

Diaphragm Valve, Metal

Construction

The GEMÜ 601, 612 and 673 manually operated diaphragm valves have a temperature resistant plastic handwheel, GEMÜ 602 has a stainless steel handwheel. Bonnet and internals are made all of stainless steel. An integral optical position indicator and a seal adjuster to increase service life of the diaphragm are included as standard.

Features

- Suitable for inert and corrosive* liquid and gaseous media
- Chemical resistance of bonnet
- CIP/SIP cleaning and sterilizing capabilities
- Autoclave capability
- Insensitive to particulate media
- Valve body and diaphragm available in various materials and designs
- Compact design (ideal when space is at a premium)
- Stepless minimum flow regulation due to seal adjuster

Advantages

- Hermetic separation between medium and actuator
- Optional flow direction
- Installation for an optimized draining is possible
- Long service life of the diaphragm due to patented seal adjuster (US-Pat. 5 377 956)
- Valve body also available in multi-port designs (M-block and T-body) or as tank bottom valve body

*see information on working medium on page 2

GEMÜ 601



GEMÜ 602

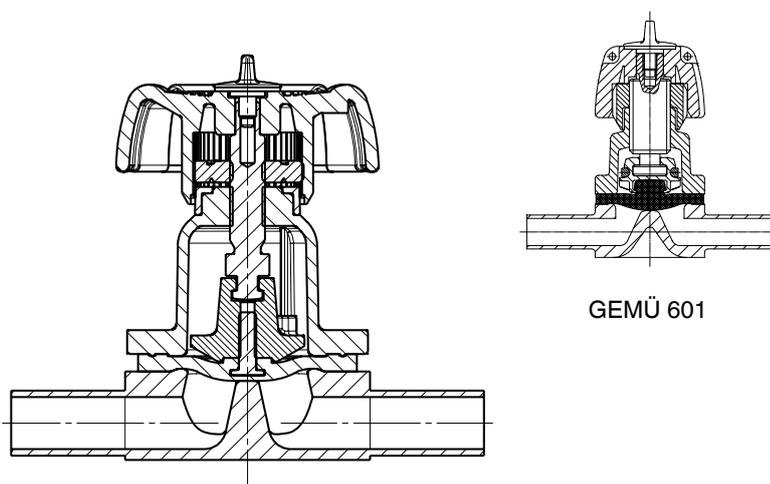


GEMÜ 612



GEMÜ 673

Sectional drawing



GEMÜ 601

GEMÜ 612

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

Media temperature

| | |
|---------------------|----------------|
| FPM (Code 4/4A) | -10 ... 90 °C |
| EPDM (Code 13/3A) | -10 ... 100 °C |
| EPDM (Code 17) | -10 ... 100 °C |
| PTFE/EPDM (Code 54) | -10 ... 100 °C |
| PTFE/EPDM (Code 5M) | -10 ... 100 °C |

Sterilisation temperature ⁽¹⁾

| | |
|---------------------|--|
| FPM (Code 4/4A) | not applicable |
| 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/EPDM (Code 54) | max. 150 °C ⁽²⁾ , no time limit per cycle |
| PTFE/EPDM (Code 5M) | 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.

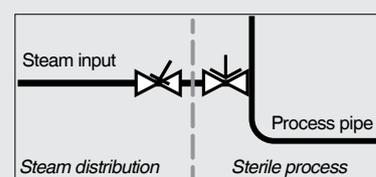
PTFE diaphragms can also be used as moisture barriers; however, this will reduce their service life.

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

Operating pressure [bar]

| Type | Diaphragm size | Nominal size | EPDM / FPM | | PTFE | | |
|--------------|----------------|--------------|--------------------|--------------------------|--------------------|-------------|-----------------------------------|
| | | | Diaphragm material | All valve body materials | Diaphragm material | Forged body | Investment cast or cast iron body |
| GEMÜ 601/602 | 8 | DN 4 - 15 | 3A, 4A, 17 | 0 - 10 | 54 | 0 - 10 | 0 - 6 |
| GEMÜ 612 | 10 | DN 10 - 20 | 4, 13, 17 | 0 - 10 | 54, 5M | 0 - 10 | 0 - 6 |
| GEMÜ 673 | 25 | DN 15 - 25 | 4, 13, 17 | 0 - 10 | 54, 5M | 0 - 10 | 0 - 6 |
| | 40 | DN 32 - 40 | 4, 13, 17 | 0 - 10 | 54, 5M | 0 - 10 | 0 - 6 |
| | 50 | DN 50 - 65 | 4, 13, 17 | 0 - 10 | 54, 5M | 0 - 10 | 0 - 6 |

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 [m³/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 |
| Type | MG | DN | | | | | | | |
| GEMÜ 601/602 | 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 | - |
| GEMÜ 612 | 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 | - |
| GEMÜ 673 | 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 | - |

MG = diaphragm size

Kv values determined acc. to DIN EN 60534, inlet pressure 5 bar, Δp 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.

Order data

| Valve type | Code |
|---|------|
| GEMÜ 601 diaphragm size 8 | 601 |
| GEMÜ 602 diaphragm size 8 stainless st. handwheel | 602 |
| GEMÜ 612 diaphragm size 10 | 612 |
| GEMÜ 673 diaphragm size 25 - 50 | 673 |

| 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 | |

| Connection | Code |
|--|------|
| Butt weld spigots | |
| 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 |
| 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 (GEMÜ 673) | |
| 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 |
| For overview of available valve bodies see page 14 | |

| Connection | Code |
|---|------|
| 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 | |
| For overview of available valve bodies see page 14 | |

| 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 |
| 1.4435 (316L), forged body | 40 |
| 1.4435 (BN2), forged body $\Delta Fe < 0.5\%$ | 42 |
| 1.4539, forged body | F4 |

| Diaphragm material | Code |
|--|--------|
| FPM | 4 4A* |
| EPDM | 13 3A* |
| EPDM | 17 17* |
| EPDM | 36 |
| PTFE/EPDM, one-piece | 54* |
| PTFE/EPDM, two-piece | 5M |
| * for diaphragm size 8 | |
| Material complies with FDA requirements, except codes 4 and 4A | |

| Control function | Code |
|-------------------|------|
| Manually operated | 0 |

| Bonnet version | Code |
|---|------|
| With seal adjuster, black handwheel GEMÜ 601 diaphragm size 8 | 0TS |
| With seal adjuster, metal handwheel GEMÜ 602 diaphragm size 8 | 0TM |
| With seal adjuster, black handwheel GEMÜ 612 diaphragm size 10 | 1TS |
| With seal adjuster, black handwheel GEMÜ 673 diaphragm size 25 | 2TS |
| With seal adjuster, black handwheel GEMÜ 673 diaphragm size 40 | 3TS |
| With seal adjuster, black handwheel GEMÜ 673 diaphragm size 50 | 4TS |

Order data

Internal surface finishes for forged and block material bodies ¹

| Readings for Process Contact Surfaces | Mechanically polished ² | | 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 ³ | H5 | 1527 | HE5 | 1516 |

| Readings for Process Contact Surfaces acc. to ASME BPE 2016 ⁴ | Mechanically polished ² | | 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 ² | |
|---------------------------------------|------------------------------------|------|
| | Hygienic class DIN 11866 | Code |
| Ra ≤ 6.30 µm | - | 1500 |
| Ra ≤ 0.80 µm | H3 | 1502 |
| Ra ≤ 0.60 µm ⁵ | - | 1507 |

¹ Surface finishes of customized valve bodies may be limited in special cases.

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

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

⁴ 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.

⁵ 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 |

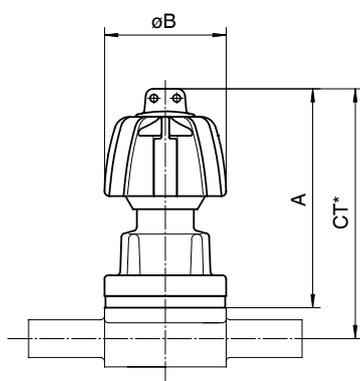
| Order example | 601 | 8 | D | 60 | C3 | 54 | 0 | 0TS | 1500 | M |
|----------------------------|-----|---|---|----|----|----|---|-----|------|---|
| Type | 601 | | | | | | | | | |
| Nominal size | | 8 | | | | | | | | |
| Body configuration (code) | | | D | | | | | | | |
| Connection (code) | | | | 60 | | | | | | |
| Valve body material (code) | | | | | C3 | | | | | |
| Diaphragm material (code) | | | | | | 54 | | | | |
| Control function (code) | | | | | | | 0 | | | |
| Bonnet version (code) | | | | | | | | 0TS | | |
| Surface finish (code) | | | | | | | | | 1500 | |
| Special function (code) | | | | | | | | | | M |

Dimensions [mm]

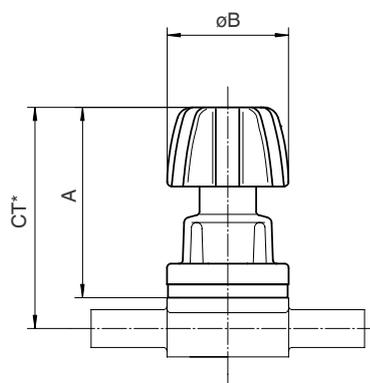
Bonnet dimensions

| Type | Diaphragm size | A | Ø B | Weight [kg] |
|----------|----------------|-----|-----|-------------|
| GEMÜ 601 | 8 | 58 | 32 | 0.10 |
| GEMÜ 602 | 8 | 54 | 32 | 0.15 |
| GEMÜ 612 | 10 | 80 | 60 | 0.40 |
| GEMÜ 673 | 25 | 102 | 90 | 0.70 |
| | 40 | 119 | 114 | 1.30 |
| | 50 | 136 | 140 | 2.05 |

GEMÜ 601 / 602

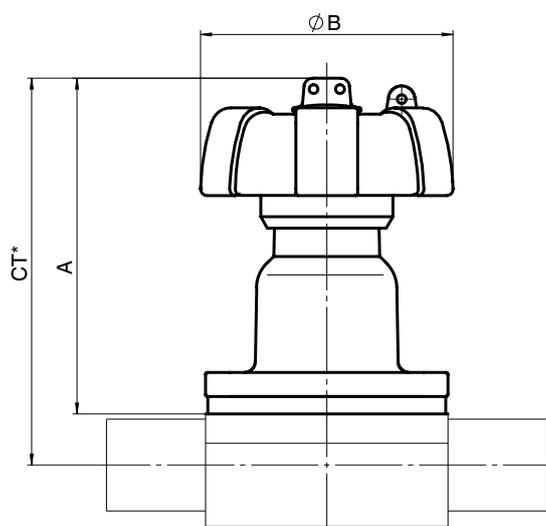


GEMÜ 601



GEMÜ 602

GEMÜ 612 / 673



* $CT = A + H1$ (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)

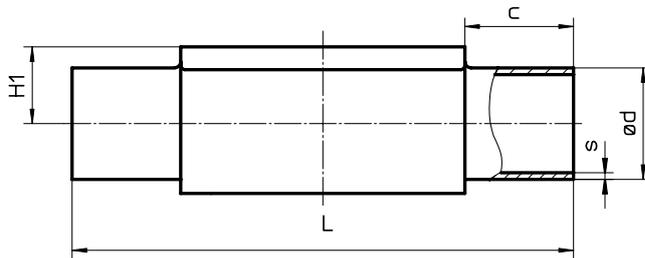
| Type | Pipe standard | | | | | | | DIN | | EN 10357 series B (formerly DIN 11850 series 1) | EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A | DIN 11850 Series 3 | | Weight [kg] | | |
|---------------|-----------------|-----|--------|------|------|------|------|-----|-----|---|--|--------------------|-----|-------------|-----|------|
| | Connection code | | | | | | | 0 | | 16 | | 17 | | | 18 | |
| | MG | DN | NPS | L | c | H1* | H1** | ød | s | ød | s | ød | s | | ød | s |
| GEMÜ 601, 602 | 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 |
| GEMÜ 612 | 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 |
| GEMÜ 673 | 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 | 2" | 173 | 30 | 32.0 | 32.0 | 52 | 1.5 | 52 | 1.0 | 53 | 1.5 | 54 | 2.0 | 2.25 | | |

* 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)

| Type | 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 | |
| GEMÜ 601, 602 | 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 |
| GEMÜ 612 | 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 |
| GEMÜ 673 | 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 | 2" | 173 | 30 | 32.0 | 32.0 | 60.3 | 2.0 | 2.25 | | |

* 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)

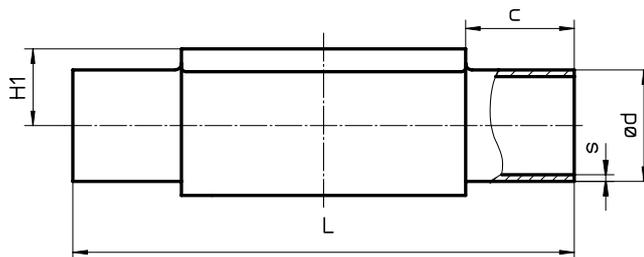
| Type | Pipe standard | | | | | | | JIS-G 3447 | | JIS-G 3459 | | SMS 3008 | | Weight [kg] |
|---------------|-----------------|--------|--------|-----|----|------|------|------------|-----|------------|------|----------|------|-------------|
| | Connection code | | | | | | | 35 | | 36 | | 37 | | |
| | MG | DN | NPS | L | c | H1* | H1** | ød | s | ød | s | ød | s | |
| GEMÜ 601, 602 | 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 |
| GEMÜ 612 | 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 |
| GEMÜ 673 | 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 | |

* 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)

| Type | 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 | |
| GEMÜ 601, 602 | 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 |
| GEMÜ 612 | 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 |
| GEMÜ 673 | 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 | |

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

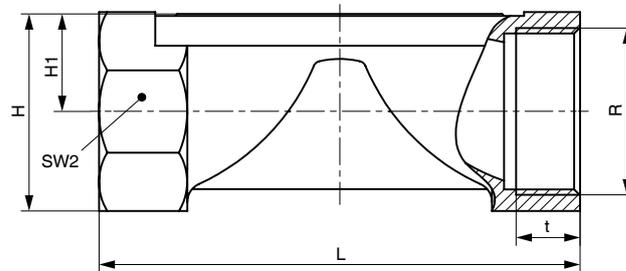


Body dimensions [mm]

Threaded sockets, connection code 1 valve body material: investment casting (code 37)

| Type | MG | DN | R | H | H1 | t | L | SW2 | Number of flats | Weight [kg] |
|--------------|----|-----|---------|----|----|-----|-----|-----|-----------------|-------------|
| GEMÜ 601/602 | 8 | 8 | G 1/4 | 19 | 9 | 11 | 72 | 18 | 6 | 0,09 |
| GEMÜ 612 | 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 |
| GEMÜ 673 | 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

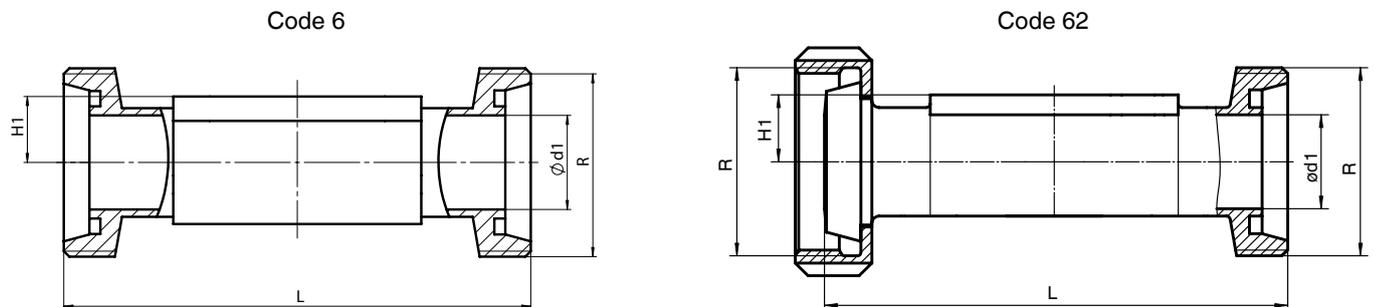


Body dimensions [mm]

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

| Type | MG | DN | H1 | ød1 | Thread to DIN 405 R | Code 6 L | Code 62 L | Weight [kg] |
|--------------|----|------|------|-------------|---------------------|----------|-----------|-------------|
| GEMÜ 601/602 | 8 | 10 | 8.5 | 10.0 | RD 28 x 1/8 | 92 | 90 | 0.21 |
| GEMÜ 612 | 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 |
| GEMÜ 673 | 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 | |

MG = Diaphragm size



Body dimensions [mm]

Flanges - DIN EN 1092, connection code 8 Valve body material GGG 40.3 (code 17, 18), investment casting (code C3), forged body (code 40)

| Type | MG | DN | øD | øk | øL | Number of bolts | H1 | | | FTF | Weight [kg] |
|----------|----|----|-----|-----|----|-----------------|----------------------|------------------|------------------|------|-------------|
| | | | | | | | Material code 17, 18 | Material code C3 | Material code 40 | | |
| GEMÜ 673 | 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 | 165 | 125 | 19 | 4 | 39.0 | 32.0 | 32.0 | 230 | 7.45 |

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

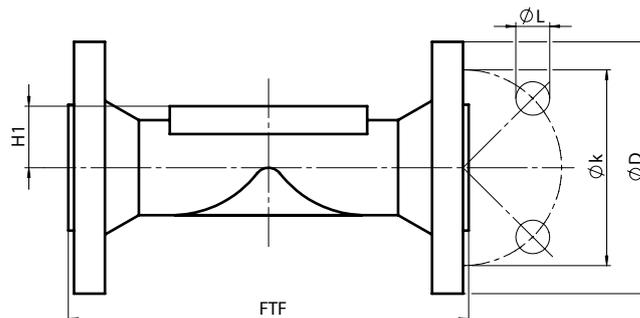
MG = diaphragm size For materials see overview on page 14

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

| Type | MG | DN | øD | øk | øL | Number of bolts | H1 | | | FTF | | Weight [kg] |
|----------|----|----|-----|-------|------|-----------------|----------------------|------------------|------------------|--------------------|--------------------|-------------|
| | | | | | | | Material code 17, 18 | Material code C3 | Material code 40 | Connection code 38 | Connection code 39 | |
| GEMÜ 673 | 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 | 150 | 2.35 |
| | | 25 | 110 | 79.4 | 15.9 | 4 | 23.0 | 19.0 | 19.0 | 146 | 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 | 200 | 5.65 |
| | | 50 | 150 | 120.7 | 19.0 | 4 | 39.0 | 32.0 | 32.0 | 200 | 230 | 7.45 |

MG = diaphragm size

For materials see overview on page 14

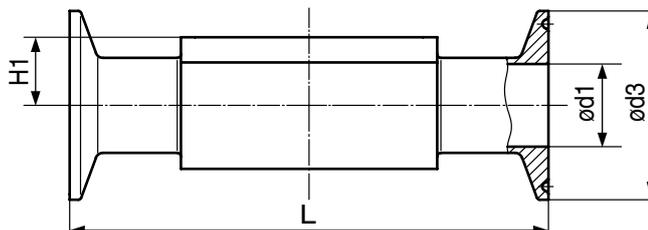


Body dimensions [mm]

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

| Type | 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 |
| GEMÜ 601/602 | 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 |
| GEMÜ 612 | 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 |
| GEMÜ 673 | 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 | |

MG = diaphragm size



Overview of valve bodies for GEMÜ 601, 602, 612, 673

| Type | | Spigots | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|----|-----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| | | Connection code | | 0 | | 16 | | 17 | | 18 | | 35 | | 36 | | 37 | | 55 | | 59 | | 60 | | 63 | | 65 | |
| | | Material code | | C3 | 40 | 40 | C3 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | C3 | 40 | 40 | 40 | C3 | 40 | C3 | 40 | 40 | 40 | 40 | 40 | |
| | | MG | DN | | | | | | | | | | | | | | | | | | | | | | | | |
| GEMÜ 601/602 | 8 | 4 | X | X | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | 6 | - | - | - | X | X | - | - | X | - | - | - | - | - | - | - | - | - | - | - | X | X | X | - | - | |
| | | 8 | - | - | - | X | X | - | - | X | - | - | X | 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 | X | X | X | X | X | X | X | X | X | |
| | | 15 | - | - | - | - | - | - | - | - | - | - | - | - | - | X | X | X | - | - | - | - | - | - | - | - | |
| GEMÜ 612 | 10 | 10 | - | - | X | X | 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 | - | - | - | - | - | - | - | - | | |
| GEMÜ 673 | 25 | 15 | - | X | X | 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 | X | X | | |
| | | 25 | - | X | 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 | X | | |
| | 50 | 50 | - | X | X | X | X | X | X | X | X | X | X | - | X | X | X | X | X | X | X | X | X | X | X | | |
| | | 65 | - | - | - | - | - | - | - | - | X | - | - | - | X | - | - | X | - | - | - | - | - | - | - | | |

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

MG = diaphragm size

| | | | Threaded connections | | | Clamps | | | | | Flanges | | | | | | | | | | | |
|--------------|----|-----------------|----------------------|----|----|--------|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|---|
| Type | | Connection code | | 1 | 6 | 62 | 80 | 82 | 88 | 8A | 8E | 8 | | | | 38 | | 39 | | | | |
| | | Material code | | 37 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 17 | 18 | C3 | 40 | 17 | 18 | 17 | 18 | C3 | 40 | |
| | | MG | DN | | | | | | | | | | | | | | | | | | | |
| GEMÜ 601/602 | 8 | 6 | - | - | - | - | K | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | 8 | X | - | - | K | K | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | 10 | - | W | W | K | - | - | W | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | 15 | - | - | - | K | - | W | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GEMÜ 612 | 10 | 10 | - | W | W | - | K | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | 15 | X | W | W | K | W | K | K | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | 20 | - | - | - | K | - | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GEMÜ 673 | 25 | 15 | X | W | W | - | W | - | K | - | X | X | W | W | - | - | X | X | W | W | W | W |
| | | 20 | X | W | W | K | K | K | K | - | X | X | W | W | X | X* | X | X | W | W | W | W |
| | | 25 | X | W | W | K | K | K | K | K | X | X | W | W | X | X* | X | X | W | W | W | W |
| | 40 | 32 | X | W | W | - | W | - | K | K | X | X | W | W | - | - | X | X | W | W | W | W |
| | | 40 | X | W | W | K | W | K | K | K | X | X | W | W | X | X* | X | X | W | W | W | W |
| | 50 | 50 | X | W | W | K | W | K | K | K | X | X | W | W | X | X* | X | X | W | W | W | W |
| 65 | | - | - | - | W | - | W | - | W | - | - | - | - | - | - | - | - | - | - | - | - | |

* 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

For further metal diaphragm valves, accessories and other products,
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