

# Diaphragm Valve, Metal

## Construction

The new GEMÜ 660 2/2-way diaphragm valve was designed for dosing and filling a wide range of products.

All metallic actuator components are made of stainless steel. Normally closed, Normally open and Double acting control functions are available. The valve has an integrated stroke limiter and seal adjuster as well as an optical position indicator as standard.

## Features

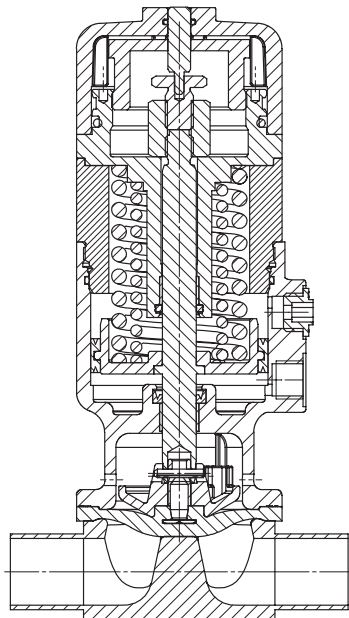
- Suitable for inert, corrosive\*, liquid and gaseous media
- Valve body and diaphragm available in various materials and designs
- Compact design (ideal when space is at a premium)
- Various connections available
- CIP/SIP capable
- Versions according to ATEX on request

## Advantages

- Optional flow direction
- Installation for an optimized draining is possible
- Stroke limiter and seal adjuster easy to adjust
- Precise stroke scale on the cover, can be fixed, 10 scale points per turn, one full turn corresponds to 1 mm stroke
- Improved sealing
- Distance sleeves for the diaphragm (not for steam applications)
- 2 control air connectors in flow direction, 4 control air connectors as an option, two of which are arranged across the flow direction
- Fast cycle duties due to minimized filling volume
- Reduced air consumption
- Mounting of electrical position indicators (as an option)

\*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.

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

### Temperatures

#### Medium temperature

drinks filling	-10 ... 85 °C
other applications	-10 ... 100 °C

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

EPDM (code 13/3A)	max. 150 °C <sup>(2)</sup> , max. 60 min per cycle
PTFE/EPDM (code 54)	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.

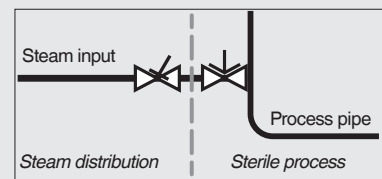
<sup>2</sup> If the sterilisation temperatures listed above are applied to the EPDM diaphragms for longer periods of time, the service life of the diaphragms will be reduced. In these cases, maintenance cycles must be adapted accordingly. This also applies to PTFE diaphragms exposed to high temperature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

#### Note:

The GEMÜ 660 diaphragm valve was specially developed for applications in the drinks filling sector. It is therefore important that the same volume of medium flows through the valve for each opening procedure without any additional control systems. To guarantee this behaviour, the diaphragm is equipped with four distance sleeves, meaning that equal compression of the diaphragm is achieved for each installation.

After a sterilisation cycle, it may be necessary to retighten the diaphragm as a result of their material-related setting behaviour. However, this is not possible using distance sleeves. Experience has shown that, after a sterilisation cycle, the diaphragm is completely replaced during filling processes in the beverages sector, which means that it is not necessary to retighten the diaphragm.

If you want to use the valve in processes that have sterilisation cycles, it can also be operated with a diaphragm that has no distance sleeves. However, this diaphragm must be ordered separately. The above-mentioned advantage to using distance sleeves does not apply in this case.

### Control medium

#### Inert gases

#### Max. permissible temperature of control medium

60 °C

#### Filling volume

Actuator size	Control function 1	Control function 2+3
0	0.007 dm <sup>3</sup>	0.006 dm <sup>3</sup>
1	0.021 dm <sup>3</sup>	0.010 dm <sup>3</sup>
2	0.060 dm <sup>3</sup>	0.038 dm <sup>3</sup>

Actuator size		Operating pressure [bar]		Control pressure [bar]	
Code	Diaphragm size	EPDM	PTFE	C.f. 1	C.f. 2 + 3
0	8	0 - 5	0 - 5	5.0 - 7.0	max. 5.5
1	10	0 - 5	0 - 5	5.0 - 7.0	max. 7.0
2	25	0 - 5	0 - 5	4.0 - 7.0	max. 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.

## Technical data

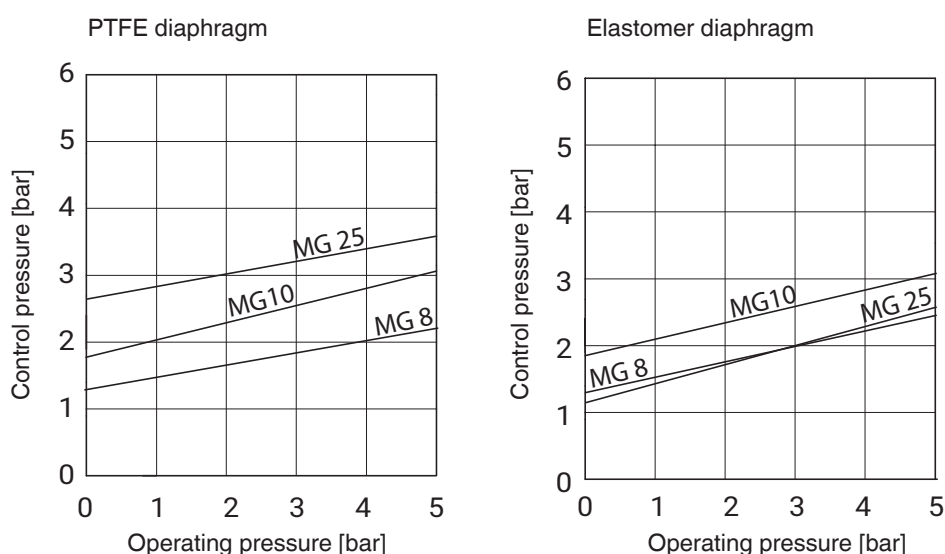
Kv values [m <sup>3</sup> /h]									
Pipe standard	DIN	EN 10357 series B (formerly DIN 11850 series 1)	EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A	DIN 11850 Series 3	SMS 3008	ASME BPE / DIN 11866 series C	ISO 1127 / EN 10357 series C / DIN 11866 series B	DIN ISO 228	
Connection code	0	16	17	18	37	59	60	1	
MG	DN								
8	4	0.5	-	-	-	-	-	-	-
	6	-	-	1.1	-	-	-	1.2	-
	8	-	-	1.3	-	-	0.6	2.2	1.4
	10	-	2.1	2.1	2.1	-	1.3	-	-
	15	-	-	-	-	-	2.0	-	-
10	10	-	2.4	2.4	2.4	-	2.2	3.3	-
	12	-	-	-	-	-	-	-	3.2
	15	3.3	3.8	3.8	3.8	-	2.2	4.0	3.4
	20	-	-	-	-	-	3.8	-	-
25	15	4.1	4.7	4.7	4.7	-	-	7.4	6.5
	20	6.3	7.0	7.0	7.0	-	4.4	13.2	10.0
	25	13.9	15.0	15.0	15.0	12.6	12.2	16.2	14.0

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.

The Kv value curve (Kv value dependent on valve stroke) can vary depending on the diaphragm material and duration of use.

## Diagrams - Control function 2/3



MG = diaphragm size

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 valve body	B**
2/2-way body	D
T body	T*
* For dimensions see T Valves brochure	
** Dimensions and versions on request	

Valve body material	Code
1.4435, investment casting	C3
1.4408, investment casting	37
1.4435 (316L), forged body	40
1.4435 (BN2), forged body $\Delta Fe < 0.5\%$	42
1.4539, forged body	F4

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 5s	64
Spigots ANSI/ASME B36.19M Schedule 40s	65
<b>Threaded connections</b>	
Threaded sockets DIN ISO 228	1
Threaded spigots DIN 11851	6
Cone spigot and union nut DIN 11851	6K
Aseptic unions on request	
<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
Clamps DIN 32676 series C, length FTF ASME BPE	8P
Clamps DIN 32676 series C, length FTF EN 558 series 7	8T
Aseptic clamps on request	
For overview of available valve bodies see page 12	

Diaphragm material	Code
EPDM	13 3A*
PTFE/EPDM, one-piece	54
* for diaphragm size 8	
Material complies with FDA requirements	

Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	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 version	Code
Control air connectors in flow direction	T
Control air connectors 90° offset to flow direction	R

Spring set	Code
Standard	1

## 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

## Order data

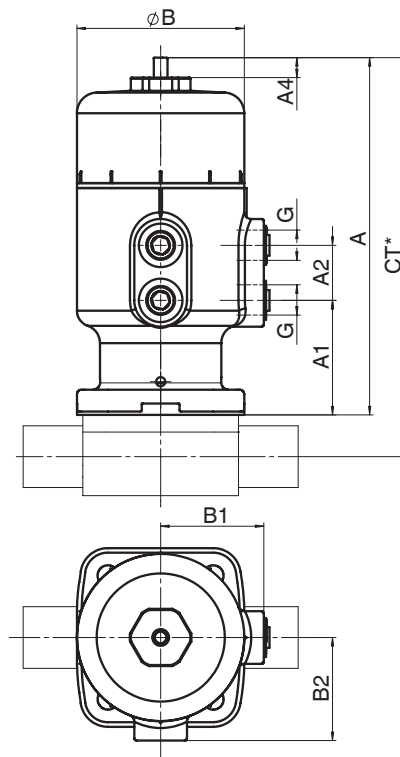
Special function	Code
3-A compliant design	M

Order example	660	15	D	60	40	54	1	2	T	1	1503	M
Type	660											
Nominal size		15										
Body configuration (code)			D									
Connection (code)				60								
Valve body material (code)					40							
Diaphragm material (code)						54						
Control function (code)							1					
Actuator size (code)								2				
Actuator version (code)									T			
Spring set (code)										1		
Surface finish (code)											1503	
Special function (code)												M

## Dimensions [mm]

Actuator dimensions											
MG	Control function	Actuator version	A	A1	A2	A4	B	B1	B2	G	Weight [kg]
8	1	T	109	50	21	4.5	38	28	28	M5	0.65
		R									
	2 + 3	T	92	50	21	4.5	38	28	28		
		R									
10	1	T	139	37	27	6.5	50	34	26	G 1/8	1.30
		R							37		
	2 + 3	T	120	37	27	6.5	50	34	26		
		R							37		
25	1	T	183	50	24	9.0	73	45	39	G 1/4	3.60
		R							51		
	2 + 3	T	148	50	24	9.0	73	45	39		
		R							51		

MG = diaphragm size



\* 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)

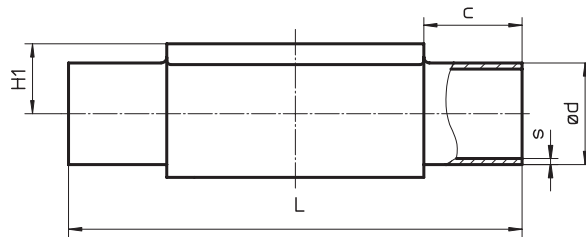
Pipe standard						DIN		EN 10357 series B (formerly DIN 11850 series 1)	EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A	DIN 11850 Series 3		Weight [kg]			
Connection code						0		16		17			18		
MG	DN	NPS	L	c	H1*	H1**	ød	s	ød	s	ød		s	ød	s
8	4	-	72	20	8.5		6	1.0	-	-	-	-	-	-	0.09
	6	-	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
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

\* only for investment cast design      \*\* only for forged design      MG = diaphragm size  
For materials see overview on page 12

### 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	
8	6	-	72	20	-	8.5	10.2	1.6	0.09
	8	1/4"	72	20	8.5	8.5	13.5	1.6	0.09
	10	3/8"	72	20	-	8.5	-	-	0.09
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

\* only for investment cast design      \*\* only for forged design      MG = diaphragm size  
For materials see overview on page 12





## Body dimensions [mm]

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

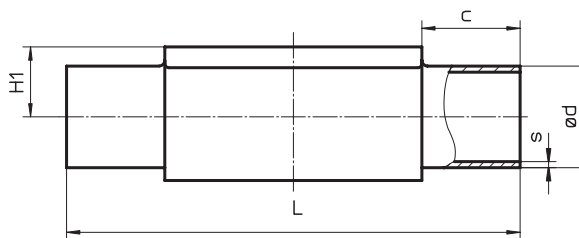
Pipe standard							JIS-G 3447	JIS-G 3459	SMS 3008		Weight [kg]		
Connection code							35		36			37	
MG	DN	NPS	L	c	H1*	H1**	ød	s	ød	s		ød	s
8	6	-	72	20	-	8.5	-	-	10.5	1.20	-	-	0.09
	8	1/4"	72	20	-	8.5	-	-	13.8	1.65	-	-	0.09
10	10	3/8"	108	25	-	12.5	-	-	17.3	1.65	-	-	0.30
	15	1/2"	108	25	-	12.5	-	-	21.7	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

\* only for investment cast design      \*\* only for forged design      MG = diaphragm size  
For materials see overview on page 12

### Butt weld spigots, connection code 55, 59, 63, 64, 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 5s	ANSI/ASME B36.19M Schedule 40s	Weight [kg]					
Connection code							55		59		63		64		65		
MG	DN	NPS	L	c	H1*	H1**	ød	s	ød	s	ød		s	ød	s	ød	s
8	6	-	72	20	-	8.5	-	-	-	-	10.3	1.24	-	-	10.3	1.73	0.09
	8	1/4"	72	20	8.5	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	8.5	9.53	1.2	9.53	0.89	-	-	-	-	-	-	0.09
	15	1/2"	72	20	8.5	8.5	12.70	1.2	12.70	1.65	-	-	-	-	-	-	0.09
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	1.65	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	1.65	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	1.65	26.7	2.87	0.58
	25	1"	120	25	19.0	19.0	-	-	25.40	1.65	33.4	2.77	33.4	1.65	33.4	3.38	0.55

\* only for investment cast design      \*\* only for forged design      MG = diaphragm size  
For materials see overview on page 12

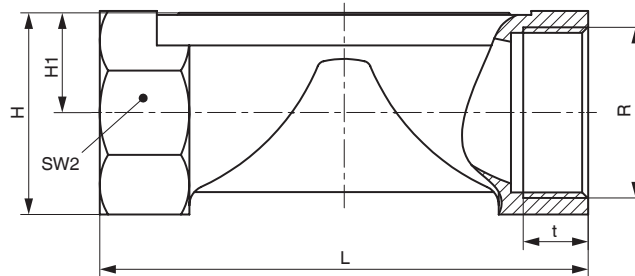


## Body dimensions [mm]

### 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	19.0	9.0	11	72	18	6	0.09
10	12	G 3/8	25.0	13.0	12	55	22	2	0.17
	15	G 1/2	30.0	15.0	15	68	27	2	0.26
25	15	G 1/2	28.3	14.8	15	85	27	6	0.32
	20	G 3/4	33.3	17.3	16	85	32	6	0.34
	25	G 1	42.3	21.8	13	110	41	6	0.39

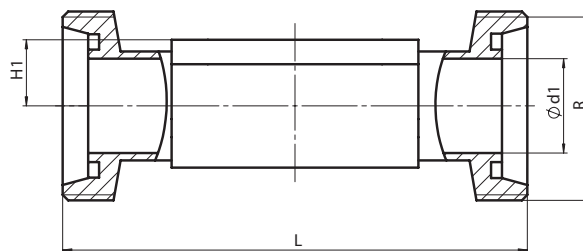
MG = diaphragm size



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

MG	DN	H1	ød1	Thread to DIN 405 R	L	Weight [kg]
8	10	8.5	10.0	RD 28 x 1/8	92	0.21
10	10	12.5	10.0	RD 28 x 1/8	118	0.33
	15	12.5	16.0	RD 34 x 1/8	118	0.35
25	15	19.0	16.0	RD 34 x 1/8	118	0.71
	20	19.0	20.0	RD 44 x 1/6	118	0.78
	25	19.0	26.0	RD 52 x 1/6	128	0.79

MG = diaphragm size



### Overview of diaphragm materials for GEMÜ 660

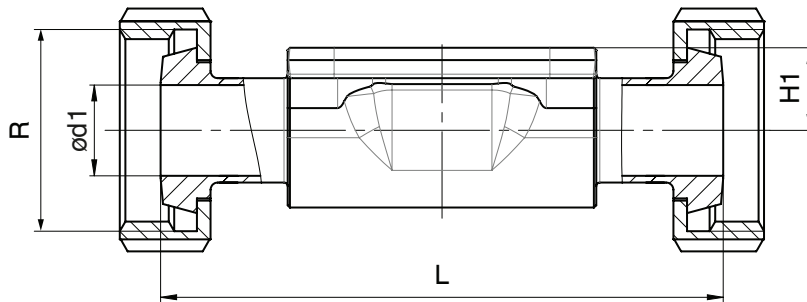
Diaphragm material	EPDM	PTFE/EPDM
Diaphragm size		
8	3A	5A
10	13	52
25	13	52

**Body dimensions [mm]**

**Cone spigot, connection code 6K  
Valve body material: Forged body (code 40)**

MG	DN	H1	ød1	Thread to DIN 405 R	L	Weight [kg]
8	10	8.5	10.0	RD 28 x 1/8	90	0.21
10	10	12.5	10.0	RD 28 x 1/8	116	0.33
	15	12.5	16.0	RD 34 x 1/8	116	0.35
25	15	19.0	16.0	RD 34 x 1/8	116	0.71
	20	19.0	20.0	RD 44 x 1/6	114	0.78
	25	19.0	26.0	RD 52 x 1/6	127	0.79

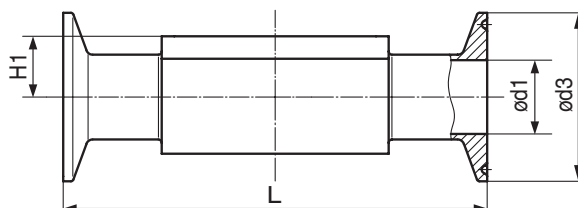
MG = diaphragm size



**Clamp connections, connection code 80, 82, 88, 8A, 8E, 8P, 8T  
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		Code 80, 88 - ASME BPE Code 8P, 8T - DIN 32676 series C			DIN 32676 series B			DIN 32676 series A			ISO 2852 / SMS 3017								
Clamp connection code		80, 8P			88, 8T			82			8A				8E				
MG	DN	NPS	H1	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	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

MG = diaphragm size



## Overview of valve bodies for GEMÜ 660

		Spigots																	
Connection code		0	16	17	18	35	36	37	55	59	60	63	64	65					
Material code		C3	40	40	C3	40	40	40	40	C3	40	40	C3	40	C3	40	40	40	40
MG	DN																		
8	4	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	X	X	-	-	X	-	-	-	-	-	-	X	X	-	X
	8	-	-	-	X	X	-	-	X	-	-	X	X	X	X	X	X	-	X
	10	-	-	X	X	X	X	-	-	-	-	X	X	X	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-
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	X
	20	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-
25	15	-	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
	25	-	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X

Availability of material code 42, F4: same as code 40  
 MG = diaphragm size

		Threaded connections			Clamps				
Connection code		1	6	6K	80, 8P	82	88, 8T	8A	8E
Material code		37	40	40	40	40	40	40	40
MG	DN								
8	6	-	-	-	-	K	-	K	-
	8	X	-	-	K	K	-	K	-
	10	-	W	W	K	-	-	W	-
	15	-	-	-	K	-	W	-	-
10	10	-	W	W	-	K	-	K	-
	12	X	-	-	-	-	-	-	-
	15	X	W	W	K	W	K	K	-
	20	-	-	-	K	-	K	-	-
25	15	X	W	W	-	W	-	K	-
	20	X	W	W	K	K	K	K	-
	25	X	W	W	K	K	K	K	K

X = Standard  
 K = Connections completely machined (not welded)  
 W = Welded construction  
 Availability of material code 42, F4: same as code 40  
 MG = diaphragm size

For further metal diaphragm valves, accessories and other products,  
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**GEMÜ** VALVES, MEASUREMENT  
 AND CONTROL SYSTEMS

