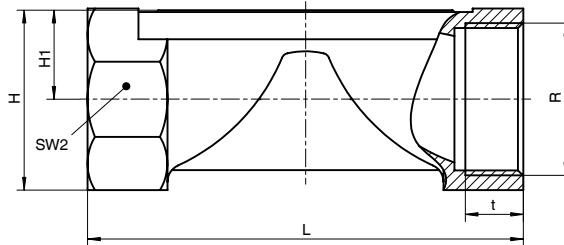
Body dimensions [mm]

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

MG	DN	R	H	H1	t	L	SW2	Number of flats	Weight [kg]
8	8	G 1/4	19	9	11	72	18	6	0.09
10	12	G 3/8	25	13	12	55	22	2	0.17
	15	G 1/2	30	15	15	68	27	2	0.26
25	15	G 1/2	29	16	15	85	27	6	0.32
	20	G 3/4	32	16	16	85	32	6	0.34
	25	G 1	37	16	13	110	41	6	0.39
40	32	G 1 1/4	49	24	20	120	50	8	0.88
	40	G 1 1/2	52	24	18	140	55	8	0.93
50	50	G 2	68	33	26	165	70	8	1.56

MG = diaphragm size

For materials see overview on last page



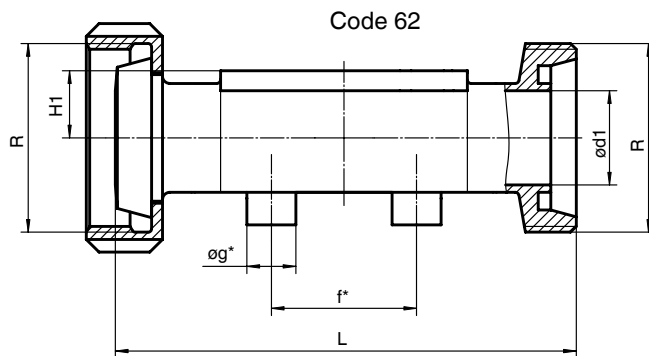
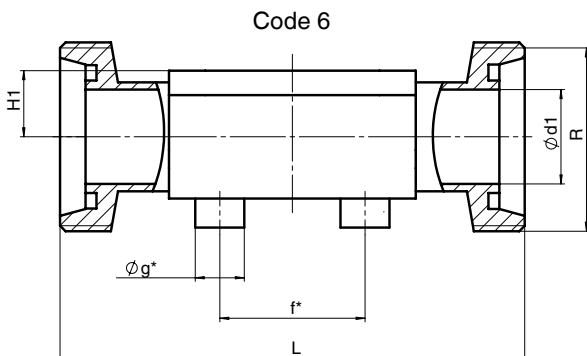
Threaded connections, connection code 6, 62 Valve body material: Investment casting (code 34), forged body (code 40)

MG	DN	H1*	H1**	f*	øg*	ød1	Thread to DIN 405 R	Code 6 L	Code 62 L	Weight [kg]
8	10	8.5	-	-	-	10.0	RD 28 x 1/8	92	90	0.21
10	10	12.5	-	30.0	13.5	10.0	RD 28 x 1/8	118	116	0.33
	15	12.5	-	30.0	13.5	16.0	RD 34 x 1/8	118	116	0.35
25	15	13.0	19	40.0	13.5	16.0	RD 34 x 1/8	118	116	0.71
	20	16.0	19	40.0	13.5	20.0	RD 44 x 1/6	118	114	0.78
40	25	19.0	19	40.0	13.5	26.0	RD 52 x 1/6	128	127	0.79
	32	24.0	26	68.0	13.5	32.0	RD 58 x 1/6	147	147	1.66
50	40	26.0	26	75.0	13.5	38.0	RD 65 x 1/6	160	160	1.62
	50	32.0	32	90.0	13.5	50.0	RD 78 x 1/6	191	191	2.70
80	65	-	62	-	-	66.0	RD 95 x 1/6	246	246	9.22
	80	-	62	-	-	81.0	RD 110 x 1/4	256	256	9.20

* only for investment cast design

** only for forged design

MG = diaphragm size For materials see overview on last page



Body dimensions [mm]

Flanges - DIN EN 1092, connection code 8 Valve body material: 1.4435 (code 34, 40), 1.4408 (code 39)

MG	DN	øD	øk	øL	Number of bolts	H1			FTF	Weight [kg]
						Material code 34	Material code 39	Material code 40		
25	15	95	65	14	4	13.0	18.0	19.0	130*	1.85
	20	105	75	14	4	16.0	20.5	19.0	150	2.35
	25	115	85	14	4	19.0	23.0	19.0	160	2.85
40	32	140	100	19	4	24.0	28.7	26.0	180	4.90
	40	150	110	19	4	26.0	33.0	26.0	200	5.65
50	50	165	125	19	4	32.0	39.0	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 34, 40 FTF = 150 (no DIN length)

MG = diaphragm size

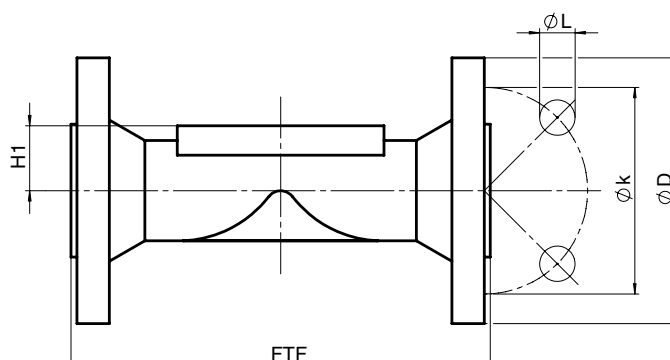
For materials see overview on page 13

Flanges - ANSI Class 125/150 RF, connection code 38, 39 Valve body material: 1.4435 (code 34, 40), 1.4408 (code 39)

MG	DN	øD	øk	øL	Number of bolts	H1			FTF		Weight [kg]
						Material code 34	Material code 39	Material code 40	Connection code 38	Connection code 39	
25	15	90	60.3	15.9	4	13.0	18.0	19.0	-	130	1.85
	20	100	69.9	15.9	4	16.0	20.5	19.0	146	150	2.35
	25	110	79.4	15.9	4	19.0	23.0	19.0	146	160	2.85
40	32	115	88.9	15.9	4	24.0	28.7	26.0	-	180	4.90
	40	125	98.4	15.9	4	26.0	33.0	26.0	175	200	5.65
50	50	150	120.7	19.0	4	32.0	39.0	32.0	200	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	310	14.20
100	100	230	190.5	19.0	8	-	73.0	76.0	327	350	21.00

MG = diaphragm size

For materials see overview on page 13

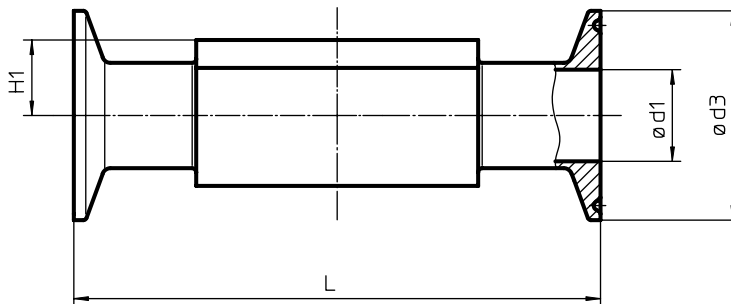


Body dimensions [mm]

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

MG	DN	NPS	H1	for pipe ASME BPE code 80			for pipe EN ISO 1127 code 82			for pipe ASME BPE code 88			for pipe DIN 11850 code 8A			for pipe SMS 3008 code 8E			Weight [kg]
				ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	
8	6	1/8"	8.5	-	-	-	7.0	25.0	63.5	-	-	-	6	25.0	63.5	-	-	-	-
	8	1/4"	8.5	4.57	25.0	63.5	10.3	25.0	63.5	-	-	-	8	25.0	63.5	-	-	-	0.15
	10	3/8"	8.5	7.75	25.0	63.5	-	-	-	-	-	-	10	34.0	88.9	-	-	-	0.18
	15	1/2"	8.5	9.40	25.0	63.5	-	-	-	9.40	25.0	108	-	-	-	-	-	-	0.18
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	18.1	50.5	108.0	9.40	25.0	108	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	23.7	50.5	117.0	15.75	25.0	117	20	34.0	117.0	-	-	-	0.71
	25	1"	19.0	22.10	50.5	114.3	29.7	50.5	127.0	22.10	50.5	127	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	44.3	64.0	159.0	34.80	50.5	159	38	50.5	159.0	35.6	50.5	159	1.50
50	50	2"	32.0	47.50	64.0	158.8	56.3	77.5	190.0	47.50	64.0	190	50	64.0	190.0	48.6	64.0	190	2.50
80	65	2 1/2"	62.0	60.20	77.5	193.8	72.1	91.0	216.0	60.20	77.5	216	66	91.0	216.0	60.3	77.5	216	8.90
	80	3"	62.0	72.90	91.0	222.3	84.3	106.0	254.0	72.90	91.0	254	81	106.0	254.0	72.9	91.0	254	8.50
100	100	4"	76.0	97.38	119.0	292.1	109.7	130.0	305.0	97.38	119.0	305	100	119.0	305.0	97.6	119.0	305	24.80

MG = diaphragm size



Overview of valve bodies for GEMÜ 650

		Spigots																						
Connection code		0		16		17		18		1A	1B	35		36	37		55		59		60		63	65
Material code		34	40	34	40	34	40	34	40	40	40	34	40	40	34	40	34	40	34	40	34	40	40	40
MG	DN																							
8	4	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	X	X	-	-	-	-	-	-	X	X	-	-	X	-	-	-	-	-	-	-	X	X	X
	8	X	X	-	-	-	-	-	-	X	X	-	-	X	-	-	X	X	X	X	X	X	X	X
	10	-	-	X	X	X	X	X	X	X	-	-	-	-	-	-	X	X	X	X	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-
10	10	-	-	X	X	X	X	X	X	X	-	-	X	-	-	-	X	-	X	X	X	X	X	X
	15	X	X	X	X	X	X	X	X	X	-	-	X	-	-	X	X	-	X	X	X	X	X	X
	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	
25	15	X	X	X	X	X	X	-	X	X	X	-	-	X	-	-	-	-	-	X	X	X	X	
	20	X	X	X	X	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	X	X	X	
40	32	X	X	X	X	X	X	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	-	-	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	
	80	-	-	-	-	-	X	-	-	X	X	-	X	X	-	X	-	-	-	X	-	X	X	
100	100	-	-	-	-	-	X*	-	-	X*	X*	-	X*	X*	-	X*	-	-	-	X*	-	X*	X*	

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

Availability of material code 32: same as code 34, availability of material code 42, F4: same as code 40

MG = diaphragm size

Overview of valve bodies for GEMÜ 650

		Threaded connections					Clamps				
Connection code		1	6		62		80	82	88	8A	8E
Material code		37	34	40	34	40	40	40	40	40	40
MG	DN										
8	6	-	-	-	-	-	-	K	-	K	-
	8	X	-	-	-	-	K	K	-	K	-
	10	-	W	W	W	W	K	-	-	W	-
	15	-	-	-	-	-	K	-	W	-	-
10	10	-	W	W	W	W	-	K	-	K	-
	12	X	-	-	-	-	-	-	-	-	-
	15	X	W	W	W	W	K	W	K	K	-
	20	-	-	-	-	-	K	-	K	-	-
25	15	X	W	W	W	W	-	W	-	K	-
	20	X	W	W	W	W	K	K	K	K	-
	25	X	W	W	W	W	K	K	K	K	K
40	32	X	W	W	W	W	-	W	-	K	K
	40	X	W	W	W	W	K	W	K	K	K
50	50	X	W	W	W	W	K	W	K	K	K
80	65	-	-	W	-	W	K	K	K	K	K
	80	-	-	W	-	W	K	W	K	W	K
100	100	-	-	-	-	-	W*	W*	W	W*	W*

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

X = Standard

K = Connections completely machined (not welded)

W = Welded construction

MG = diaphragm size

Availability of material code 32: same as code 34, availability of material code 42, F4: same as code 40

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

GEMÜ® VALVES, MEASUREMENT
AND CONTROL SYSTEMS

