

## GEMÜ R677

### Manually operated diaphragm valve



#### Features

- Same mounting height planes over multiple nominal sizes
- Integral optical position indicator
- Compact system design thanks to flow-optimized high-flow valve bodies

#### Description

The GEMÜ R677 2/2-way diaphragm valve has a low maintenance plastic actuator and is manually operated. An integrated optical position indicator is standard. The high-flow valve body provides compact dimensions at high flow rates.

#### Technical specifications

- **Media temperature:** 14 to 176 °F
- **Ambient temperature:** -10 to 122 °F
- **Operating pressure :** 0 to 150 psi
- **Nominal sizes:** 1/2" (DN 15) to 4" (DN 100)
- **Body configurations:** 2/2-way body
- **Connection standards:** ANSI | ASTM | BS | DIN | EN | ISO | JIS
- **Body materials:** ABS | Inliner PP-H, grey / outliner PP, reinforced | Inliner PVDF/outliner PP, reinforced | PP, reinforced | PVC-U, grey | PVDF
- **Diaphragm materials:** EPDM | FKM | NBR | PTFE/EPDM
- **Conformities:** ACS | EAC | FDA | NSF

Technical data depends on the respective configuration

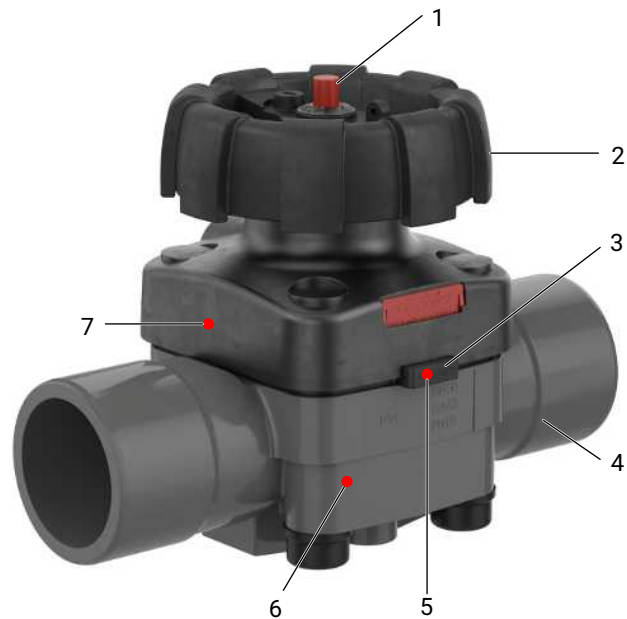


further information  
webcode: GW-R677



Product description

Construction



| Item | Name                                                   | Materials                                                                                                                              |
|------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Optical position indicator                             | PP-H red                                                                                                                               |
| 2    | Actuator                                               | PP- H 30% glass fibre reinforced                                                                                                       |
| 3    | Diaphragm                                              | NBR, FKM, EPDM,<br>PTFE / EPDM one-piece,<br>PTFE / EPDM two-piece                                                                     |
| 4    | Valve body                                             | PVC-U, grey<br>ABS<br>PP, reinforced<br>PVDF<br>Inliner PP-H, grey / outliner PP, reinforced<br>Inliner PVDF / outliner PP, reinforced |
| 5    | CONEXO diaphragm RFID chip<br>(see Conexo information) |                                                                                                                                        |
| 6    | CONEXO body RFID chip<br>(see Conexo information)      |                                                                                                                                        |
| 7    | CONEXO actuator RFID chip<br>(see Conexo information)  |                                                                                                                                        |

## GEMÜ CONEXO

The interaction of valve components that are equipped with RFID chips and an associated IT infrastructure actively increase process reliability.



Thanks to serialization, every valve and every relevant valve component such as the body, actuator or diaphragm, and even automation components, can be clearly traced and read using the CONEXO pen RFID reader. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves the "installation qualification" process, but also makes the maintenance process much more transparent and easier to document. The app actively guides the maintenance technician through the maintenance schedule and directly provides him with all the information assigned to the valve, such as test reports, testing documentation and maintenance histories. The CONEXO portal acts as a central element, helping to collect, manage and process all data.

**For further information on GEMÜ CONEXO please visit:**

[www.gemu-group.com/conexo](http://www.gemu-group.com/conexo)

### Ordering

GEMÜ Conexo must be ordered separately with the ordering option "CONEXO".

## Availability

### Availability of valve bodies

#### Spigot

| MG  | DN  | Connection type code <sup>1)</sup> |       |        |    |        |      |              |
|-----|-----|------------------------------------|-------|--------|----|--------|------|--------------|
|     |     | 0                                  |       |        | 20 |        | 30   | 7X           |
|     |     | Material code <sup>2)</sup>        |       |        |    |        |      |              |
|     |     | 1                                  | 5, 20 | 71, 75 | 20 | 71, 75 | 1, 4 | 1, 4, 71, 20 |
| 20  | 15  | X                                  | -     | X      | -  | X      | X    | X            |
|     | 20  | X                                  | -     | X      | -  | X      | X    | X            |
|     | 25  | X                                  | -     | X      | -  | X      | X    | X            |
| 25  | 32  | X                                  | -     | X      | -  | X      | X    | X            |
| 40  | 40  | X                                  | -     | X      | -  | X      | X    | X            |
|     | 50  | X                                  | -     | X      | -  | X      | X    | X            |
| 50  | 65  | X                                  | X     | -      | X  | -      | X    | -            |
| 80  | 80  | X                                  | X     | -      | X  | -      | X    | -            |
| 100 | 100 | X                                  | X     | -      | X  | -      | X    | -            |

MG = diaphragm size, X = standard

#### 1) Connection type

Code 0: Spigot DIN

Code 20: Spigot for IR butt welding

Code 30: Spigot – inch, for welding or solvent cementing, depending on the body material

Code 7X: Body with threaded spigots for unions

#### 2) Valve body material

Code 1: PVC-U, grey

Code 4: ABS

Code 5: PP, reinforced

Code 20: PVDF

Code 71: Inliner PP-H, grey, outliner PP, reinforced

Code 75: Inliner PVDF/outliner PP, reinforced

**Union end**

| MG | DN | Connection type code <sup>1)</sup> |   |    |    |    |    |   |    |    |    |    |
|----|----|------------------------------------|---|----|----|----|----|---|----|----|----|----|
|    |    | 7                                  |   |    |    | 7R | 33 |   | 3M | 3T | 78 |    |
|    |    | Material code <sup>2)</sup>        |   |    |    |    |    |   |    |    |    |    |
|    |    | 1                                  | 4 | 71 | 75 | 1  | 1  | 4 | 1  | 1  | 71 | 75 |
| 20 | 15 | X                                  | X | X  | X  | X  | X  | X | X  | -  | X  | X  |
|    | 20 | X                                  | X | X  | X  | X  | X  | X | X  | X  | X  | X  |
|    | 25 | X                                  | X | X  | X  | X  | X  | X | X  | X  | X  | X  |
| 25 | 32 | X                                  | X | X  | X  | X  | X  | X | X  | X  | X  | X  |
| 40 | 40 | X                                  | X | X  | X  | X  | X  | X | X  | X  | X  | X  |
|    | 50 | X                                  | X | X  | X  | X  | X  | X | X  | X  | X  | X  |

MG = diaphragm size, X = standard

**1) Connection type**

Code 7: Union end with insert (socket) – DIN

Code 7R: Union end with insert (Rp threaded socket) – DIN

Code 33: Union end with inch insert – BS (socket)

Code 3M: Union end with inch insert – ASTM (socket)

Code 3T: Union end with insert – JIS (socket)

Code 78: Union end with insert (for IR butt welding) – DIN

**2) Valve body material**

Code 1: PVC-U, grey

Code 4: ABS

Code 71: Inliner PP-H, grey, outliner PP, reinforced

Code 75: Inliner PVDF/outliner PP, reinforced

**Flange**

| MG  | DN  | Connection type code <sup>1)</sup> |   |    |    |    |    |   |    |    |    |
|-----|-----|------------------------------------|---|----|----|----|----|---|----|----|----|
|     |     | 4                                  |   |    |    |    | 39 |   |    |    |    |
|     |     | Material code <sup>2)</sup>        |   |    |    |    |    |   |    |    |    |
|     |     | 1                                  | 5 | 20 | 71 | 75 | 1  | 5 | 20 | 71 | 75 |
| 20  | 15  | X                                  | - | -  | X  | X  | X  | - | -  | X  | X  |
|     | 20  | X                                  | - | -  | X  | X  | X  | - | -  | X  | X  |
|     | 25  | X                                  | - | -  | X  | X  | X  | - | -  | X  | X  |
| 25  | 32  | X                                  | - | -  | X  | X  | X  | - | -  | X  | X  |
| 40  | 40  | X                                  | - | -  | X  | X  | X  | - | -  | X  | X  |
|     | 50  | X                                  | - | -  | X  | X  | X  | - | -  | X  | X  |
| 50  | 65  | X                                  | X | X  | -  | -  | X  | X | X  | -  | -  |
| 80  | 80  | X                                  | X | X  | -  | -  | X  | X | X  | -  | -  |
| 100 | 100 | X                                  | X | X  | -  | -  | X  | X | X  | -  | -  |

MG = diaphragm size, X = standard

**1) Connection type**

Code 4: Flange EN 1092, PN 10, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 39: Flange ANSI Class 125/150 RF, length only for body configuration D acc. to EN 558 series 1, ISO 5752, basic series 1

**2) Valve body material**

Code 1: PVC-U, grey

Code 5: PP, reinforced

Code 20: PVDF

Code 71: Inliner PP-H, grey, outliner PP, reinforced

Code 75: Inliner PVDF/outliner PP, reinforced

**Availability - Product conformity NSF (special function code N)**

| MG  | DN  | Connection type code |   |   |    |    |    |    |    |    | Material code | Diaphragm material (code) |
|-----|-----|----------------------|---|---|----|----|----|----|----|----|---------------|---------------------------|
|     |     | 0                    | 4 | 7 | 7R | 30 | 33 | 39 | 3M | 3T |               |                           |
| 20  | 15  | X                    | X | X | X  | X  | X  | X  | X  | -  | X             | X                         |
|     | 20  | X                    | X | X | X  | X  | X  | X  | X  | X  | X             | X                         |
|     | 25  | X                    | X | X | X  | X  | X  | X  | X  | X  | X             | X                         |
| 25  | 32  | X                    | X | X | X  | X  | X  | X  | X  | X  | X             | X                         |
| 40  | 40  | X                    | X | X | X  | X  | X  | X  | X  | X  | X             | X                         |
|     | 50  | X                    | X | X | X  | X  | X  | X  | X  | X  | X             | X                         |
| 50  | 65  | X                    | X | - | -  | X  | -  | X  | -  | -  | X             | X                         |
| 80  | 80  | X                    | X | - | -  | X  | -  | X  | -  | -  | X             | X                         |
| 100 | 100 | X                    | X | - | -  | X  | -  | X  | -  | -  | X             | X                         |

MG = diaphragm size

## Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

## Order codes

| 1 Type                                                                            | Code |
|-----------------------------------------------------------------------------------|------|
| Diaphragm valve, manually operated, plastic handwheel, optical position indicator | R677 |

| 2 DN   | Code |
|--------|------|
| DN 15  | 15   |
| DN 20  | 20   |
| DN 25  | 25   |
| DN 32  | 32   |
| DN 40  | 40   |
| DN 50  | 50   |
| DN 65  | 65   |
| DN 80  | 80   |
| DN 100 | 100  |

| 3 Body configuration | Code |
|----------------------|------|
| 2/2-way body         | D    |

| 4 Connection type                                                                                                    | Code |
|----------------------------------------------------------------------------------------------------------------------|------|
| <b>Spigot</b>                                                                                                        |      |
| Spigot DIN                                                                                                           | 0    |
| Spigot for IR butt welding                                                                                           | 20   |
| Spigot – inch, for welding or solvent cementing, depending on the body material                                      | 30   |
| Body with threaded spigots for unions                                                                                | 7X   |
| <b>Union end</b>                                                                                                     |      |
| Union end with insert (socket) – DIN                                                                                 | 7    |
| Union end with insert (Rp threaded socket) – DIN                                                                     | 7R   |
| Union end with inch insert – BS (socket)                                                                             | 33   |
| Union end with inch insert – ASTM (socket)                                                                           | 3M   |
| Union end with insert – JIS (socket)                                                                                 | 3T   |
| Union end with insert (for IR butt welding) – DIN                                                                    | 78   |
| <b>Flange</b>                                                                                                        |      |
| Flange EN 1092, PN 10, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1                  | 4    |
| Flange ANSI Class 125/150 RF, length only for body configuration D acc. to EN 558 series 1, ISO 5752, basic series 1 | 39   |

| 5 Valve body material                       | Code |
|---------------------------------------------|------|
| PVC-U, grey                                 | 1    |
| ABS                                         | 4    |
| PP, reinforced                              | 5    |
| PVDF                                        | 20   |
| Inliner PP-H, grey, outliner PP, reinforced | 71   |

| 5 Valve body material                | Code |
|--------------------------------------|------|
| Inliner PVDF/outliner PP, reinforced | 75   |

| 6 Diaphragm material                                                                | Code |
|-------------------------------------------------------------------------------------|------|
| <b>Elastomer</b>                                                                    |      |
| NBR                                                                                 | 2    |
| FKM                                                                                 | 4    |
| EPDM                                                                                | 17   |
| EPDM                                                                                | 29   |
| <b>PTFE</b>                                                                         |      |
| PTFE/EPDM one-piece                                                                 | 54   |
| PTFE/EPDM two-piece                                                                 | 5M   |
| <b>Note:</b> The PTFE/EPDM diaphragm (code 5M) is available from diaphragm size 25. |      |

| 7 Control function                         | Code |
|--------------------------------------------|------|
| Manually operated                          | 0    |
| Manually operated, with lockable handwheel | L    |

| 8 Actuator version                                                 | Code |
|--------------------------------------------------------------------|------|
| <b>with connection thread for electrical position indicator</b>    |      |
| Actuator size EDZ (diaphragm size 20)                              | EDZ  |
| Actuator size EFZ (diaphragm size 20)                              | EFZ  |
| Actuator size FDZ (diaphragm size 25)                              | FDZ  |
| Actuator size HDZ (diaphragm size 40)                              | HDZ  |
| Actuator size KDZ (diaphragm size 50)                              | KDZ  |
| Actuator size MDZ (diaphragm size 80)                              | MDZ  |
| Actuator size NDZ (diaphragm size 100)                             | NDZ  |
| <b>without connection thread for electrical position indicator</b> |      |
| Actuator size ED                                                   | ED   |
| Actuator size EF (diaphragm size 20)                               | EF   |
| Actuator size FD (diaphragm size 25)                               | FD   |
| Actuator size HD (diaphragm size 40)                               | HD   |
| Actuator size KD (diaphragm size 50)                               | KD   |

| 9 Special version     | Code |
|-----------------------|------|
| NSF 61 water approval | N    |

| 10 CONEXO                                                           | Code |
|---------------------------------------------------------------------|------|
| Without                                                             |      |
| Integrated RFID chip for electronic identification and traceability | C    |

**Order example**

| Order option          | Code | Description                                                                       |
|-----------------------|------|-----------------------------------------------------------------------------------|
| 1 Type                | R677 | Diaphragm valve, manually operated, plastic handwheel, optical position indicator |
| 2 DN                  | 15   | DN 15                                                                             |
| 3 Body configuration  | D    | 2/2-way body                                                                      |
| 4 Connection type     | 7    | Union end with insert (socket) – DIN                                              |
| 5 Valve body material | 1    | PVC-U, grey                                                                       |
| 6 Diaphragm material  | 17   | EPDM                                                                              |
| 7 Control function    | 0    | Manually operated                                                                 |
| 8 Actuator version    | EDZ  | Actuator size EDZ (diaphragm size 20)                                             |
| 9 Special version     | N    | NSF 61 water approval                                                             |
| 10 CONEXO             | C    | Integrated RFID chip for electronic identification and traceability               |

## Technical data

### Medium

**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.

### Temperature

**Ambient temperature:**

| Valve body material                                   |             |
|-------------------------------------------------------|-------------|
| PVC-U, grey (code 1)                                  | 50 – 122 °F |
| ABS (code 4)                                          | 14 – 122 °F |
| PP, reinforced (code 5)                               | 41 – 122 °F |
| PVDF (code 20)                                        | 14 – 122 °F |
| Inliner PP-H grey / outliner PP, reinforced (code 71) | 41 – 122 °F |
| Inliner PVDF / outliner PP, reinforced (code 75)      | 23 – 122 °F |

**Storage temperature:** 50 – 104 °F

### Pressure

**Operating pressure:**

| MG  | DN  | Diaphragm materials |         |
|-----|-----|---------------------|---------|
|     |     | Elastomer           | PTFE    |
| 20  | 15  | 0 - 150             | 0 - 150 |
|     | 20  | 0 - 150             | 0 - 150 |
|     | 25  | 0 - 150             | 0 - 150 |
| 25  | 32  | 0 - 150             | 0 - 150 |
| 40  | 40  | 0 - 150             | 0 - 150 |
|     | 50  | 0 - 150             | 0 - 150 |
| 50  | 65  | 0 - 150             | 0 - 150 |
| 80  | 80  | 0 - 150             | 0 - 90  |
| 100 | 100 | 0 - 150             | 0 - 90  |

All pressures are psi - 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.

**Pressure rating:** PN 10

**Pressure/temperature correlation:**

| Valve body material |           | Temperature in °C (valve body) |       |       |       |       |       |            |       |            |       |       |       |
|---------------------|-----------|--------------------------------|-------|-------|-------|-------|-------|------------|-------|------------|-------|-------|-------|
| Materials           | Code      | -10                            | ±0    | 5     | 10    | 20    | 25    | 30         | 40    | 50         | 60    | 70    | 80    |
| <b>PVC-U</b>        | <b>1</b>  | -                              | -     | -     | 150.0 | 150.0 | 150.0 | 120.0      | 90.0  | 50.76      | 21.76 | -     | -     |
| <b>ABS</b>          | <b>4</b>  | 150.0                          | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 120.0      | 90.0  | 60.0       | 30.0  | -     | -     |
| <b>PP</b>           | <b>5</b>  | -                              | -     | 150.0 | 150.0 | 150.0 | 150.0 | 123.2<br>8 | 105.0 | 79.77      | 60.0  | 39.16 | 21.76 |
| <b>PP-H</b>         | <b>71</b> | -                              | -     | 150.0 | 150.0 | 150.0 | 150.0 | 123.2<br>8 | 105.0 | 79.77      | 60.0  | 39.16 | 21.76 |
| <b>PVDF</b>         | <b>20</b> | 150.0                          | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 130.5<br>4 | 120.0 | 102.9<br>8 | 91.38 | 78.32 | 68.17 |
| <b>PVDF</b>         | <b>75</b> | 150.0                          | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 130.5<br>4 | 120.0 | 102.9<br>8 | 91.38 | 78.32 | 68.17 |

Data for extended temperature ranges on request. Please note that the ambient temperature and media temperature generate a combined temperature at the valve body which must not exceed the above values.

| MG         | DN         | Kv values |
|------------|------------|-----------|
| <b>20</b>  | <b>15</b>  | 7.0       |
|            | <b>20</b>  | 11.7      |
|            | <b>25</b>  | 14.0      |
| <b>25</b>  | <b>32</b>  | 23.4      |
| <b>40</b>  | <b>40</b>  | 49.1      |
|            | <b>50</b>  | 53.8      |
| <b>50</b>  | <b>65</b>  | 81.9      |
| <b>80</b>  | <b>80</b>  | 140.4     |
| <b>100</b> | <b>100</b> | 221.1     |

MG = diaphragm size, Kv values in m³/h

Kv values determined acc.to DIN EN 60534 standard, inlet pressure 5 bar, Δp 1 bar, PVC-U 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.

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

## Product conformity

**Pressure Equipment Directive:** 2014/68/EU

**Food:** FDA\*  
Regulation (EC) No. 1935/2004  
Regulation (EC) No. 10/2011\*

**EAC:** TR CU 010/2011

**Drinking water:** NSF/ANSI\*  
\* depending on version and/or operating parameters

## Materials

### Materials:

| Diaphragm material | O-ring material |
|--------------------|-----------------|
| PTFE               | FKM             |
| NBR                | EPDM            |
| FKM                | FKM             |
| EPDM               | EPDM            |

## Mechanical data

**Protection class:** IP 65 acc. to EN 60529

### Weight:

#### Actuator

| MG         | Actuator size | Weight |
|------------|---------------|--------|
| <b>20</b>  | <b>ED</b>     | 0.66   |
| <b>20</b>  | <b>EF</b>     | 0.77   |
| <b>25</b>  | <b>FD</b>     | 0.88   |
| <b>40</b>  | <b>HD</b>     | 1.32   |
| <b>65</b>  | <b>KD</b>     | 2.20   |
| <b>80</b>  | <b>MD</b>     | 8.38   |
| <b>100</b> | <b>ND</b>     | 11.24  |

MG = diaphragm size, weight in kg

#### Valve body

| MG  | DN  | Spigot               |      | Union end |      |        |      | Flange |
|-----|-----|----------------------|------|-----------|------|--------|------|--------|
|     |     | Connection type code |      |           |      |        |      |        |
|     |     | 0, 30                | 20   | 7, 7R     | 33   | 3M, 3T | 78   | 4, 39  |
| 20  | 15  | 0.26                 | 0.22 | 0.37      | 0.53 | 0.57   | 0.60 | 1.48   |
|     | 20  | 0.29                 | 0.26 | 0.46      | 0.62 | 0.66   | 0.79 | 1.85   |
|     | 25  | 0.35                 | 0.31 | 0.57      | 0.73 | 0.84   | 0.82 | 2.82   |
| 25  | 32  | 0.49                 | 0.40 | 0.88      | 1.54 | 1.61   | 1.39 | 4.17   |
| 40  | 40  | 1.10                 | 0.88 | 1.61      | 1.83 | 2.05   | 2.49 | 5.20   |
|     | 50  | 1.26                 | 1.04 | 2.20      | 3.09 | 3.31   | 3.53 | 6.79   |
| 50  | 65  | 2.03                 | 7.87 | -         | -    | -      | -    | 7.05   |
| 80  | 80  | 8.82                 | 7.28 | -         | -    | -      | -    | 14.77  |
| 100 | 100 | 9.70                 | 8.82 | -         | -    | -      | -    | 18.08  |

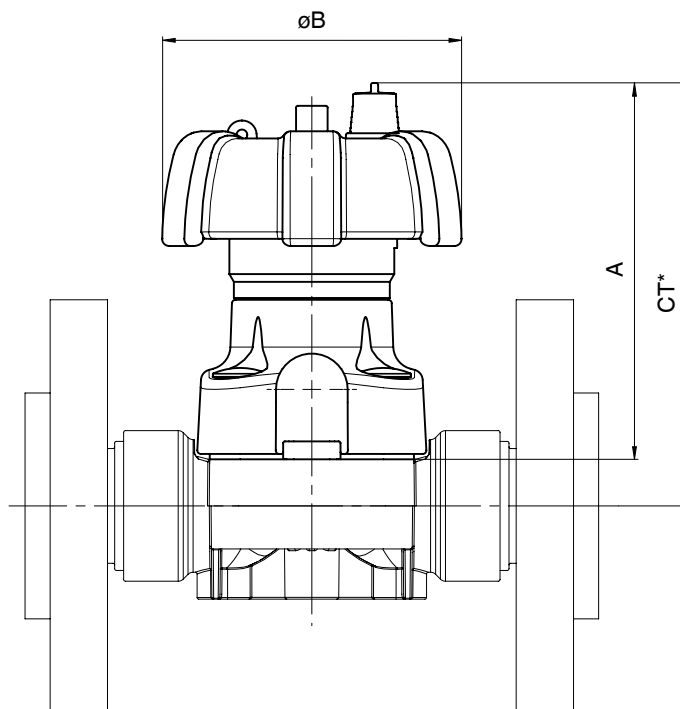
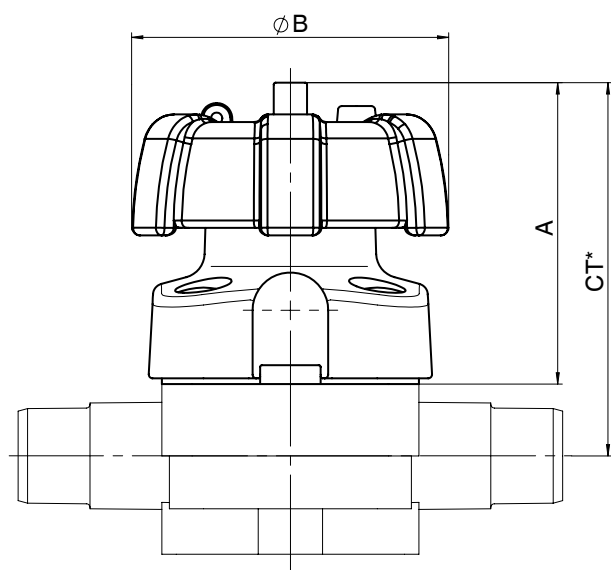
MG = diaphragm size  
Weight in lb

**Installation position:** Optional

**Flow direction:** Optional

## Dimensions

### Actuator dimensions



Actuator size EF  
connection code 4, 39

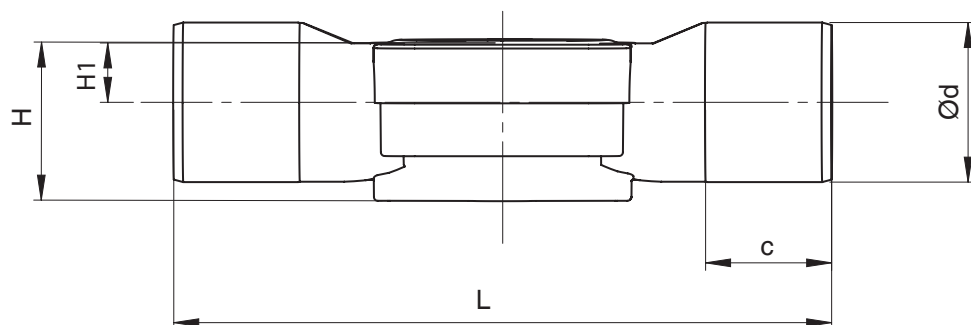
| MG  | DN      | Actuator size | $\varnothing B$ | A                  |                    |
|-----|---------|---------------|-----------------|--------------------|--------------------|
|     |         |               |                 | Control function 0 | Control function L |
| 20  | 15 - 25 | ED            | 3.54            | 2.95               | 3.27               |
| 20  | 15 - 25 | EF            | 3.54            | 3.90               | 4.21               |
| 25  | 32      | FD            | 3.54            | 3.11               | 3.43               |
| 40  | 40 - 50 | HD            | 4.49            | 3.90               | 3.98               |
| 50  | 65      | KD            | 5.51            | 4.69               | 4.80               |
| 80  | 80      | MD            | 8.43            | 6.57               | 6.65               |
| 100 | 100     | ND            | 8.43            | 8.50               | 8.31               |

\* only for control function code L

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

## Body dimensions

### Spigot DIN / inch (code 0, 30)



Connection type spigot DIN (code 0)<sup>1)</sup>, body material PVC-U (code 1), PP (code 5), PVDF (code 20), inliner/outliner (code 71, 75)<sup>2)</sup>

| MG  | DN  | NPS  | c        |       |        | ød   | H        |       |        | H1   | L     |
|-----|-----|------|----------|-------|--------|------|----------|-------|--------|------|-------|
|     |     |      | Material |       |        |      | Material |       |        |      |       |
|     |     |      | 1        | 5, 20 | 71, 75 |      | 1        | 5, 20 | 71, 75 |      |       |
| 20  | 15  | 1/2" | 0.63     | -     | 0.71   | 0.79 | 1.42     | -     | 1.42   | 0.39 | 4.88  |
|     | 20  | 3/4" | 0.75     | -     | 0.75   | 0.98 | 1.50     | -     | 1.50   | 0.47 | 5.67  |
|     | 25  | 1"   | 0.87     | -     | 0.87   | 1.26 | 1.54     | -     | 1.54   | 0.51 | 6.06  |
| 25  | 32  | 1¼"  | 1.26     | -     | 1.26   | 1.57 | 1.61     | -     | 1.61   | 0.59 | 6.85  |
| 40  | 40  | 1½"  | 1.38     | -     | 1.02   | 1.97 | 2.49     | -     | 2.49   | 0.91 | 7.64  |
|     | 50  | 2"   | 1.50     | -     | 1.30   | 2.48 | 2.49     | -     | 2.49   | 0.91 | 8.82  |
| 50  | 65  | 2½"  | 1.81     | 1.81  | -      | 2.95 | 3.10     | 3.10  | -      | 1.53 | 11.18 |
| 80  | 80  | 3"   | 2.01     | 2.01  | -      | 3.54 | 4.61     | 4.61  | -      | 2.44 | 11.81 |
| 100 | 100 | 4"   | 2.40     | 2.40  | -      | 4.33 | 5.51     | 5.51  | -      | 2.95 | 13.39 |

Connection type spigot - inch (code 30)<sup>1)</sup>, body material PVC-U (code 1), ABS (code 4)<sup>2)</sup>

| MG  | DN  | NPS  | c    | ød   | H    | H1   | L     |
|-----|-----|------|------|------|------|------|-------|
| 20  | 15  | 1/2" | 0.94 | 0.84 | 1.42 | 0.39 | 5.55  |
|     | 20  | 3/4" | 1.06 | 1.05 | 1.50 | 0.47 | 5.67  |
|     | 25  | 1"   | 1.18 | 1.32 | 1.54 | 0.51 | 6.06  |
| 25  | 32  | 1¼"  | 1.30 | 1.66 | 1.61 | 0.59 | 6.85  |
| 40  | 40  | 1½"  | 1.38 | 1.90 | 2.49 | 0.91 | 7.64  |
|     | 50  | 2"   | 1.57 | 2.37 | 2.49 | 0.91 | 8.82  |
| 50  | 65  | 2½"  | 1.81 | 2.87 | 3.10 | 1.53 | 11.18 |
| 80  | 80  | 3"   | 2.01 | 3.50 | 4.61 | 2.44 | 11.81 |
| 100 | 100 | 4"   | 2.40 | 4.50 | 5.51 | 2.95 | 13.39 |

Dimensions in inch

MG = diaphragm size

#### 1) Connection type

Code 0: Spigot DIN

Code 30: Spigot – inch, for welding or solvent cementing, depending on the body material

#### 2) Valve body material

Code 1: PVC-U, grey

Code 4: ABS

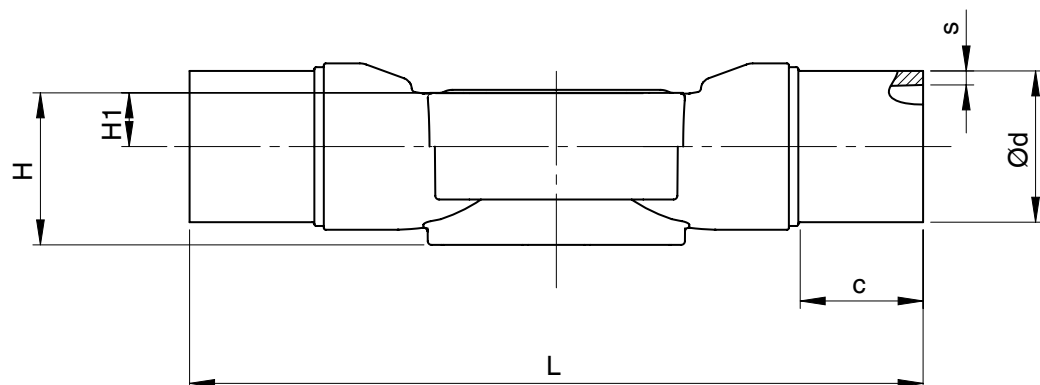
Code 5: PP, reinforced

Code 20: PVDF

Code 71: Inliner PP-H, grey, outliner PP, reinforced

Code 75: Inliner PVDF/outliner PP, reinforced

## Spigot IR (code 20)



Connection type spigot IR (code 20)<sup>1)</sup>, body material inliner/outliner (code 71, 75)<sup>2)</sup>

| MG | DN | NPS  | c    | ød   | H    | H1   | L    | s        |      |
|----|----|------|------|------|------|------|------|----------|------|
|    |    |      |      |      |      |      |      | Material |      |
|    |    |      |      |      |      |      |      | 71       | 75   |
| 20 | 15 | 1/2" | 1.30 | 0.79 | 1.42 | 0.39 | 6.06 | 0.07     | 0.07 |
|    | 20 | 3/4" | 1.30 | 0.98 | 1.50 | 0.47 | 6.06 | 0.09     | 0.07 |
|    | 25 | 1"   | 1.30 | 1.26 | 1.54 | 0.51 | 6.06 | 0.11     | 0.09 |
| 25 | 32 | 1¼"  | 1.30 | 1.57 | 1.61 | 0.59 | 7.64 | 0.15     | 0.09 |
| 40 | 40 | 1½"  | 1.30 | 1.97 | 2.49 | 0.91 | 7.64 | 0.18     | 0.12 |
|    | 50 | 2"   | 1.30 | 2.48 | 2.49 | 0.91 | 8.82 | 0.23     | 0.12 |

Connection type spigot IR (code 20)<sup>1)</sup>, body material PVDF (code 20)<sup>2)</sup>

| MG  | DN  | NPS | c    | ød   | H    | H1   | L     | s    |
|-----|-----|-----|------|------|------|------|-------|------|
| 50  | 65  | 2½" | 1.69 | 2.95 | 3.10 | 1.53 | 11.18 | 0.14 |
| 80  | 80  | 3"  | 2.01 | 3.54 | 4.61 | 2.44 | 11.81 | 0.17 |
| 100 | 100 | 4"  | 2.32 | 4.33 | 5.51 | 2.95 | 13.39 | 0.21 |

Dimensions in inch

MG = diaphragm size

1) **Connection type**

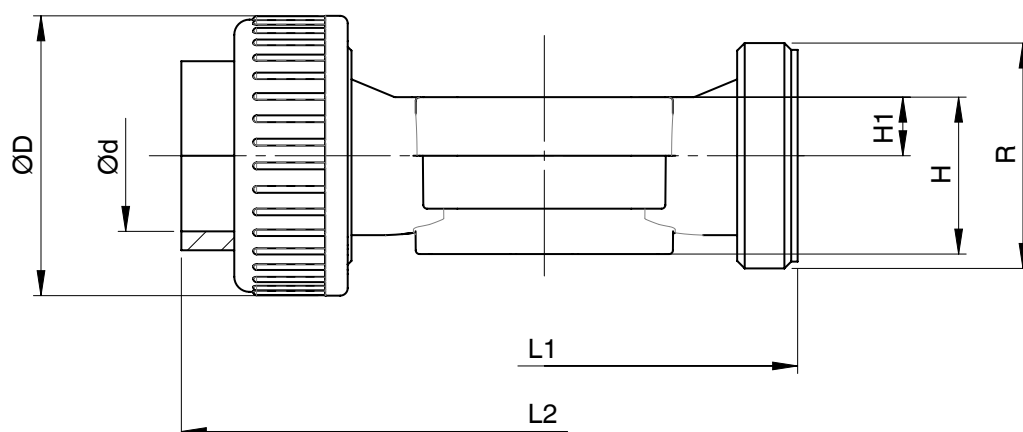
Code 20: Spigot for IR butt welding

2) **Valve body material**

Code 20: PVDF

Code 71: Inliner PP-H, grey, outliner PP, reinforced

Code 75: Inliner PVDF/outliner PP, reinforced

**Union end DIN (code 7)**

Connection type union end (code 7)<sup>1)</sup>, body material PVC-U (code 1), ABS (code 4), inliner/outliner (code 71, 75)<sup>2)</sup>, diaphragm sizes 20 – 40

| MG | DN | NPS  | ød   | øD   | H    | H1   | L1   | L2       |       |      |      | R    |
|----|----|------|------|------|------|------|------|----------|-------|------|------|------|
|    |    |      |      |      |      |      |      | Material |       |      |      |      |
|    |    |      |      |      |      |      |      | 1        | 4     | 71   | 75   |      |
| 20 | 15 | 1/2" | 0.79 | 1.69 | 1.42 | 0.39 | 4.25 | 5.75     | 5.91  | 5.63 | 5.75 | G 1  |
|    | 20 | 3/4" | 0.98 | 2.09 | 1.50 | 0.47 | 4.25 | 5.98     | 6.14  | 5.75 | 5.91 | G 1¼ |
|    | 25 | 1"   | 1.26 | 2.36 | 1.54 | 0.51 | 4.57 | 6.54     | 6.69  | 6.22 | 6.38 | G 1½ |
| 25 | 32 | 1¼"  | 1.57 | 2.91 | 1.61 | 0.59 | 5.28 | 7.56     | 7.72  | 7.13 | 7.24 | G 2  |
| 40 | 40 | 1½"  | 1.97 | 3.27 | 2.49 | 0.91 | 6.06 | 8.74     | 8.74  | 8.15 | 8.27 | G 2¼ |
|    | 50 | 2"   | 2.48 | 4.06 | 2.49 | 0.91 | 7.24 | 10.47    | 10.47 | 9.65 | 9.76 | G 2¾ |

Dimensions in inch

MG = diaphragm size

1) **Connection type**

Code 7: Union end with insert (socket) – DIN

2) **Valve body material**

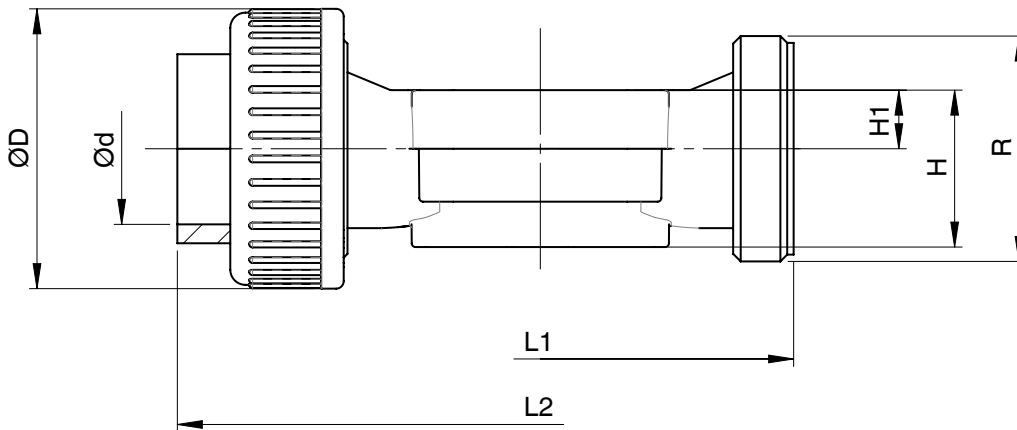
Code 1: PVC-U, grey

Code 4: ABS

Code 71: Inliner PP-H, grey, outliner PP, reinforced

Code 75: Inliner PVDF/outliner PP, reinforced

### Union end inch (code 33, 3M, 3T)



Connection type union end inch (code 33, 3M, 3T)<sup>1)</sup>, body material PVC-U (code 1)<sup>2)</sup>, diaphragm sizes 20 - 40

| MG | DN | NPS  | ød              |      |      | øD     |        | H    | H1   | L1   | L2              |       |       | R      |        |
|----|----|------|-----------------|------|------|--------|--------|------|------|------|-----------------|-------|-------|--------|--------|
|    |    |      | Connection type |      |      |        |        |      |      |      | Connection type |       |       |        |        |
|    |    |      | 33              | 3M   | 3T   | 33, 3M | 3T     |      |      |      | 33              | 3M    | 3T    | 33, 3M | 3T     |
| 20 | 15 | 1/2" | 0.84            | 0.84 | 0.87 | 1.69   | 2.09 * | 1.42 | 0.39 | 4.25 | 5.75            | 6.22  | 5.98  | G 1    | G 1¼ * |
|    | 20 | 3/4" | 1.06            | 1.05 | 1.02 | 2.09   | 2.09   | 1.50 | 0.47 | 4.25 | 5.98            | 6.46  | 5.98  | G 1¼   | G 1¼   |
|    | 25 | 1"   | 1.32            | 1.32 | 1.26 | 2.36   | 2.36   | 1.54 | 0.51 | 4.57 | 6.54            | 7.09  | 6.54  | G 1½   | G 1½   |
| 25 | 32 | 1¼"  | 1.67            | 1.66 | 1.50 | 2.91   | 2.91   | 1.61 | 0.59 | 5.28 | 7.56            | 8.03  | 7.56  | G 2    | G 2    |
| 40 | 40 | 1½"  | 1.90            | 1.90 | 1.89 | 3.27   | 3.27   | 2.49 | 0.91 | 6.06 | 8.74            | 9.06  | 8.74  | G 2¼   | G 2¼   |
|    | 50 | 2"   | 2.38            | 2.38 | 2.36 | 4.06   | 4.06   | 2.49 | 0.91 | 7.24 | 10.39           | 10.47 | 10.47 | G 2¾   | G 2¾   |

Connection type BS (code 33)<sup>1)</sup>, body material ABS (code 4)<sup>2)</sup>

| MG | DN | NPS    | ød   | øD   | H    | H1   | L1   | L2    | R       |
|----|----|--------|------|------|------|------|------|-------|---------|
| 20 | 15 | 1/2"   | 0.84 | 1.69 | 1.42 | 0.39 | 4.25 | 5.91  | G 1     |
|    | 20 | 3/4"   | 1.06 | 2.09 | 1.50 | 0.47 | 4.25 | 6.14  | G 1 1/4 |
|    | 25 | 1"     | 1.32 | 2.36 | 1.54 | 0.51 | 4.57 | 6.69  | G 1 1/2 |
| 25 | 32 | 1 1/4" | 1.67 | 2.91 | 1.61 | 0.59 | 5.28 | 7.80  | G 2     |
| 40 | 40 | 1 1/2" | 1.90 | 3.27 | 2.49 | 0.91 | 6.06 | 8.66  | G 2 1/4 |
|    | 50 | 2"     | 2.38 | 4.06 | 2.49 | 0.91 | 7.24 | 10.39 | G 2 3/4 |

Dimensions in inch

MG = diaphragm size

\* Insert requires valve body DN 20

#### 1) Connection type

Code 33: Union end with inch insert – BS (socket)

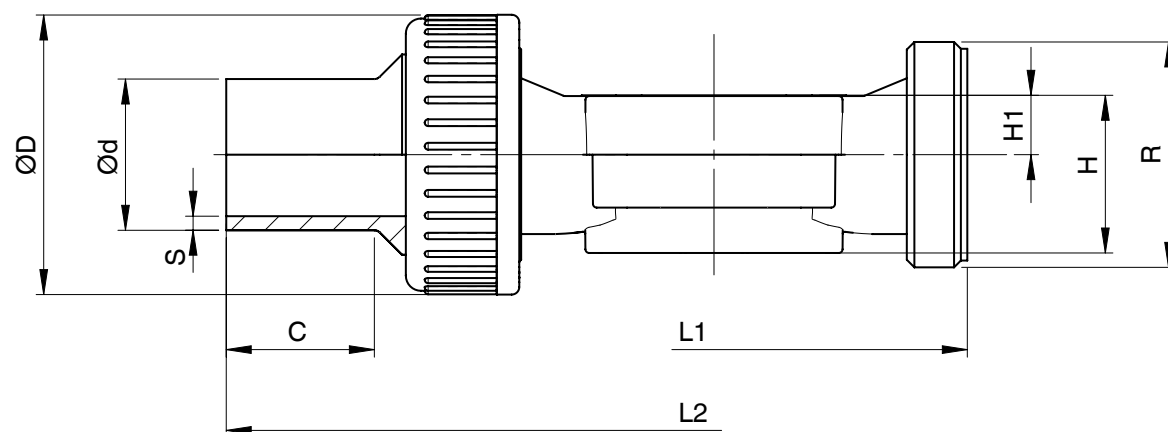
Code 3M: Union end with inch insert – ASTM (socket)

Code 3T: Union end with insert – JIS (socket)

#### 2) Valve body material

Code 1: PVC-U, grey

Code 4: ABS

**Union end DIN (code 78)****Connection type union end DIN, IR butt welding (code 78)<sup>1)</sup>, body materials inliner/outliner (code 71, 75)<sup>2)</sup>**

| MG | DN | NPS  | c    | ød   | øD   | H    | H1   | L1   | L2    | R    | s        |      |
|----|----|------|------|------|------|------|------|------|-------|------|----------|------|
|    |    |      |      |      |      |      |      |      |       |      | Material |      |
|    |    |      |      |      |      |      |      |      |       |      | 71       | 75   |
| 20 | 15 | 1/2" | 1.42 | 0.03 | 1.69 | 1.42 | 0.39 | 4.25 | 8.43  | G 1  | 0.07     | 0.07 |
|    | 20 | 3/4" | 1.46 | 0.04 | 2.09 | 1.50 | 0.47 | 4.25 | 8.66  | G 1¼ | 0.09     | 0.07 |
|    | 25 | 1"   | 1.54 | 1.26 | 2.36 | 1.54 | 0.51 | 4.57 | 9.21  | G 1½ | 0.11     | 0.09 |
| 25 | 32 | 1¼"  | 1.54 | 1.57 | 2.91 | 1.61 | 0.59 | 5.28 | 10.16 | G 2  | 0.15     | 0.09 |
| 40 | 40 | 1½"  | 1.69 | 1.97 | 3.27 | 2.49 | 0.91 | 6.06 | 11.18 | G 2¼ | 0.18     | 0.12 |
|    | 50 | 2"   | 1.69 | 2.48 | 4.06 | 2.49 | 0.91 | 7.24 | 12.60 | G 2¾ | 0.23     | 0.12 |

Dimensions in inch

MG = diaphragm size

**1) Connection type**

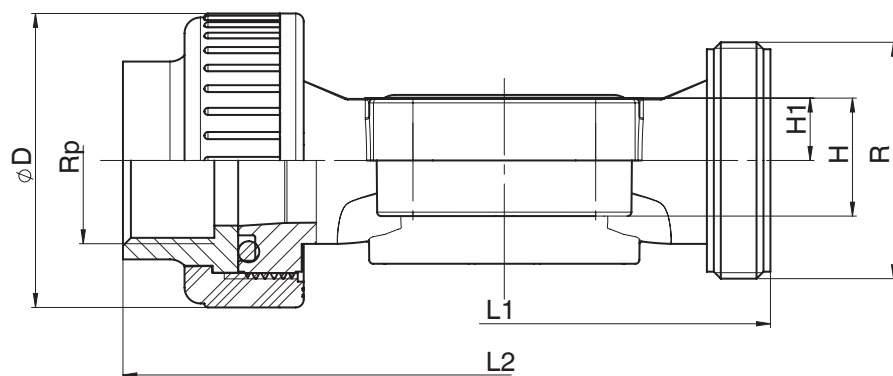
Code 78: Union end with insert (for IR butt welding) – DIN

**2) Valve body material**

Code 71: Inliner PP-H, grey, outliner PP, reinforced

Code 75: Inliner PVDF/outliner PP, reinforced

### Union end Rp (code 7R)



Connection type union end Rp (code 7R)<sup>1)</sup>, body material PVC-U (code 1)<sup>2)</sup>

| MG | DN | NPS  | øD   | H    | H1   | L1   | L2    | R    | Rp  |
|----|----|------|------|------|------|------|-------|------|-----|
| 20 | 15 | 1/2" | 1.69 | 1.42 | 0.39 | 4.25 | 5.75  | G 1  | 1/2 |
|    | 20 | 3/4" | 2.09 | 1.50 | 0.47 | 4.25 | 5.98  | G 1¼ | 3/4 |
|    | 25 | 1"   | 2.36 | 1.54 | 0.51 | 4.57 | 6.54  | G 1½ | 1   |
| 25 | 32 | 1¼"  | 2.91 | 1.61 | 0.59 | 5.28 | 7.56  | G 2  | 1¼  |
| 40 | 40 | 1½"  | 3.27 | 2.49 | 0.91 | 6.06 | 8.74  | G 2¼ | 1½  |
|    | 50 | 2"   | 4.06 | 2.49 | 0.91 | 7.24 | 10.47 | G 2¾ | 2   |

Dimensions in inch

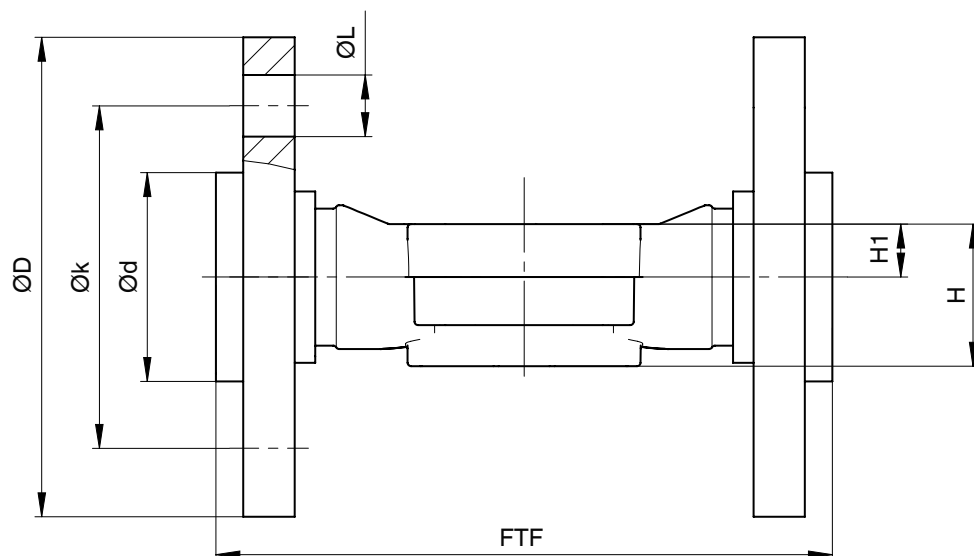
MG = diaphragm size

1) **Connection type**

Code 7R: Union end with insert (Rp threaded socket) – DIN

2) **Valve body material**

Code 1: PVC-U, grey

**Flange EN (code 4)****Connection type flange EN (code 4)<sup>1)</sup>, body material PVC-U (code 1)<sup>2)</sup>**

| MG  | DN  | NPS  | ød   | øD   | FTF   | H    | H1   | øk   | øL   | n |
|-----|-----|------|------|------|-------|------|------|------|------|---|
| 20  | 15  | 1/2" | 1.34 | 3.74 | 5.12  | 1.42 | 0.39 | 2.56 | 0.55 | 4 |
|     | 20  | 3/4" | 1.61 | 4.13 | 5.91  | 1.50 | 0.47 | 2.95 | 0.55 | 4 |
|     | 25  | 1"   | 1.97 | 4.53 | 6.30  | 1.54 | 0.51 | 3.35 | 0.55 | 4 |
| 25  | 32  | 1¼"  | 2.40 | 5.51 | 7.09  | 1.61 | 0.59 | 3.94 | 0.71 | 4 |
| 40  | 40  | 1½"  | 2.87 | 5.91 | 7.87  | 2.49 | 0.91 | 4.33 | 0.71 | 4 |
|     | 50  | 2"   | 3.54 | 6.50 | 9.06  | 2.49 | 0.91 | 4.92 | 0.71 | 4 |
| 50  | 65  | 2½"  | 4.17 | 7.28 | 11.42 | 3.10 | 1.53 | 5.71 | 0.71 | 4 |
| 80  | 80  | 3"   | 4.92 | 7.87 | 12.20 | 4.61 | 2.44 | 6.30 | 0.71 | 8 |
| 100 | 100 | 4"   | 5.91 | 8.66 | 13.78 | 5.51 | 2.95 | 7.09 | 0.71 | 8 |

**Connection type flange EN (code 4)<sup>1)</sup>, body materials PP (code 5), PVDF (code 20)<sup>2)</sup>**

| MG  | DN  | NPS | ød       |      | øD   | FTF   | H    | H1   | øk   | øL   | n |
|-----|-----|-----|----------|------|------|-------|------|------|------|------|---|
|     |     |     | Material |      |      |       |      |      |      |      |   |
|     |     |     | 5        | 20   |      |       |      |      |      |      |   |
| 50  | 65  | 2½" | 4.80     | 4.72 | 7.28 | 11.42 | 3.10 | 1.53 | 5.71 | 0.71 | 4 |
| 80  | 80  | 3"  | 5.43     | 4.92 | 7.87 | 12.20 | 4.61 | 2.44 | 6.30 | 0.71 | 8 |
| 100 | 100 | 4"  | 6.22     | 5.91 | 8.66 | 13.78 | 5.51 | 2.95 | 7.09 | 0.71 | 8 |

Dimensions in inch

MG = diaphragm size

n = number of bolts

**1) Connection type**

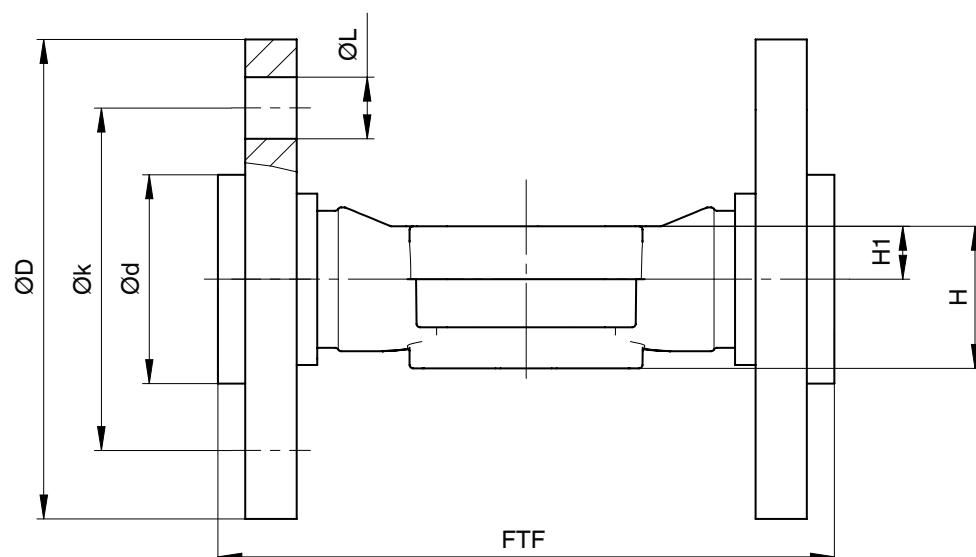
Code 4: Flange EN 1092, PN 10, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

**2) Valve body material**

Code 1: PVC-U, grey

Code 5: PP, reinforced

Code 20: PVDF



Connection type flange EN (code 4)<sup>1)</sup>, body material inliner/outliner (code 71, 75)<sup>2)</sup>

| MG | DN | NPS    | ød   | øD   | FTF  | H    | H1   | øk   | øL   | n |
|----|----|--------|------|------|------|------|------|------|------|---|
| 20 | 15 | 1/2"   | 1.77 | 3.74 | 5.12 | 1.42 | 0.39 | 2.56 | 0.55 | 4 |
|    | 20 | 3/4"   | 2.28 | 4.13 | 5.91 | 1.50 | 0.47 | 2.95 | 0.55 | 4 |
|    | 25 | 1"     | 2.68 | 4.53 | 6.30 | 1.54 | 0.51 | 3.35 | 0.55 | 4 |
| 25 | 32 | 1 1/4" | 3.07 | 5.51 | 7.09 | 1.61 | 0.59 | 3.94 | 0.71 | 4 |
| 40 | 40 | 1 1/2" | 3.46 | 5.91 | 7.87 | 2.49 | 0.91 | 4.33 | 0.71 | 4 |
|    | 50 | 2"     | 4.02 | 6.50 | 9.06 | 2.49 | 0.91 | 4.92 | 0.71 | 4 |

Dimensions in inch

MG = diaphragm size

n = number of bolts

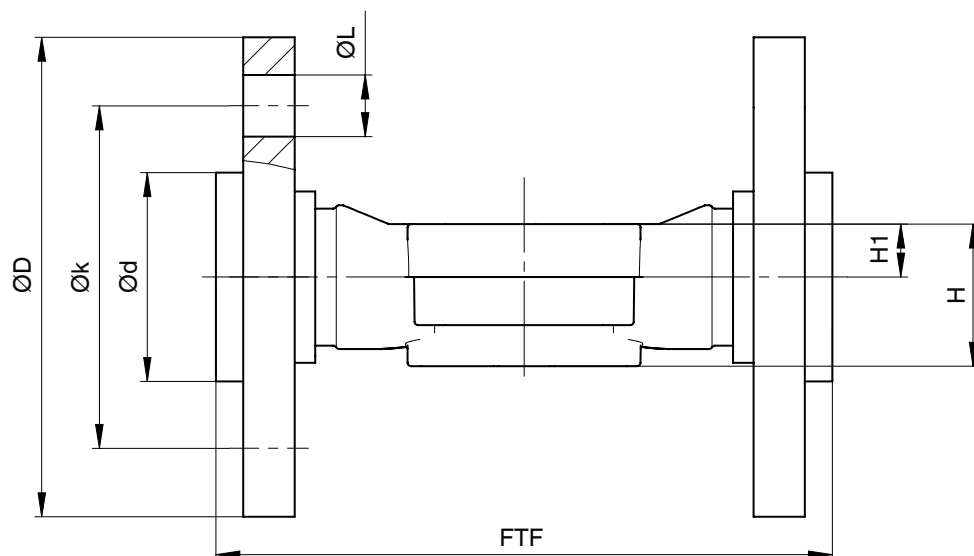
1) **Connection type**

Code 4: Flange EN 1092, PN 10, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

2) **Valve body material**

Code 71: Inliner PP-H, grey, outliner PP, reinforced

Code 75: Inliner PVDF/outliner PP, reinforced

**Flange ANSI Class (code 39)****Connection type flange ANSI (code 39)<sup>1)</sup>, body material PVC-U (code 1)<sup>2)</sup>**

| MG  | DN  | NPS  | ød   | øD   | FTF   | H    | H1   | øk   | øL   | n |
|-----|-----|------|------|------|-------|------|------|------|------|---|
| 20  | 15  | 1/2" | 1.34 | 3.74 | 5.12  | 1.42 | 0.39 | 2.36 | 0.63 | 4 |
|     | 20  | 3/4" | 1.61 | 4.13 | 5.91  | 1.50 | 0.47 | 2.76 | 0.63 | 4 |
|     | 25  | 1"   | 1.97 | 4.53 | 6.30  | 1.54 | 0.51 | 3.11 | 0.63 | 4 |
| 25  | 32  | 1¼"  | 2.40 | 5.51 | 7.09  | 1.61 | 0.59 | 3.50 | 0.63 | 4 |
| 40  | 40  | 1½"  | 2.87 | 5.91 | 7.87  | 2.49 | 0.91 | 3.86 | 0.63 | 4 |
|     | 50  | 2"   | 3.54 | 6.50 | 9.06  | 2.49 | 0.91 | 4.76 | 0.75 | 4 |
| 50  | 65  | 2½"  | 4.17 | 7.28 | 11.42 | 3.10 | 1.53 | 5.51 | 0.75 | 4 |
| 80  | 80  | 3"   | 4.92 | 7.87 | 12.20 | 4.61 | 2.44 | 5.98 | 0.75 | 4 |
| 100 | 100 | 4"   | 5.91 | 9.02 | 13.78 | 5.51 | 2.95 | 7.48 | 0.75 | 8 |

**Connection type flange ANSI (code 39)<sup>1)</sup>, body material PP (code 5), PVDF (code 20)<sup>2)</sup>**

| MG  | DN  | NPS | ød       |      | øD   | FTF   | H    | H1   | øk   | øL   | n |
|-----|-----|-----|----------|------|------|-------|------|------|------|------|---|
|     |     |     | Material |      |      |       |      |      |      |      |   |
|     |     |     | 5        | 20   |      |       |      |      |      |      |   |
| 50  | 65  | 2½" | 4.80     | 4.72 | 7.28 | 11.42 | 3.10 | 1.53 | 5.51 | 0.75 | 4 |
| 80  | 80  | 3"  | 5.24     | 4.92 | 7.87 | 12.20 | 4.61 | 2.44 | 5.98 | 0.75 | 4 |
| 100 | 100 | 4"  | 6.22     | 5.91 | 9.02 | 13.78 | 5.51 | 2.95 | 7.48 | 0.75 | 8 |

Dimensions in inch

MG = diaphragm size

n = number of bolts

**1) Connection type**

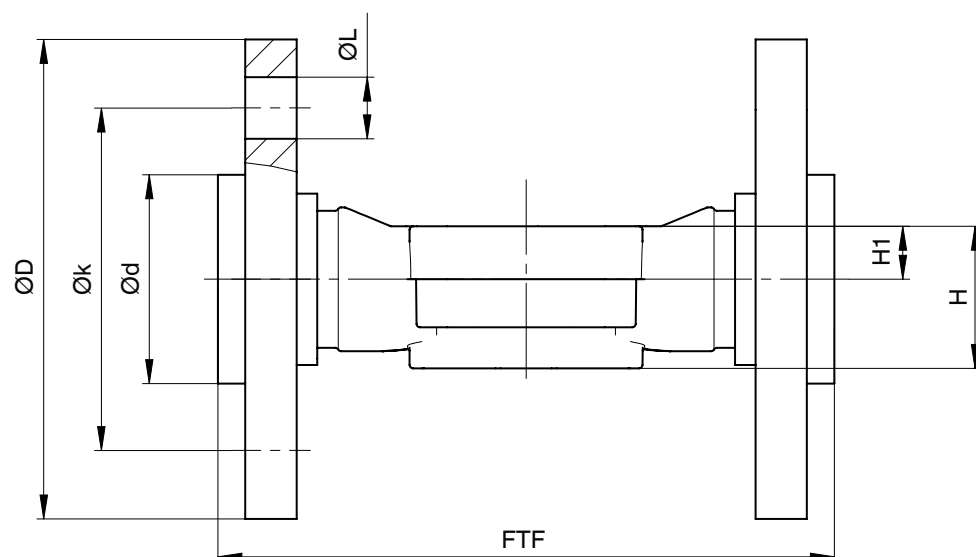
Code 39: Flange ANSI Class 125/150 RF, length only for body configuration D acc. to EN 558 series 1, ISO 5752, basic series 1

**2) Valve body material**

Code 1: PVC-U, grey

Code 5: PP, reinforced

Code 20: PVDF



Connection type flange ANSI (code 39)<sup>1)</sup>, inliner/outliner body material (code 71, 75)<sup>2)</sup>

| MG | DN | NPS    | ød   | øD   | FTF  | H    | H1   | øk   | øL   | n |
|----|----|--------|------|------|------|------|------|------|------|---|
| 20 | 15 | 1/2"   | 1.77 | 3.74 | 5.12 | 1.42 | 0.39 | 2.36 | 0.63 | 4 |
|    | 20 | 3/4"   | 2.13 | 4.13 | 5.91 | 1.50 | 0.47 | 2.76 | 0.63 | 4 |
|    | 25 | 1"     | 2.48 | 4.53 | 6.30 | 1.54 | 0.51 | 3.11 | 0.63 | 4 |
| 25 | 32 | 1 1/4" | 2.87 | 5.51 | 7.09 | 1.61 | 0.59 | 3.50 | 0.63 | 4 |
| 40 | 40 | 1 1/2" | 3.23 | 5.91 | 7.87 | 2.49 | 0.91 | 3.86 | 0.63 | 4 |
|    | 50 | 2"     | 4.02 | 6.50 | 9.06 | 2.49 | 0.91 | 4.76 | 0.75 | 4 |

Dimensions in inch

MG = diaphragm size

n = number of bolts

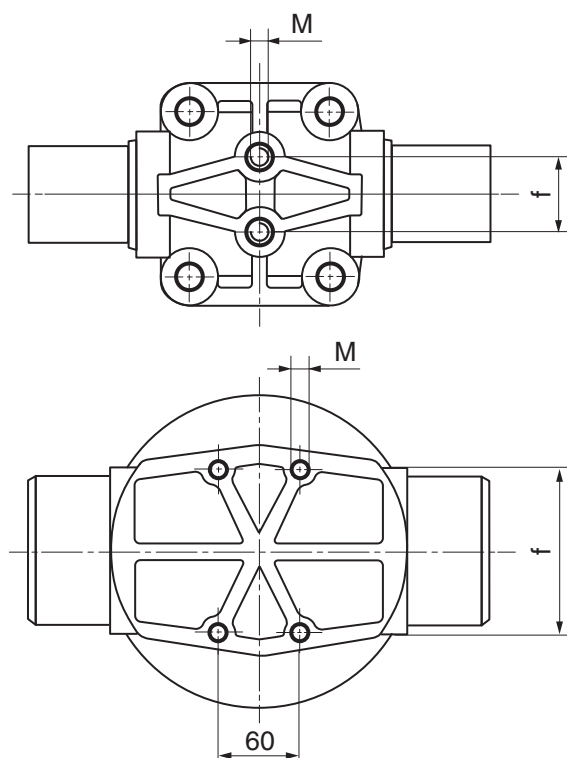
1) **Connection type**

Code 39: Flange ANSI Class 125/150 RF, length only for body configuration D acc. to EN 558 series 1, ISO 5752, basic series 1

2) **Valve body material**

Code 71: Inliner PP-H, grey, outliner PP, reinforced

Code 75: Inliner PVDF/outliner PP, reinforced

**Valve body mounting**

| MG  | DN      | M<br>Connection code 0, 4, 7,<br>7R, 20, 33, 39, 3M, 3T,<br>78 | M<br>Connection code 30 | f    |
|-----|---------|----------------------------------------------------------------|-------------------------|------|
| 20  | 15 – 25 | M6                                                             | M6 *                    | 0.98 |
| 25  | 32      | M6                                                             | M6 *                    | 0.98 |
| 40  | 40 - 50 | M8                                                             | M8 *                    | 1.75 |
| 50  | 65      | M8                                                             | M8 *                    | 1.75 |
| 80  | 80      | M12                                                            | 1/2" **                 | 3.94 |
| 100 | 100     | M10                                                            | 3/4" **                 | 4.72 |

\* Inch thread on request

\*\* Metric thread on request



GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG  
Fritz-Müller-Straße 6-8, 74653 Ingelfingen-Criesbach, Germany  
Tel. +49 (0)7940 123-0 · [info@gemue.de](mailto:info@gemue.de)  
[www.gemu-group.com](http://www.gemu-group.com)