

## GEMÜ 687

### Pneumatically operated diaphragm valve



#### Features

- Hermetic separation between medium and actuator
- CIP/SIP capable
- Suitable for particulate and abrasive media
- Stainless steel body suitable for corrosive environments
- Wide range of adaptation options for add-on components and accessories

#### Description

The GEMÜ 687 2/2-way diaphragm valve has a low-maintenance membrane actuator and is pneumatically operated. The valve has a metal distance piece. Normally Closed (NC), Normally Open (NO) and Double Acting (DA) control functions are available.

#### Technical specifications

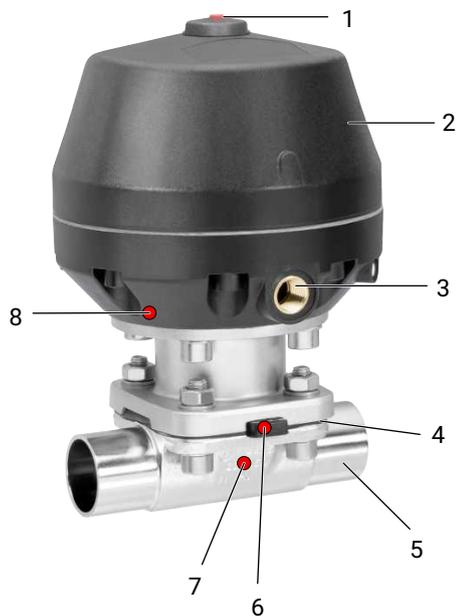
- **Media temperature:** -20 to 120 °C
- **Sterilization temperature:** max. 150 °C
- **Ambient temperature:** -10 to 60 °C
- **Operating pressure :** 0 to 10 bar
- **Nominal sizes:** DN 10 to 100
- **Body configurations:** 2/2-way body | Tank valve body | T-body
- **Connection types:** Clamp | Flange | Spigot | Threaded connection
- **Connection standards:** ANSI | ASME | BS | DIN | EN | ISO | JIS | NPT | SMS
- **Body materials:** 1.4408, investment casting material | 1.4408, investment casting material, PFA lined | 1.4435 (316L), forged material | 1.4435 (BN2), forged material | 1.4435, investment casting material | 1.4539 (904L), forged material | EN-GJS-400-18-LT (GGG 40.3), PFA lined | EN-GJS-400-18-LT (GGG 40.3), PP lined | EN-GJS-400-18-LT, hard rubber lined
- **Diaphragm materials:** EPDM | FKM | PTFE
- **Conformities:** 3A | Belgaqua | CRN | EAC | FDA | FMEDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | TA Luft (German Clean Air Act) | USP

Technical data depends on the respective configuration



## Product description

### Construction



Position	Name	Materials
1	Position indicator	
2	Membrane actuator	Cast iron, PP reinforced
3	Control air connector	
4	Diaphragm	EPDM FKM PTFE/EPDM (one-piece, two-piece) PTFE/PVDF/EPDM (three-piece)
5	Valve body	EN-GJS-400-18-LT (GGG 40.3), PFA lined EN-GJS-400-18-LT (GGG 40.3), PP lined EN-GJS-400-18-LT (GGG 40.3), hard rubber lined 1.4408, investment casting 1.4408, PFA lined 1.4435 (F316L), forged body 1.4435 (BN2), forged body, $\Delta Fe < 0.5\%$ 1.4435, investment casting 1.4539, forged body
6	CONEXO diaphragm RFID chip (see Conexo information)	
7	CONEXO body RFID chip (see Conexo information)	
8	CONEXO actuator RFID chip (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".

## Availabilities

Combinations that are not listed in the availability can be tested via the configurator in the GEMÜ online shop.

### Availability of grades of surface finish

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

Process contact surfaces	Mechanically polished <sup>2)</sup>		Electropolished	
	Hygiene class DIN 11866	Code	Hygiene 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

Media wetted internal surface finishes in accordance with 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

Process contact surfaces	Mechanically polished <sup>2)</sup>	
	Hygiene class DIN 11866	Code
Ra ≤ 6.30 µm	-	1500
Ra ≤ 0.80 µm	H3	1502
Ra ≤ 0.60 µm <sup>5)</sup>	-	1507

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

- 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.

## Availability of valve bodies

### Spigot

MG	DN	Connection type code <sup>1)</sup>																
		0	16	17	18	35	36	37	55	59	60	63	64	65				
		Material code <sup>2)</sup>																
		40, 42, F4	40, 42, F4	C3	40, 42, F4	40, 42, F4	40, 42, F4	40, 42, F4	C3	40, 42, F4	40, 42, F4	C3	40, 42, F4	C3	40, 42, F4	40, 42, F4	40, 42, F4	40, 42, F4
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
40	32	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
50	50	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X
	65	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	-	-
80	65	-	-	-	X	-	X	X	-	X	-	-	X	-	X	X	X	X
	80	-	-	-	X	-	X	X	-	X	-	-	X	-	X	X	X	X
100	100	-	-	-	X	-	X	X	-	X	-	-	X	-	X	X	X	X

MG = diaphragm size, X = standard

#### 1) Connection type

Code 0: Spigot DIN

Code 16: Spigot DIN EN 10357 series B (2014 edition; formerly DIN 11850 series 1)

Code 17: Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2

Code 18: Spigot DIN 11850 series 3

Code 35: Spigot JIS-G 3447

Code 36: Spigot JIS-G 3459 schedule 10s

Code 37: Spigot SMS 3008

Code 55: Spigot BS 4825, Part 1

Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 issue)/DIN 11866 series C

Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 issue)/DIN 11866 series B

Code 63: Spigot ANSI/ASME B36.19M schedule 10s

Code 64: Spigot ANSI/ASME B36.19M schedule 5s

Code 65: Spigot ANSI/ASME B36.19M schedule 40s

#### 2) Valve body material

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

Code C3: 1.4435, investment casting

Code F4: 1.4539 / UNS N08904, forged body

**Threaded connection**

MG	DN	Connection type code <sup>1)</sup>		
		1	31	6, 6K
		Material code <sup>2)</sup>		
		37	37	40, 42
10	10	-	-	W
	12	X	-	-
	15	X	-	W
25	15	X	X	W
	20	X	X	W
	25	X	X	W
40	32	X	X	W
	40	X	X	W
50	50	X	X	W
80	65	-	-	W
	80	-	-	W

MG = diaphragm size, X = standard

W = welded assembly

1) **Connection type**

Code 1: Threaded socket DIN ISO 228

Code 31: NPT female thread

Code 6: Threaded spigot DIN 11851

Code 6K: Cone spigot and union nut DIN 11851

2) **Valve body material**

Code 37: 1.4408, investment casting

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

## Flange

MG	DN	Connection type code <sup>1)</sup>							
		8			34	38	39		
		Material code <sup>2)</sup>							
		17, 18, 39, 83	40, 42	C3	39	17, 18 <sup>3)</sup> , 39, 83	17, 18, 39, 83	40, 42	C3
25	15	X	W	W	X	-	X	W	W
	20	X	W	W	X	X	X	W	W
	25	X	W	W	X	X	X	W	W
40	32	X	W	W	X	-	X	W	W
	40	X	W	W	X	X	X	W	W
50	50	X	W	W	X	X	X	W	W
80	65	-	W	-	-	-	-	W	-
	80	X	W	-	-	X	X	W	-
100	100	X	W	-	-	X	X	W	-

MG = diaphragm size, X = standard

W = welded assembly

### 1) Anschlussart

Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D

Code 34: Flange JIS B2220, 10K, RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D

Code 38: Flange ANSI Class 150 RF, face-to-face dimension FTF MSS SP-88, length only for body configuration D

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

### 2) Valve body material

Code 17: EN-GJS-400-18-LT (GGG 40.3), PFA lined

Code 18: EN-GJS-400-18-LT (GGG 40.3), PP lined

Code 39: 1.4408, PFA lined

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

Code 83: EN-GJS-400-18-LT (GGG 40.3), hard rubber lined

Code C3: 1.4435, investment casting

### 3) On request

**Clamp**

MG	DN	Connection type code <sup>1)</sup>				
		80, 8P	82	88, 8T	8A	8E
		Material code <sup>2)</sup>				
40, 42, F4						
10	10	-	K	-	K	-
	15	K	W	K	K	-
	20	K	-	K	-	-
25	15	-	W	-	K	-
	20	K	K	K	K	-
	25	K	K	K	K	K
40	32	-	W	-	K	K
	40	K	W	K	K	K
50	50	K	W	K	K	K
	65	W	-	W	-	W
80	65	K	K	K	K	K
	80	K	W	K	W	K
100	100	W	W	W	W	W

MG = diaphragm size

K = connections completely machined (not welded)

W = welded assembly

1) **Connection type**

Code 80: Clamp ASME BPE, face-to-face dimension FTF ASME BPE, length only for body configuration D

Code 82: Clamp DIN 32676 series B, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code 88: Clamp ASME BPE, for pipe ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code 8A: Clamp DIN 32676 series A, face-to-face dimension FTF acc. to EN 558 series 7, length only for body configuration D

Code 8E: Clamp ISO 2852 for pipe ISO 2037, clamps SMS 3017 for pipe SMS 3008, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code 8P: Clamp DIN 32676 series C, face-to-face dimension FTF ASME BPE, length only for body configuration D

Code 8T: Clamp DIN 32676 series C, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

2) **Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

Code F4: 1.4539 / UNS N08904, forged body

**Aseptic connections**

Dia- phrag m size	DN	Connection type code <sup>1)</sup>								
		Flange			Threaded connection			Clamp		
		A1, A2	A4, A5	A7, A8	C1, C2	C4, C5	C7, C8	E1, E2	E4, E5	E7, E8
		Material code 40, 42 <sup>2)</sup>								
10	10	X	X	-	X	X	-	X	X	-
	15	X	X	X	X	X	X	X	X	X
	20	-	-	X	-	-	X	-	-	X
25	15	X	X	X	X	X	X	X	X	X
	20	X	X	X	X	X	X	X	X	X
	25	X	X	X	X	-	X	X	X	X
40	32	X	X		X	X	-	X	X	-
	40	X	X	X	X	X	X	X	X	X
50	50	X	X	X	X	X	X	X	X	X
	65	-	-	X	-	-	X	-	-	X
80	65	X	X	X	X	X	X	X	X	X
	80	X	X	X	X	X	X	X	X	X
100	100	X	X	X	X	-	X	X	-	X

MG = diaphragm size

1) **Connection type**

Code A1: Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

Code A2: Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

Code A4: Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

Code A5: Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

Code A7: Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series C and ASME BPE, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

Code A8: Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series C and ASME BPE, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

Code C1: Aseptic threaded spigot DIN 11864-GS, for pipe DIN 11866 series A and EN 10357 series A

Code C2: Aseptic union nut with grooved union nut DIN 11864-BS, for pipe DIN 11866 series A and EN 10357 series A

Code C4: Aseptic threaded spigot DIN 11864-GS, for pipe DIN 11866 series B and EN ISO 1127

Code C5: Aseptic union nut with grooved union nut DIN 11864-BS, for pipe DIN 11866 series B and EN ISO 1127

Code C7: Aseptic threaded spigot DIN 11864-GS for pipe DIN 11866 series C and ASME BPE

Code C8: Aseptic union nut with grooved union nut DIN 11864-BS, for pipe DIN 11866 series C and ASME BPE

Code E1: Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code E2: Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code E4: Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code E5: Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code E7: Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series C/ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code E8: Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series C/ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

2) **Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

## Availability of product conformity

	Diaphragm material code <sup>1)</sup>	Body material code <sup>2)</sup>
<b>Food</b>		
3A	54, 5M	-
<b>Drinking water</b>		
Belgaqua (B)	28	37

1) **Diaphragm material**

Code 28: EPDM

Code 54: PTFE/EPDM one-piece

Code 5M: PTFE/EPDM two-piece

2) **Valve body material**

Code 37: 1.4408, investment casting

**Availability of diaphragm materials**

Diaphragm size	Elastomer	PTFE
10	4, 13, 17, 19, 28, 29	54, 5M, 71
25		54, 5M, 5Y, 71
40		54, 5M, 71
50		54, 5M, 71
80		54, 5M, 71
100		54, 5M, 71

## 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, pneumatically operated, plastic actuator, stainless steel distance piece	687

2 DN	Code
DN 10	10
DN 12	12
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
Tank bottom valve body	B
Body configuration code B: Dimensions and designs on request	
2/2-way body	D
T body	T
Body configuration code T: Dimensions on request	

4 Connection type	Code
<b>Spigot</b>	
Spigot DIN	0
Spigot DIN EN 10357 series B (2014 edition; formerly DIN 11850 series 1)	16
Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2	17
Spigot DIN 11850 series 3	18
Spigot JIS-G 3447	35
Spigot JIS-G 3459 schedule 10s	36
Spigot SMS 3008	37
Spigot BS 4825, Part 1	55
Spigot ASME BPE/DIN EN 10357 series C (from 2022 issue)/DIN 11866 series C	59
Spigot ISO 1127/DIN EN 10357 series C (2014 issue)/DIN 11866 series B	60
Spigot ANSI/ASME B36.19M schedule 10s	63
Spigot ANSI/ASME B36.19M schedule 5s	64
Spigot ANSI/ASME B36.19M schedule 40s	65
<b>Threaded connection</b>	
Threaded socket DIN ISO 228	1
NPT female thread	31
Threaded spigot DIN 11851	6

4 Connection type	Code
Cone spigot and union nut DIN 11851	6K
<b>Flange</b>	
Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D	8
Flange JIS B2220, 10K, RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D	34
Flange ANSI Class 150 RF, face-to-face dimension FTF MSS SP-88, length only for body configuration D	38
Flange ANSI Class 125/150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D	39
<b>Clamp</b>	
Clamp ASME BPE, face-to-face dimension FTF ASME BPE, length only for body configuration D	80
Clamp DIN 32676 series B, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	82
Clamp ASME BPE, for pipe ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	88
Clamp DIN 32676 series A, face-to-face dimension FTF acc. to EN 558 series 7, length only for body configuration D	8A
Clamp ISO 2852 for pipe ISO 2037, clamps SMS 3017 for pipe SMS 3008, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	8E
Clamp DIN 32676 series C, face-to-face dimension FTF ASME BPE, length only for body configuration D	8P
Clamp DIN 32676 series C, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	8T
<b>Aseptic connections</b>	
<b>Flange</b>	
Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 1, length only for body configuration D	A1
Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 1, length only for body configuration D	A2

4 Connection type	Code
Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 1, length only for body configuration D	A4
Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 1, length only for body configuration D	A5
Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series C and ASME BPE, face-to-face dimension FTF EN 558 series 1, length only for body configuration D	A7
Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series C and ASME BPE, face-to-face dimension FTF EN 558 series 1, length only for body configuration D	A8
<b>Threaded connection</b>	
Aseptic threaded spigot DIN 11864-GS, for pipe DIN 11866 series A and EN 10357 series A	C1
Aseptic union nut with grooved union nut DIN 11864-BS, for pipe DIN 11866 series A and EN 10357 series A	C2
Aseptic union DIN 11864-V, for pipe DIN 11866 series A and EN 10357 series A	C3
Aseptic threaded spigot DIN 11864-GS, for pipe DIN 11866 series B and EN ISO 1127	C4
Aseptic union nut with grooved union nut DIN 11864-BS, for pipe DIN 11866 series B and EN ISO 1127	C5
Aseptic union DIN 11864-V, for pipe DIN 11866 series B and EN ISO 1127	C6
Aseptic threaded spigot DIN 11864-GS for pipe DIN 11866 series C and ASME BPE	C7
Aseptic union nut with grooved union nut DIN 11864-BS, for pipe DIN 11866 series C and ASME BPE	C8
<b>Clamp</b>	
Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	E1
Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	E2
Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	E4
Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	E5
Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series C/ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	E7
Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series C/ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	E8

5 Valve body material	Code
<b>SG iron material</b>	
EN-GJS-400-18-LT (GGG 40.3), PFA lined	17
EN-GJS-400-18-LT (GGG 40.3), PP lined	18
EN-GJS-400-18-LT (GGG 40.3), hard rubber lined	83
<b>Investment casting material</b>	
1.4408, investment casting	37
1.4408, PFA lined	39
1.4435, investment casting	C3
<b>Forged material</b>	
1.4435 (F316L), forged body	40
1.4435 (BN2), forged body, $\Delta$ Fe < 0.5%	42
1.4539 / UNS N08904, forged body	F4

6 Diaphragm material	Code
<b>Elastomer</b>	
FKM	4
EPDM	13
EPDM	17
EPDM	19
EPDM	28
EPDM	29
<b>PTFE</b>	
PTFE/EPDM one-piece	54
PTFE/EPDM two-piece	5M
PTFE/EPDM two-piece for lining bodies	5Y
PTFE/PVDF/EPDM three-piece	71
<b>Note:</b> The PTFE/EPDM diaphragm (code 5M) is available from diaphragm size 25.	
<b>Note:</b> The PTFE/EPDM diaphragm (code 5Y) is available for diaphragm size 25 and can only be combined with PFA-lined valve bodies.	
<b>Note:</b> The PTFE/PVDF/EPDM diaphragm (code 71) can only be combined with PFA lined valve bodies.	

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

8 Actuator version	Code
<b>DN 10–20, diaphragm size 10</b>	
Actuator size B/N, control air connector 90° offset to flow direction	B/N
<b>DN 15 - 25, diaphragm size 25</b>	
Actuator size F/M, control air connector 90° offset to flow direction, adapted control and operating pressure	F/M
Actuator size F/N, control air connector 90° offset to flow direction	F/N
Actuator size FRM, control air connector in-line with flow direction, adapted control and operating pressure	FRM

Order data

8 Actuator version	Code
Actuator size FRN, control air connector in-line with flow direction	FRN
<b>DN 32 - 40, diaphragm size 40</b>	
Actuator size H/M, control air connector 90° offset to flow direction, adapted control and operating pressure	H/M
Actuator size H/N, control air connector 90° offset to flow direction	H/N
Actuator size HRM, control air connector 90° offset to flow direction	HRM
Actuator size HRN, control air connector in-line with flow direction	HRN
<b>DN 50–65, diaphragm size 50</b>	
Actuator size J/M, control air connector 90° offset to flow direction, adapted control and operating pressure	J/M
Actuator size J/N, control air connector 90° offset to flow direction	J/N
Actuator size JRM, control air connector in-line with flow direction, adapted control and operating pressure	JRM
Actuator size JRN, control air connector in-line with flow direction	JRN
<b>DN 65–80, diaphragm size 80</b>	
Actuator size 4/N, control air connector 90° offset to flow direction	4/N
Actuator size 4RN, control air connector in-line with flow direction	4RN
Actuator size 6A, control air connector 90° offset to flow direction, adapted control and operating pressure	6A
Actuator size 6A2, control air connector 90° offset to flow direction, adapted control and operating pressure	6A2
<b>DN 100, diaphragm size 100</b>	
Actuator size 5/N, control air connector 90° offset to flow direction	5/N
Actuator size 5RN, control air connector in-line with flow direction	5RN
Actuator size 7A, control air connector 90° offset to flow direction, adapted control and operating pressure	7A
Actuator size 7A3 control air connector 90° offset to flow direction, adapted control and operating pressure	7A3

9 Surface	Code
Ra ≤ 6.3 µm for media wetted surfaces, mechanically polished internal	1500
Ra ≤ 0.8 µm for media wetted surfaces, in accordance with DIN 11866 H3, mechanically polished internal	1502
Ra ≤ 0.8 µm for media wetted surfaces, in accordance with DIN 11866 HE3, electropolished internal/external	1503
Ra ≤ 0.6 µm for media wetted surfaces, mechanically polished internal	1507
Ra ≤ 0.6 µm for media wetted surfaces, electropolished internal/external	1508

9 Surface	Code
Ra ≤ 0.25 µm for media wetted surfaces *), in accordance with DIN 11866 HE5, electropolished internal/external, *) for inner pipe diameter ≤ 6 mm, in spigot Ra ≤ 0.38 µm	1516
Ra ≤ 0.25 µm for media wetted surfaces *), in accordance with DIN 11866 H5, mechanically polished internal, *) for inner pipe diameter < 6 mm, in spigots Ra ≤ 0.38 µm	1527
Ra ≤ 0.4 µm for media wetted surfaces, in accordance with DIN 11866 H4, mechanically polished internal	1536
Ra ≤ 0.4 µm for media wetted surfaces, in accordance with DIN 11866 HE4, electropolished internal/external	1537
Ra max. 0.51 µm (20 µin.) for media wetted surfaces, in accordance with ASME BPE SF1, mechanically polished internal	SF1
Ra max. 0.64 µm (25 µin.) for media wetted surfaces, in accordance with ASME BPE SF2, mechanically polished internal	SF2
Ra max. 0.76 µm (30 µin.) for media wetted surfaces, in accordance with ASME BPE SF3, mechanically polished internal	SF3
Ra max. 0.38 (15 µin.) µm for media wetted surfaces, in accordance with ASME BPE SF4, electropolished internal/external	SF4
Ra max. 0.51 µm (20 µin.) for media wetted surfaces, in accordance with ASME BPE SF5, electropolished internal/external	SF5
Ra max. 0.64 µm (25 µin.) for media wetted surfaces, in accordance with ASME BPE SF6, electropolished internal/external	SF6

10 Special version	Code
Without	
BELGAQUA certification	B
Special version for 3A	M
Special version for oxygen, maximum medium temperature: 60 °C	S

11 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

**Order example**

Ordering option	Code	Description
1 Type	687	Diaphragm valve, pneumatically operated, plastic actuator, stainless steel distance piece
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	60	Spigot ISO 1127/DIN EN 10357 series C (2014 issue)/DIN 11866 series B
5 Valve body material	40	1.4435 (F316L), forged body
6 Diaphragm material	5M	PTFE/EPDM two-piece
7 Control function	1	Normally closed (NC)
8 Actuator version	F/N	Actuator size F/N, control air connector 90° offset to flow direction
9 Surface	1503	Ra ≤ 0.8 µm for media wetted surfaces, in accordance with DIN 11866 HE3, electropolished internal/external
10 Special version	M	Special version for 3A
11 CONEXO		Without

## 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.  
For special oxygen version (code S): only gaseous oxygen

**Control medium:** Inert gases

### Temperature

#### Media temperature:

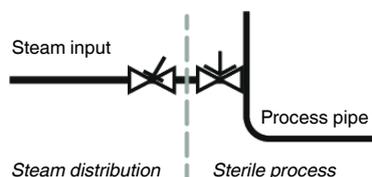
Diaphragm size	Diaphragm material	Valve body material	Standard	Special version for oxygen
10, 25, 40, 50, 80, 100	EPDM (code 3A/13)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	-10 to 100 °C	0 to 60 °C
10, 25, 40, 50, 80, 100	FKM (code 4A/4)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	-10 to 90 °C	-
10, 25, 40, 50, 80, 100	EPDM (code 17)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	-10 to 100 °C	0 to 60 °C
10, 25, 40, 50, 80, 100	EPDM (code 19)	1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4539, forged body (code F4)	-10 to 100 °C	0 to 60 °C
10, 25, 40, 50, 80, 100	EPDM (code 19)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, forged body (code 40, 42) 1.4435, block material (code 41, 43)	-20 to 130 °C*	0 to 60 °C
10, 25, 40, 50, 80, 100	EPDM (code 28)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, forged body (code 40, 42) 1.4435, block material (code 41, 43)	-10 to 85 °C	-
10, 25, 40, 50, 80, 100	EPDM (code 29)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, forged body (code 40, 42) 1.4435, block material (code 41, 43)	-10 to 100 °C	-
10, 25, 40, 50, 80, 100	PTFE/EPDM (code 54)	1.4408, investment casting (code 37) 1.4435, investment casting (code C3) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	-10 to 100 °C	0 to 60 °C
10, 25, 40, 50, 80, 100	PTFE/EPDM (code 54)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39)	-20 to 130 °C*	0 to 60 °C

Diaphragm size	Diaphragm material	Valve body material	Standard	Special version for oxygen
		1.4435, forged body (code 40, 42) 1.4435, block material (code 41, 43)	-30 to 130 °C*	0 to 60 °C
10, 25, 40, 50, 80, 100	PTFE/PVDF/EPDM (code 71)	1.4408, PFA lined (code 39)	-10 to 100 °C	-
25, 40, 50, 80, 100	PTFE/EPDM (code 5M)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	-10 to 100 °C	0 to 60 °C
25, 40, 50, 80, 100	PTFE/EPDM (code 5M)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39)	-20 to 130 °C*	-
		1.4435, forged body (code 40, 42) 1.4435, block material (code 41, 43)	-30 to 130 °C*	-
25	PTFE/EPDM (code 5Y)	1.4408, PFA lined (code 39)	-10 to 100 °C	-

\* The service life of the diaphragms is reduced at temperatures below -10 °C and above +100 °C. The maintenance cycles must be carried out in shorter time intervals accordingly.

<b>Sterilization temperature:</b>	EPDM (code 3A/13)	max. 150 °C, max. 60 min per cycle
	FKM (code 4/4A)	not applicable
	EPDM (code 17)	max. 150 °C, max. 180 min per cycle
	EPDM (code 19)	max. 150 °C, max. 180 min per cycle
	EPDM (code 28)	not applicable
	EPDM (code 29)	not applicable
	PTFE/EPDM (code 54)	max. 150 °C, constant temperature per cycle
	PTFE/PVDF/EPDM (code 71)	not applicable
	PTFE/EPDM (code 5M)	max. 150 °C, constant temperature per cycle
	PTFE/EPDM (Code 5Y)	Max. 150 °C, constant temperature per cycle

The sterilization temperature is only valid for steam (saturated steam) or superheated water. If the sterilization 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. PTFE diaphragms can also be used as steam barriers; however, this will reduce their service life. This also applies to PTFE diaphragms exposed to high temperature fluctuations. 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:**

Diaphragm size	Diaphragm material	Valve body material	Standard	Special version for oxygen
10, 25, 40, 50, 80, 100	EPDM (code 3A/13)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	0 to 60 °C	0 to 60 °C
10, 25, 40, 50, 80, 100	EPDM (code 4A/4)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	0 to 60 °C	-
10, 25, 40, 50, 80, 100	EPDM (code 17)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	0 to 60 °C	0 to 60 °C
10, 25, 40, 50, 80, 100	EPDM (code 19)	1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4539, forged body (code F4)	0 to 60 °C	0 to 60 °C
10, 25, 40, 50, 80, 100	EPDM (code 19)	1.4408, investment casting (code 37) 1.4435, forged body (code 40, 42) 1.4435, block material (code 41, 43, 44)	-20 to 60 °C*	0 to 60 °C
10, 25, 40, 50, 80, 100	EPDM (code 28)	1.4408, investment casting (code 37) 1.4435, forged body (code 40, 42) 1.4435, block material (code 41, 43, 44)	-20 to 60 °C*	-
10, 25, 40, 50, 80, 100	EPDM (code 29)	1.4408, investment casting (code 37) 1.4435, forged body (code 40, 42) 1.4435, block material (code 41, 43, 44)	-20 to 60 °C*	-
10, 25, 40, 50, 80, 100	PTFE/EPDM (code 54)	1.4408, investment casting (code 37) 1.4435, investment casting (code C3) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	0 to 60 °C	0 to 60 °C
10, 25, 40, 50, 80, 100	PTFE/EPDM (code 54)	1.4408, PFA lined (code 39) 1.4435, forged body (code 40, 42)	-20 to 60 °C*	0 to 60 °C
10, 25, 40, 50, 80, 100	PTFE/PVDF/EPDM (code 71)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43)	0 to 60 °C	0 to 60 °C
25, 40, 50, 80, 100	PTFE/EPDM (code 5M)	1.4435, investment casting (code C3) 1.4539, forged body (code F4) 1.4435, block material (code 41, 43, 44)	0 to 60 °C	0 to 60 °C
25, 40, 50, 80, 100	PTFE/EPDM (code 5M)	1.4408, investment casting (code 37) 1.4408, PFA lined (code 39) 1.4435, forged body (code 40, 42)	-20 to 60 °C*	0 to 60 °C
25	PTFE/EPDM (code 5Y)	1.4408, PFA lined (code 39)	-20 to 60 °C	-

\* The service life of the diaphragms is reduced at temperatures below -10 °C and above +100 °C. The maintenance cycles must be carried out in shorter time intervals accordingly.

**Control medium temperature:** 0 – 40 °C

**Storage temperature:** 0 – 40 °C

## Pressure

**Operating pressure:**

MG	DN	Actuator version code	Control function 1		Control function 2 + 3	
			Diaphragm material			
			EPDM/FKM	PTFE	EPDM/FKM	PTFE
10	10, 15, 20	B/N	0 - 10	0 - 6	0 - 6	0 - 6
25	15, 20, 25	F/M, FRM	0 - 6	0 - 6	-	-
		F/N, FRN	0 - 10	0 - 10	0 - 10	0 - 10
40	32, 40	H/M, HRM	0 - 6	0 - 6	-	-
		H/N, HRN	0 - 10	0 - 10	0 - 10	0 - 10
50	50, 65	J/M, JRM	0 - 6	0 - 6	-	-
		J/N, JRN	0 - 10	0 - 10	0 - 10	0 - 10
80	65, 80	4/N, 4RN	0 - 8	0 - 5	0 - 8	0 - 6
		6A	-	-	-	0 - 10
		6A2	-	0 - 10	-	-
100	100	5/N, 5RN	0 - 6	0 - 4	0 - 6	0 - 4
		7A	-	-	-	0 - 10
		7A3	-	0 - 10	-	-

MG = diaphragm size

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.

**High vacuum:** 0.05 mbar (absolute)\*

\* The service life of the diaphragms is reduced in a high vacuum. The maintenance cycles must be carried out in shorter time intervals accordingly.

Available under the following conditions:

- Control function 1
- Diaphragm codes 54, 5M, 17 and 19
- Diaphragm sizes 10–100
- Material codes for valve body 40, 42 and F4

**Pressure rating:** PN 16

**Leakage rate:** Leakage rate A to P11/P12 EN 12266-1

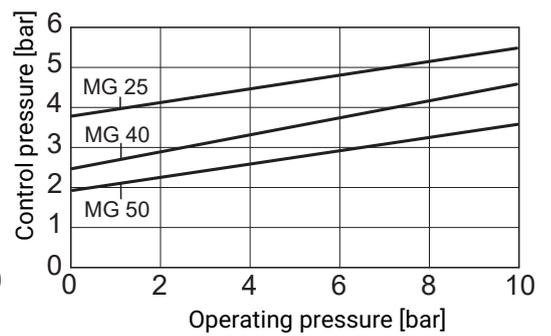
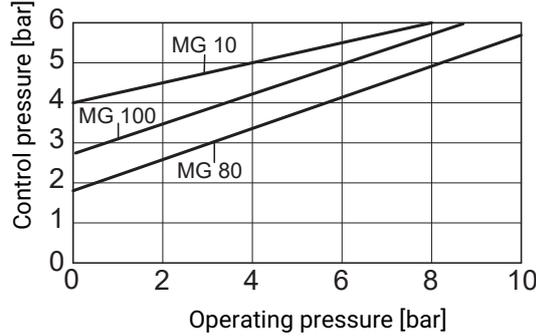
**Control pressure:**

MG	DN	Actuator version code	Control function 1	Control function 2	Control function 3
10	10, 15, 20	B/N	3.5 - 7.0	max. 6.0	max. 5.0
25	15, 20, 25	F/M, FRM	3.8 - 6.0	-	-
		F/N, FRN	5.5 - 7.0	max. 5.5	max. 5.5
40	32, 40	H/M, HRM	3.8 - 6.0	-	-
		H/N, HRN	5.5 - 7.0	max. 5.5	max. 5.5
50	50, 65	J/M, JRM	3.8 - 6.0	-	-
		J/N, JRN	5.5 - 7.0	max. 5.0	max. 5.0
80	65, 80	4/N, 4RN	5.5 - 7.0	max. 5.0	max. 4.5
		6A	-	max. 3.0	max. 3.0
		6A2	4.0 - 7.0	-	-
100	100	5/N, 5RN	5.5 - 7.0	max. 5.0	max. 4.5
		7A	-	max. 3.5	max. 3.5
		7A3	4.5 - 7.0	-	-

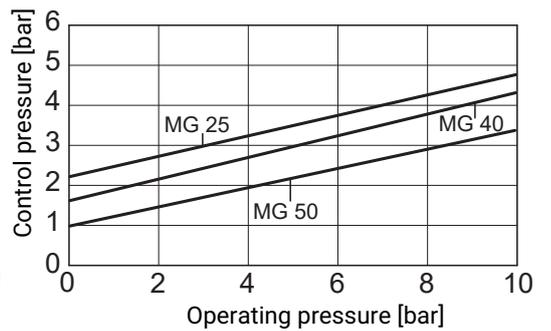
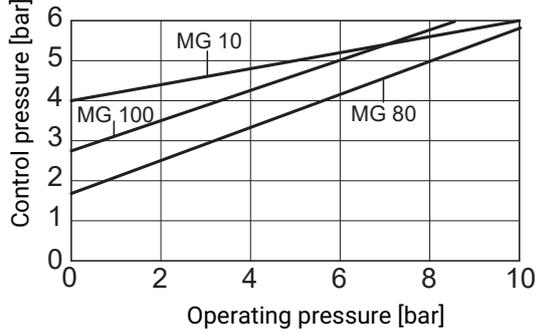
MG = diaphragm size  
 All pressures are gauge pressures.

**GEMÜ 687 design: Control pressure – operating pressure – diagram – control function 2 and 3**

**PTFE diaphragm**



**Elastomer diaphragm**



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

**Filling volume:**

Actuator version (code)	Control function 1	Control function 2
<b>B/N</b>	0.03	0.02
<b>F/M, FRM</b>	0.20	-
<b>F/N, FRN</b>	0.20	0.16
<b>H/M, HRM</b>	0.42	-
<b>H/N, HRN</b>	0.42	0.40
<b>J/M, HRM</b>	0.79	-
<b>J/N, JRN</b>	0.79	0.69
<b>4/N, 4RN</b>	2.30	1.87
<b>5/N, 5RN</b>	2.30	2.00

 Filling volume in dm<sup>3</sup>

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

**Kv values:**

MG	DN	Connection type code								
		0	16	17	18	37	59	60	1	31
<b>10</b>	<b>10</b>	-	2.4	2.4	2.4	-	2.2	3.3	-	-
	<b>12</b>	-	-	-	-	-	-	-	3.2	-
	<b>15</b>	3.3	3.8	3.8	3.8	-	2.2	4.0	3.4	-
	<b>20</b>	-	-	-	-	-	3.8	-	-	-
<b>25</b>	<b>15</b>	4.1	4.7	4.7	4.7	-	-	7.4	6.5	6.5
	<b>20</b>	6.3	7.0	7.0	7.0	-	4.4	13.2	10.0	10.0
	<b>25</b>	13.9	15.0	15.0	15.0	12.6	12.2	16.2	14.0	14.0
<b>40</b>	<b>32</b>	25.3	27.0	27.0	27.0	26.2	-	30.0	26.0	26.0
	<b>40</b>	29.3	30.9	30.9	30.9	30.2	29.5	32.8	33.0	33.0
<b>50</b>	<b>50</b>	46.5	48.4	48.4	48.4	51.7	50.6	55.2	60.0	60.0
	<b>65</b>	-	-	-	-	62.2	61.8	-	-	-
<b>80</b>	<b>65</b>	-	-	77.0	-	68.5	68.5	96.0	-	-
	<b>80</b>	-	-	111.0	-	80.0	87.0	111.0	-	-
<b>100</b>	<b>100</b>	-	-	194.0	-	173.0	188.0	214.0	-	-

MG = diaphragm size

 Kv values in m<sup>3</sup>/h

Kv values determined in accordance with DIN EN 60534 standard, inlet pressure 5 bar, Δp 1 bar, stainless steel valve body and soft elastomer diaphragm. The Kv values for other product configurations (e.g. other diaphragm or body materials) may differ. In general, all diaphragms are subject to the influences of pressure, temperature, the process and their tightening torques. Therefore the Kv values may exceed the tolerance limits of the standard.

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

**Kv values:**

MG	DN	Rubber lining	Plastic lining
		Material code 83	Material code 17, 18, 39
<b>25</b>	<b>15</b>	6.0	5.0
	<b>20</b>	11.0	9.0
	<b>25</b>	15.0	13.0
<b>40</b>	<b>32</b>	29.0	23.0
	<b>40</b>	32.0	26.0
<b>50</b>	<b>50</b>	64.0	47.0
	<b>65</b>	64.0	47.0
<b>80</b>	<b>80</b>	128.0	110.0
<b>100</b>	<b>100</b>	190.0	177.0

MG = diaphragm size, Kv values in m<sup>3</sup>/h

Kv values determined in accordance with DIN EN 60534, inlet pressure 5 bar, Δp 1 bar, with connection flange EN 1092 length EN 558 series 1 (or threaded socket DIN ISO 228 for body material GGG40.3) 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 term of use.

## Product conformity

<b>Machinery Directive:</b>	2006/42/EC		
<b>Pressure Equipment Directive:</b>	2014/68/EU		
<b>Food:</b>	Regulation (EC) No. 1935/2006 Regulation (EC) No. 10/2011* FDA* USP* Class VI		
<b>Drinking water:</b>	Belgaqua*		
<b>TA Luft (German Clean Air Act):</b>	The product meets the following requirements under the max. permissible operating conditions: -Tightness or compliance with the specific leak rate within the sense of TA-Luft as well as VDI 2440 and VDI 2290 -Compliance with the requirements in accordance with DIN EN ISO 15848-1, Table C.2, Class BH		
<b>FMEDA:</b>	<b>Product description:</b>	GEMÜ diaphragm valve 687	
	<b>Type of valve:</b>	A	
	<b>Safety function:</b>	Due to the safety function, the diaphragm valve is placed in the closed position (with control function 1) or in the open position (with control function 2).	
	<b>HFT (Hardware Fault Tolerance):</b>	0	
	<b>MTTR (Mean Time To Restoration):</b>	24 hours	
	* depending on version and/or operating parameters		

## Mechanical data

Weight:

Actuator

MG	DN	Actuator version (code)	Control function 1	Control function 2 and 3
10	10, 15, 20	B/N	0.53	-
25	15, 20, 25	F/M, F/N, FRM, FRN	2.2	1.7
40	32, 40	H/M, H/N, HRM, HRN	4.7	3.1
50	50, 65	J/M, J/N, JRM, JRN	6.9	5.2
80	65, 80	4/N, 4RN	15.0	-
	65, 80	6A	-	-
	65, 80	6A2	52.0	-
100	100	5/N, 5RN	16.1	-
	100	7A	-	-
	100	7A3	63.0	-

Weights in kg  
MG = diaphragm size

**Weight:**

**Body**

MG	DN	Spigot	Threaded socket	Threaded spigot, cone spigot	Flange	Clamp
		Connection type code				
		0, 16, 17, 18, 35, 36, 37, 55, 59, 60, 63, 64, 65	1, 31	6, 6K	8, 38, 39	80, 82, 88, 8A, 8E, 8P, 8T
<b>10</b>	<b>10</b>	0.30	-	0.33	-	0.30
	<b>12</b>	-	0.17	-	-	-
	<b>15</b>	0.30	0.26	0.35	-	0.43
	<b>20</b>	-	-	-	-	0.43
<b>25</b>	<b>15</b>	0.62	0.32	0.71	1.50	0.75
	<b>20</b>	0.58	0.34	0.78	2.20	0.71
	<b>25</b>	0.55	0.39	0.79	2.80	0.63
<b>40</b>	<b>32</b>	1.45	0.88	1.66	3.40	1.62
	<b>40</b>	1.32	0.93	1.62	4.50	1.50
<b>50</b>	<b>50</b>	2.25	1.56	2.70	6.30	2.50
	<b>65</b>	2.20	-	-	10.30	2.30
<b>80</b>	<b>65</b>	8.60	-	9.22	10.20	8.90
	<b>80</b>	8.00	-	9.20	13.80	8.50
<b>100</b>	<b>100</b>	24.10	-	-	20.80	24.80

Weights in kg  
MG = diaphragm size

**Installation position:**

Optional

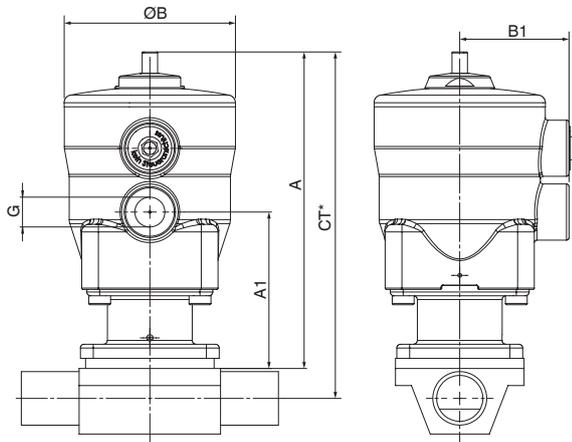
Observe the angle of rotation for optimized draining when it comes to installation. See separate document, "Angle of rotation technical information".

## Dimensions

### Actuator dimensions

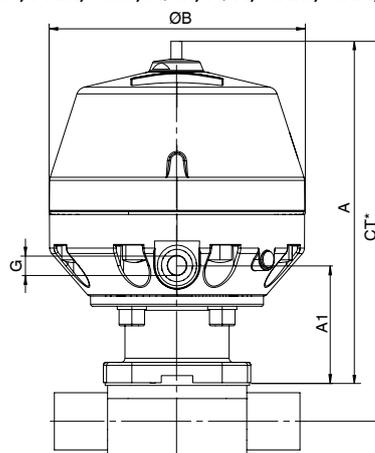
#### Actuator - Control function 1

Control function 1 – diaphragm size 10  
Actuator size B/N

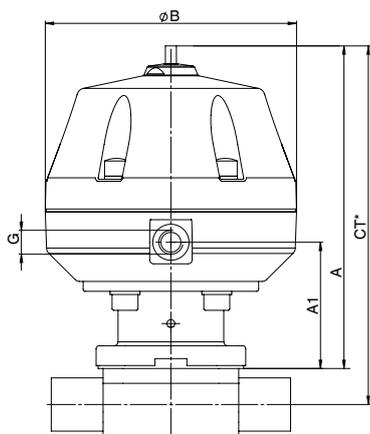


Control function 1 – diaphragm size 25–50  
Actuator sizes

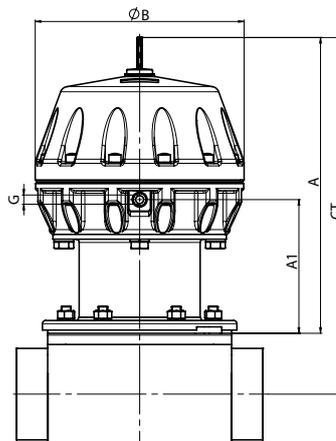
F/M, F/N, FRM, FRN, H/M, H/N, HRM, HRN, J/M, J/N, JRM, JRN



Control function 1 – diaphragm size 80  
Actuator sizes  
4/N, 4RN, 6A2



Control function 1 – diaphragm size 100  
Actuator sizes  
5/N, 5RN, 7A3



MG	Actuator size	ø B	A	A1	B1	G
10	B/N	67.0	125.0	62.0	44.0	G 1/4
25	F/M, F/N, FRM, FRN	130.0	170.0	59.0	-	G 1/4
40	H/M, H/N, HRM, HRN	171.0	208.0	75.0	-	G 1/4
50	J/M, J/N, JRM, JRN	211.0	244.0	90.0	-	G 1/4
80	4/N, 4RN	259.0	368.0	173.0	-	G 1/4
	6A2	360.0	475.0	158.0	-	G 1/4
100	5/N, 5RN	259.0	372.0	169.0	-	G 1/4
	7A3	360.0	477.0	154.0	-	G 1/4

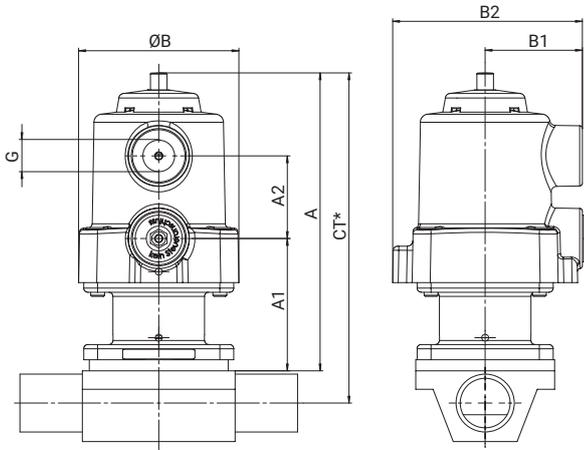
Dimensions in mm

MG = diaphragm size

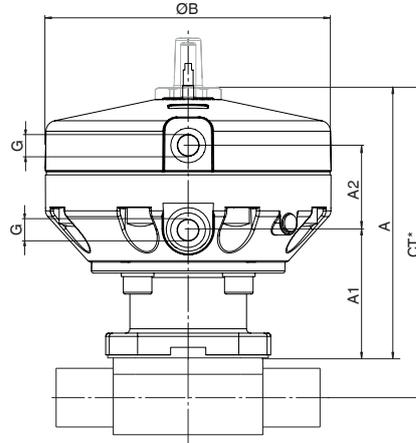
\* CT = A + H1 (see body dimensions)

**Actuator - Control function 2 and 3**

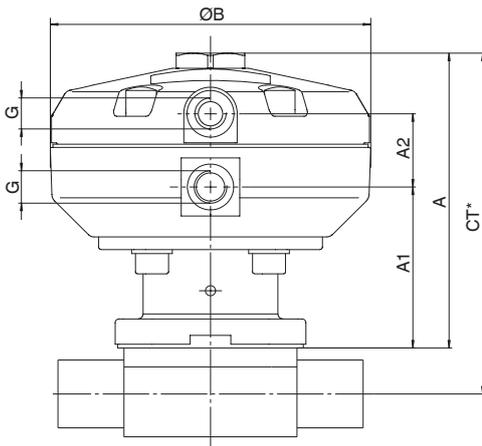
Control function 2 + 3 – diaphragm size 10  
Actuator size B/N



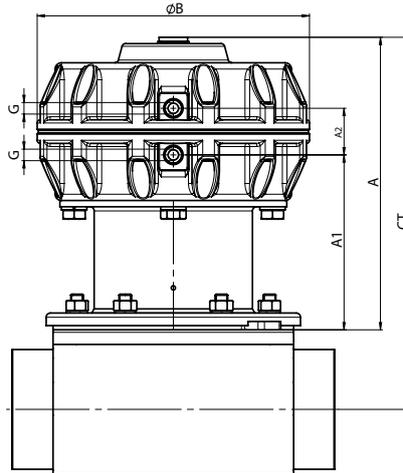
Control function 2 + 3 – diaphragm size 25–50  
Actuator sizes  
F/M, F/N, FRM, FRN, H/M, H/N, HRM, HRN, J/M, J/N, JRM, JRN



Control function 2 + 3 – diaphragm size 80  
Actuator sizes  
4/N, 4RN, 6A2



Control function 2 + 3 – diaphragm size 100  
Actuator sizes  
5/N, RN, 7A3

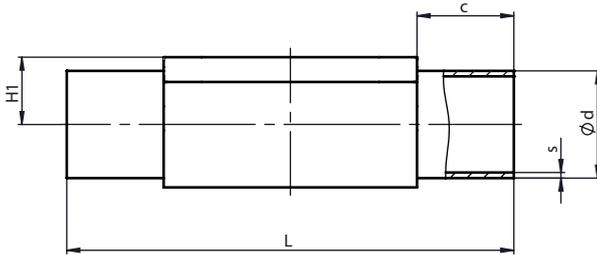


MG	Actuator size	ø B	A	A1	A2	B1	B2	G
10	B/N	57.0	110.0	49.0	30.0	35.0	68.0	G 1/4
25	F/M, F/N, FRM, FRN	130.0	147.0	59.0	39.0	-	-	G 1/4
40	H/M, H/N, HRM, HRN	171.0	173.0	75.0	42.0	-	-	G 1/4
50	J/M, J/N, JRM, JRN	211.0	206.0	90.0	47.0	-	-	G 1/4
80	4/N, 4RN	258.0	282.0	170.0	45.0	-	-	G 1/4
	6A	360.0	323.0	158.0	110.0	-	-	G 1/4
100	5/N, 5RN	258.0	278.0	165.0	45.0	-	-	G 1/4
	7A	360.0	319.0	154.0	110.0	-	-	G 1/4

Dimensions in mm  
MG = diaphragm size  
\* CT = A + H1 (see body dimensions)

## Body dimensions

### Spigot DIN/EN/ISO (code 0, 16, 17, 18, 60)



#### Connection type spigot DIN/EN/ISO (code 0, 16, 17, 18, 60)<sup>1)</sup>, forged material (code 40, 42, F4)<sup>2)</sup>

MG	DN	NPS	c (min)	Ød					H1	L	s				
				Connection type							Connection type				
				0	16	17	18	60			0	16	17	18	60
10	10	3/8"	25.0	-	12.0	13.0	14.0	17.2	12.5	108.0	-	1.0	1.5	2.0	1.6
	15	1/2"	25.0	18.0	18.0	19.0	20.0	21.3	12.5	108.0	1.5	1.0	1.5	2.0	1.6
25	15	1/2"	25.0	18.0	18.0	19.0	20.0	21.3	19.0	120.0	1.5	1.0	1.5	2.0	1.6
	20	3/4"	25.0	22.0	22.0	23.0	24.0	26.9	19.0	120.0	1.5	1.0	1.5	2.0	1.6
	25	1"	25.0	28.0	28.0	29.0	30.0	33.7	19.0	120.0	1.5	1.0	1.5	2.0	2.0
40	32	1¼"	25.0	34.0	34.0	35.0	36.0	42.4	26.0	153.0	1.5	1.0	1.5	2.0	2.0
	40	1½"	30.5	40.0	40.0	41.0	42.0	48.3	26.0	153.0	1.5	1.0	1.5	2.0	2.0
50	50	2"	30.0	52.0	52.0	53.0	54.0	60.3	32.0	173.0	1.5	1.0	1.5	2.0	2.0
80	65	2½"	30.0	-	-	70.0	-	76.1	62.0	216.0	-	-	2.0	-	2.0
	80	3"	30.0	-	-	85.0	-	88.9	62.0	254.0	-	-	2.0	-	2.3
100	100	4"	30.0	-	-	104.0	-	114.3	76.0	305.0	-	-	2.0	-	2.3

Dimensions in mm

MG = diaphragm size

#### 1) Connection type

Code 0: Spigot DIN

Code 16: Spigot DIN EN 10357 series B (2014 edition; formerly DIN 11850 series 1)

Code 17: Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2

Code 18: Spigot DIN 11850 series 3

Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 issue)/DIN 11866 series B

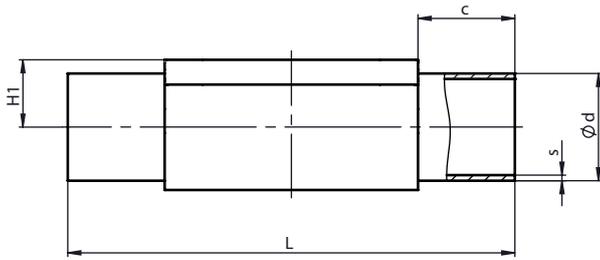
#### 2) Valve body material

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

Code F4: 1.4539, forged body

## Dimensions



Connection type spigot DIN/EN/ISO (code 17, 60)<sup>1)</sup>, investment casting material (code C3)<sup>2)</sup>

MG	DN	NPS	c (min)	Ød		H1	L	s	
				Connection type				Connection type	
				17	60			17	60
10	10	3/8"	25.0	13.0	17.2	12.5	108.0	1.5	1.6
	15	1/2"	25.0	19.0	21.3	12.5	108.0	1.5	1.6
25	15	1/2"	25.0	19.0	21.3	13.0	120.0	1.5	1.6
	20	3/4"	25.0	23.0	26.9	16.0	120.0	1.5	1.6
	25	1"	25.0	29.0	33.7	19.0	120.0	1.5	2.0
40	32	1¼"	25.0	35.0	42.4	24.0	153.0	1.5	2.0
	40	1½"	30.5	41.0	48.3	26.0	153.0	1.5	2.0
50	50	2"	30.0	53.0	60.3	32.0	173.0	1.5	2.0

Dimensions in mm

MG = diaphragm size

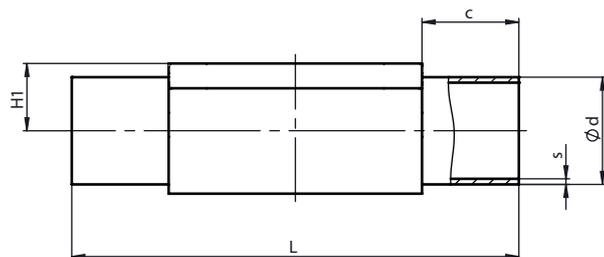
1) **Anschlussart**

Code 17: Stutzen EN 10357 Serie A / DIN 11866 Reihe A ehemals DIN 11850 Reihe 2

Code 60: Stutzen ISO 1127 / DIN EN 10357 Serie C (Ausgabe 2014) / DIN 11866 Reihe B

2) **Valve body material**

Code C3: 1.4435, investment casting

**Spigot ASME/BS (code 55, 59, 63, 64, 65)****Connection type spigot ASME/BS (code 55, 59, 63, 64, 65)<sup>1)</sup>, forged material (code 40, 42, F4)<sup>2)</sup>**

MG	DN	NPS	c (min)	Ød					H1	L	s				
				Connection type							Connection type				
				55	59	63	64	65			55	59	63	64	65
10	10	3/8"	25.0	9.53	9.53	17.1	-	17.1	12.5	108.0	1.2	0.89	1.65	-	2.31
	15	1/2"	25.0	12.70	12.70	21.3	21.3	21.3	12.5	108.0	1.2	1.65	2.11	1.65	2.77
	20	3/4"	25.0	19.05	19.05	-	-	-	12.5	108.0	1.2	1.65	-	-	-
25	15	1/2"	25.0	-	-	21.3	21.3	21.3	19.0	120.0	-	-	2.11	1.65	2.77
	20	3/4"	25.0	19.05	19.05	26.7	26.7	26.7	19.0	120.0	1.2	1.65	2.11	1.65	2.87
	25	1"	25.0	-	25.40	33.4	33.4	33.4	19.0	120.0	-	1.65	2.77	1.65	3.38
40	32	1¼"	25.0	-	-	42.2	42.2	42.2	26.0	153.0	-	-	2.77	1.65	3.56
	40	1½"	30.5	-	38.10	48.3	48.3	48.3	26.0	153.0	-	1.65	2.77	1.65	3.68
50	50	2"	30.0	-	50.80	60.3	60.3	60.3	32.0	173.0	-	1.65	2.77	1.65	3.91
	65	2½"	30.0	-	63.50	-	-	-	34.0	173.0	-	1.65	-	-	-
80	65	2½"	30.0	-	63.50	73.0	73.0	73.0	62.0	216.0	-	1.65	3.05	2.11	5.16
	80	3"	30.0	-	76.20	88.9	88.9	88.9	62.0	254.0	-	1.65	3.05	2.11	5.49
100	100	4"	30.0	-	101.60	114.3	114.3	114.3	76.0	305.0	-	2.11	3.05	2.11	6.02

Dimensions in mm

MG = diaphragm size

**1) Connection type**

Code 55: Spigot BS 4825, Part 1

Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 issue)/DIN 11866 series C

Code 63: Spigot ANSI/ASME B36.19M schedule 10s

Code 64: Spigot ANSI/ASME B36.19M schedule 5s

Code 65: Spigot ANSI/ASME B36.19M schedule 40s

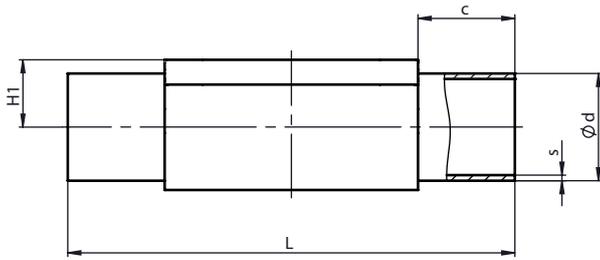
**2) Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe &lt; 0.5%

Code F4: 1.4539, forged body

## Dimensions



### Connection type spigot ASME BPE (code 59)<sup>1)</sup>, investment casting material (code C3)<sup>2)</sup>

MG	DN	NPS	c (min)	Ød	H1	L	s
10	20	3/4"	25.0	19.05	12.5	108.0	1.65
25	20	3/4"	25.0	19.05	16.0	120.0	1.65
	25	1"	25.0	25.40	19.0	120.0	1.65
40	40	1½"	30.5	38.10	26.0	153.0	1.65
50	50	2"	30.0	50.80	32.0	173.0	1.65

Dimensions in mm

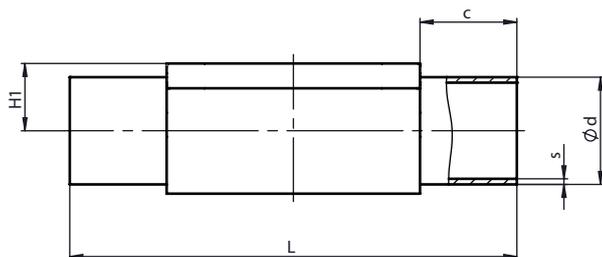
MG = diaphragm size

#### 1) Connection type

Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 issue)/DIN 11866 series C

#### 2) Valve body material

Code C3: 1.4435, investment casting

**Spigot JIS/SMS (code 35, 36, 37)****Connection type spigot JIS/SMS (code 35, 36, 37)<sup>1)</sup>, forged material (code 40, 42, F4)<sup>2)</sup>**

MG	DN	NPS	c (min)	Ød			H1	L	s		
				Connection type					Connection type		
				35	36	37			35	36	37
10	10	3/8"	25.0	-	17.3	-	12.5	108.0	-	1.65	-
	15	1/2"	25.0	-	21.7	-	12.5	108.0	-	2.10	-
25	15	1/2"	25.0	-	21.7	-	19.0	120.0	-	2.10	-
	20	3/4"	25.0	-	27.2	-	19.0	120.0	-	2.10	-
	25	1"	25.0	25.4	34.0	25.0	19.0	120.0	1.2	2.80	1.2
40	32	1 1/4"	25.0	31.8	42.7	33.7	26.0	153.0	1.2	2.80	1.2
	40	1 1/2"	30.5	38.1	48.6	38.0	26.0	153.0	1.2	2.80	1.2
50	50	2"	30.0	50.8	60.5	51.0	32.0	173.0	1.5	2.80	1.2
	65	2 1/2"	30.0	63.5	-	63.5	34.0	173.0	2.0	-	1.6
80	65	2 1/2"	30.0	63.5	76.3	63.5	62.0	216.0	2.0	3.00	1.6
	80	3"	30.0	76.3	89.1	76.1	62.0	254.0	2.0	3.00	1.6
100	100	4"	30.0	101.6	114.3	101.6	76.0	305.0	2.0	3.00	2.0

**Connection type spigot SMS (code 37)<sup>1)</sup>, investment casting material (code C3)<sup>2)</sup>**

MG	DN	NPS	c (min)	Ød	H1	L	s
25	25	1"	25.0	25.0	19.0	120.0	1.2
40	40	1 1/2"	30.5	38.0	26.0	153.0	1.2
50	50	2"	30.0	51.0	32.0	173.0	1.2

Dimensions in mm

MG = diaphragm size

**1) Connection type**

Code 35: Spigot JIS-G 3447

Code 36: Spigot JIS-G 3459 schedule 10s

Code 37: Spigot SMS 3008

**2) Valve body material**

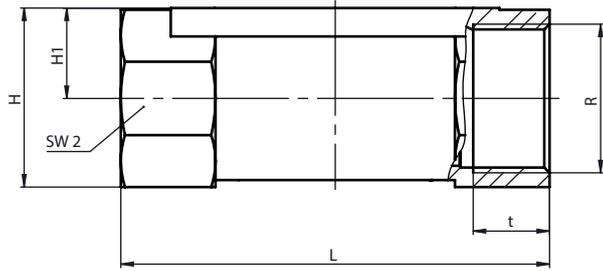
Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe &lt; 0.5%

Code C3: 1.4435, investment casting

Code F4: 1.4539, forged body

**Threaded socket DIN (code 1)**



Connection type threaded socket (code 1)<sup>1)</sup>, investment casting material (code 37)<sup>2)</sup>

MG	DN	NPS	H	H1	L	n	R	SW 2	t
10	12	3/8"	25.0	13.0	55.0	2	G 3/8	22.0	12.0
	15	1/2"	30.0	15.0	68.0	2	G 1/2	27.0	15.0
25	15	1/2"	28.3	14.8	85.0	6	G 1/2	27.0	15.0
	20	3/4"	33.3	17.3	85.0	6	G 3/4	32.0	16.0
	25	1"	42.3	21.8	110.0	6	G 1	41.0	13.0
40	32	1 1/4"	51.3	26.3	120.0	8	G 1 1/4	50.0	20.0
	40	1 1/2"	56.3	28.8	140.0	8	G 1 1/2	55.0	18.0
50	50	2"	71.3	36.0	165.0	8	G 2	70.0	26.0

Dimensions in mm

MG = diaphragm size

n = number of flats

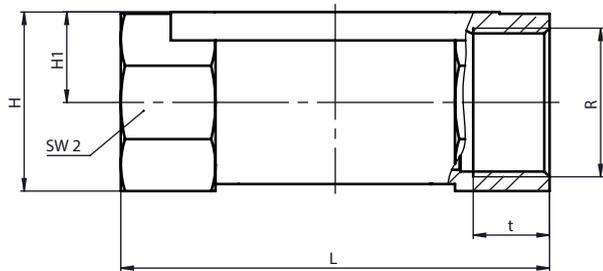
1) **Connection type**

Code 1: Threaded socket DIN ISO 228

2) **Valve body material**

Code 37: 1.4408, investment casting

**Threaded socket NPT (code 31)**



Connection type threaded socket NPT (code 31)<sup>1)</sup>, investment casting material (code 37)<sup>2)</sup>

MG	DN	NPS	H	H1	L	n	R	SW 2	t
25	15	1/2"	28.3	14.8	85.0	6	NPT 1/2	27.0	14.0
	20	3/4"	33.3	17.3	85.0	6	NPT 3/4	32.0	14.0
	25	1"	42.3	21.8	110.0	6	NPT 1	41.0	17.0
40	32	1 1/4"	51.3	26.3	120.0	8	NPT 1 1/4	50.0	17.0
	40	1 1/2"	56.3	28.8	140.0	8	NPT 1 1/2	55.0	17.0
50	50	2"	71.3	36.3	165.0	8	NPT 2	70.0	18.0

Dimensions in mm

MG = diaphragm size

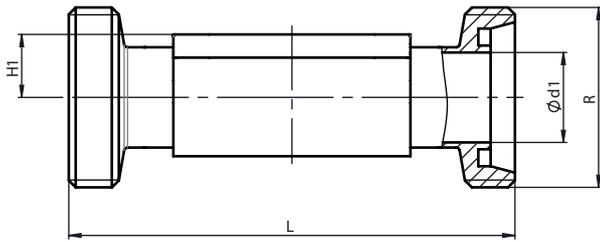
n = number of flats

1) **Connection type**

Code 31: NPT female thread

2) **Valve body material**

Code 37: 1.4408, investment casting

**Threaded spigot DIN (code 6)****Connection type threaded spigot DIN (code 6)<sup>1)</sup>, forged material (code 40, 42)<sup>2)</sup>**

MG	DN	NPS	Ød1	H1	L	R
10	10	3/8"	10.0	12.5	118.0	Rd 28 x 1/8
	15	1/2"	16.0	12.5	118.0	Rd 34 x 1/8
25	15	1/2"	16.0	19.0	118.0	Rd 34 x 1/8
	20	3/4"	20.0	19.0	118.0	Rd 44 x 1/6
	25	1"	26.0	19.0	128.0	Rd 52 x 1/6
40	32	1¼"	32.0	26.0	147.0	Rd 58 x 1/6
	40	1½"	38.0	26.0	160.0	Rd 65 x 1/6
50	50	2"	50.0	32.0	191.0	Rd 78 x 1/6
80	65	2½"	66.0	62.0	246.0	Rd 95 x 1/6
	80	3"	81.0	62.0	256.0	Rd 110 x 1/4

Dimensions in mm

MG = diaphragm size

**1) Connection type**

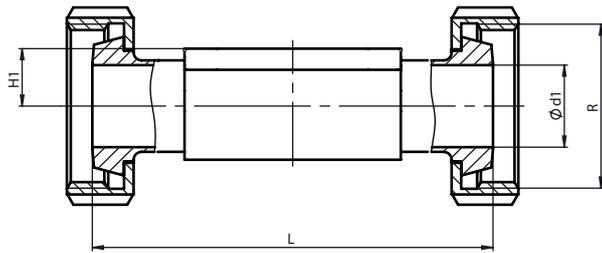
Code 6: Threaded spigot DIN 11851

**2) Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe &lt; 0.5%

**Cone spigot DIN (code 6K)**



**Connection type cone spigot DIN (code 6K)<sup>1)</sup>, forged material (code 40, 42)<sup>2)</sup>**

MG	DN	NPS	Ød1	H1	L	R
10	10	3/8"	10.0	12.5	116.0	Rd 28 x 1/8
	15	1/2"	16.0	12.5	116.0	Rd 34 x 1/8
25	15	1/2"	16.0	19.0	116.0	Rd 34 x 1/8
	20	3/4"	20.0	19.0	114.0	Rd 44 x 1/6
	25	1"	26.0	19.0	127.0	Rd 52 x 1/6
40	32	1¼"	32.0	26.0	147.0	Rd 58 x 1/6
	40	1½"	38.0	26.0	160.0	Rd 65 x 1/6
50	50	2"	50.0	32.0	191.0	Rd 78 x 1/6
80	65	2½"	66.0	62.0	246.0	Rd 95 x 1/6
	80	3"	81.0	62.0	256.0	Rd 110 x 1/4

Dimensions in mm

MG = diaphragm size

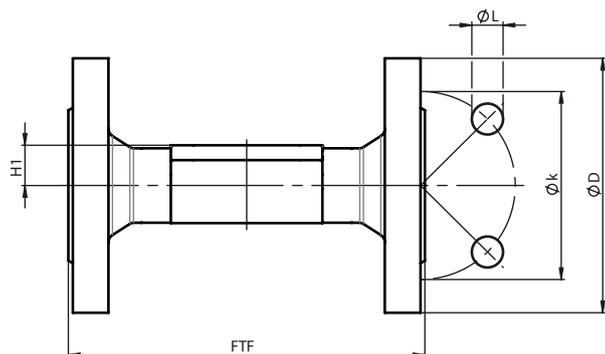
**1) Connection type**

Code 6K: Cone spigot and union nut DIN 11851

**2) Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

**Flange EN (code 8)**

Connection type flange, length EN 558 (code 8)<sup>1)</sup>, SG iron material (code 17, 18, 83), investment casting material (code 39, C3), forged material (code 40, 42)<sup>2)</sup>

Dia- phragm size	DN	NPS	øD	øk	øL	n	H1			FTF		
							Material			Material		
							17, 18, 39, 83	C3	40, 42	17, 18, 39, 83	C3	40, 42
25	15	1/2"	95.0	65.0	14.0	4	18.0	13.0	19.0	130.0	150.0	150.0
	20	3/4"	105.0	75.0	14.0	4	20.5	16.0	19.0	150.0	150.0	150.0
	25	1"	115.0	85.0	14.0	4	23.0	19.0	19.0	160.0	160.0	160.0
40	32	1¼"	140.0	100.0	19.0	4	28.7	24.0	26.0	180.0	180.0	180.0
	40	1½"	150.0	110.0	19.0	4	33.0	26.0	26.0	200.0	200.0	200.0
50	50	2"	165.0	125.0	19.0	4	39.0	32.0	32.0	230.0	230.0	230.0
80	65	2½"	185.0	145.0	19.0	4	-	-	62.0	-	-	290.0
	80	3"	200.0	160.0	19.0	8	59.5	-	62.0	310.0	-	310.0
100	100	4"	220.0	180.0	19.0	8	73.0	-	76.0	350.0	-	350.0

Dimensions in mm

MG = diaphragm size

n = number of bolts

1) **Connection type**

Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D

2) **Valve body material**

Code 17: EN-GJS-400-18-LT (GGG 40.3), PFA lined

Code 18: EN-GJS-400-18-LT (GGG 40.3), PP lined

Code 39: 1.4408, PFA lined

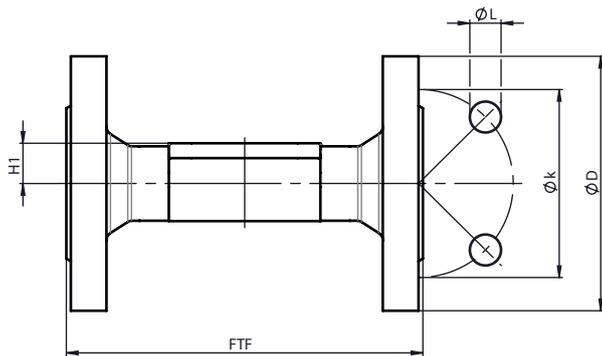
Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

Code 83: EN-GJS-400-18-LT (GGG 40.3), hard rubber lined

Code C3: 1.4435, investment casting

**Flange JIS (code 34)**



**Connection type flange, length 558 (code 34)<sup>1)</sup>, investment casting material (code 39)<sup>2)</sup>**

MG	DN	NPS	øD	øk	øL	n	H1	FTF
25	15	1/2"	95.0	70.0	15.0	4	18.0	130.0
	20	3/4"	100.0	75.0	15.0	4	20.5	150.0
	25	1"	125.0	90.0	19.0	4	23.0	160.0
40	32	1¼"	135.0	100.0	19.0	4	28.7	180.0
	40	1½"	140.0	105.0	19.0	4	33.0	200.0
50	50	2"	155.0	120.0	19.0	4	39.0	230.0

Dimensions in mm

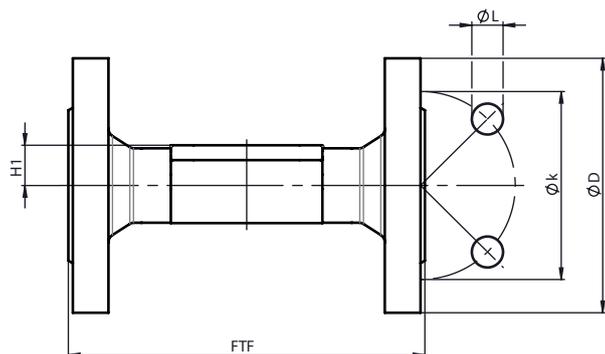
MG = diaphragm size

**1) Anschlussart**

Code 34: Flange JIS B2220, 10K, RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D

**2) Valve body material**

Code 39: 1.4408, PFA lined

**Flange ANSI Class (code 38, 39)**

Connection type flange, length MSS SP-88 (code 38)<sup>1)</sup>, SG iron material (code 17, 18, 83), investment casting material (code 39)<sup>2)</sup>

Diaphragm size	DN	NPS	øD	øk	øL	n	H1	FTF	
								Material	
								17, 18, 39	83
25	20	3/4"	100.0	69.9	15.9	4	20.5	146.0	146.4
	25	1"	110.0	79.4	15.9	4	23.0	146.0	146.4
40	40	1½"	125.0	98.4	15.9	4	33.0	175.0	171.4
50	50	2"	150.0	120.7	19.0	4	39.0	200.0	197.4
80	80	3"	190.0	152.4	19.0	4	59.5	260.0	260.4
100	100	4"	230.0	190.5	19.0	8	73.0	327.0	324.4

Dimensions in mm

MG = diaphragm size

n = number of bolts

1) **Connection type**

Code 38: Flange ANSI Class 150 RF, face-to-face dimension FTF MSS SP-88, length only for body configuration D

2) **Valve body material**

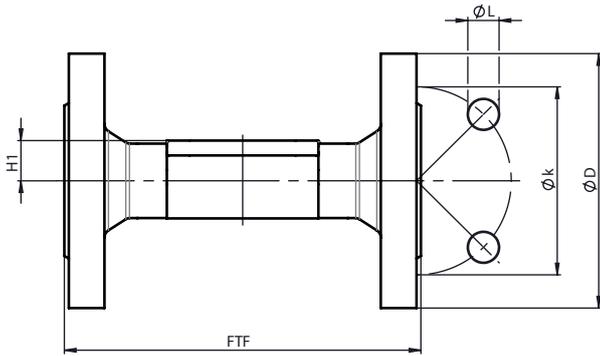
Code 17: EN-GJS-400-18-LT (GGG 40.3), PFA lined

Code 18: EN-GJS-400-18-LT (GGG 40.3), PP lined

Code 39: 1.4408, PFA lined

Code 83: EN-GJS-400-18-LT (GGG 40.3), hard rubber lined

## Dimensions



Connection type flange, length EN 558 (code 39)<sup>1)</sup>, SG iron material (code 17, 18, 83), investment casting material (code 39, C3), forged material (code 40, 42)<sup>2)</sup>

Dia- phragm size	DN	NPS	øD	øk	øL	n	H1			FTF		
							Material			Material		
							17, 18, 39, 83	C3	40, 42	17, 18, 39, 83	C3	40, 42
25	15	1/2"	90.0	60.3	15.9	4	-	13.0	19.0	130.0	150.0	150.0
	20	3/4"	100.0	69.9	15.9	4	20.5	16.0	19.0	150.0	150.0	150.0
	25	1"	110.0	79.4	15.9	4	23.0	19.0	19.0	160.0	160.0	160.0
40	32	1¼"	115.0	88.9	15.9	4	28.7	24.0	26.0	180.0	180.0	180.0
	40	1½"	125.0	98.4	15.9	4	33.0	26.0	26.0	200.0	200.0	200.0
50	50	2"	150.0	120.7	19.0	4	39.0	32.0	32.0	230.0	230.0	230.0
	65	2½"	180.0	139.7	19.0	4	51.0	-	-	-	-	290.0
80	65	2½"	180.0	139.7	19.0	4	-	-	62.0	-	-	290.0
	80	3"	190.0	152.4	19.0	4	59.5	-	62.0	310.0	-	310.0
100	100	4"	230.0	190.5	19.0	8	73.0	-	76.0	350.0	-	350.0

Dimensions in mm

MG = diaphragm size

n = number of bolts

### 1) Connection type

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

### 2) Valve body material

Code 17: EN-GJS-400-18-LT (GGG 40.3), PFA lined

Code 18: EN-GJS-400-18-LT (GGG 40.3), PP lined

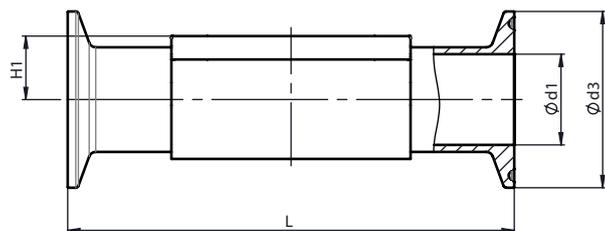
Code 39: 1.4408, PFA lined

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

Code 83: EN-GJS-400-18-LT (GGG 40.3), hard rubber lined

Code C3: 1.4435, investment casting

**Clamp (code 80, 82, 88, 8A, 8E, 8P, 8T)****Connection type clamp DIN/ASME (code 80, 88, 8P, 8T)<sup>1)</sup>, forged material (code 40, 42, F4)<sup>2)</sup>**

MG	DN	NPS	ød1		ød3		H1	L	
			Connection type		Connection type			Connection type	
			80, 8P	88, 8T	80, 8P	88, 8T		80, 8P	88, 8T
10	15	1/2"	9.40	9.40	25.0	25.0	12.5	88.9	108.0
	20	3/4"	15.75	15.75	25.0	25.0	12.5	101.6	117.0
25	20	3/4"	15.75	15.75	25.0	25.0	19.0	101.6	117.0
	25	1"	22.10	22.10	50.5	50.5	19.0	114.3	127.0
40	40	1½"	34.80	34.80	50.5	50.5	26.0	139.7	159.0
50	50	2"	47.50	47.50	64.0	64.0	32.0	158.8	190.0
	65	2½"	60.20	60.20	77.5	77.5	34.0	193.8	216.0
80	65	2½"	60.20	60.20	77.5	77.5	62.0	193.8	216.0
	80	3"	72.90	72.90	91.0	91.0	62.0	222.3	254.0
100	100	4"	97.38	97.38	119.0	119.0	76.0	292.1	305.0

Dimensions in mm

MG = diaphragm size

**1) Connection type**

Code 80: Clamp ASME BPE, face-to-face dimension FTF ASME BPE, length only for body configuration D

Code 88: Clamp ASME BPE, for pipe ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code 8P: Clamp DIN 32676 series C, face-to-face dimension FTF ASME BPE, length only for body configuration D

Code 8T: Clamp DIN 32676 series C, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

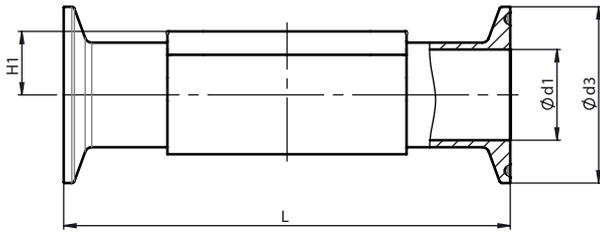
**2) Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe &lt; 0.5%

Code F4: 1.4539, forged body

## Dimensions



### Connection type clamp DIN/ISO (code 82, 8A, 8E)<sup>1)</sup>, forged material (code 40, 42, F4)<sup>2)</sup>

MG	DN	NPS	Ød1			Ød3			H1	L		
			Connection type			Connection type				Connection type		
			82	8A	8E	82	8A	8E		82	8A	8E
10	10	3/8"	14.0	10.0	-	25.0	34.0	-	12.5	108.0	108.0	-
	15	1/2"	18.1	16.0	-	50.5	34.0	-	12.5	108.0	108.0	-
25	15	1/2"	18.1	16.0	-	50.5	34.0	-	19.0	108.0	108.0	-
	20	3/4"	23.7	20.0	-	50.5	34.0	-	19.0	117.0	117.0	-
	25	1"	29.7	26.0	22.6	50.5	50.5	50.5	19.0	127.0	127.0	127.0
40	32	1 1/4"	38.4	32.0	31.3	64.0	50.5	50.5	26.0	146.0	146.0	146.0
	40	1 1/2"	44.3	38.0	35.6	64.0	50.5	50.5	26.0	159.0	159.0	159.0
50	50	2"	56.3	50.0	48.6	77.5	64.0	64.0	32.0	190.0	190.0	190.0
	65	2 1/2"	-	-	60.3	-	-	77.5	34.0	-	-	216.0
80	65	2 1/2"	72.1	66.0	60.3	91.0	91.0	77.5	62.0	216.0	216.0	216.0
	80	3"	84.3	81.0	72.9	106.0	106.0	91.0	62.0	254.0	254.0	254.0
100	100	4"	109.7	100.0	97.6	130.0	119.0	119.0	76.0	305.0	305.0	305.0

Dimensions in mm

MG = diaphragm size

#### 1) Connection type

Code 82: Clamp DIN 32676 series B, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code 8A: Clamp DIN 32676 series A, face-to-face dimension FTF acc. to EN 558 series 7, length only for body configuration D

Code 8E: Clamp ISO 2852 for pipe ISO 2037, clamps SMS 3017 for pipe SMS 3008, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

#### 2) Valve body material

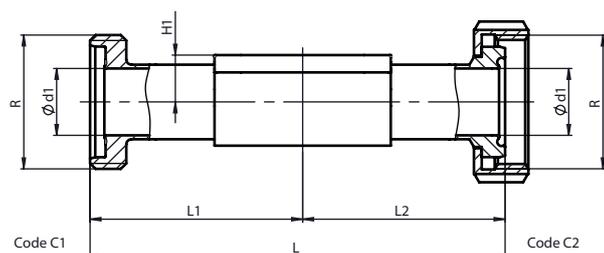
Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

Code F4: 1.4539, forged body

## Aseptic connections

### Aseptic union DIN



#### Aseptic union DIN, series A (code C1, C2)<sup>1)</sup>, forged material (code 40, 42)<sup>2)</sup>

MG	DN	H1	Ød1	Thread	Connection type (code)			
					C1		C2	
					R	L	L1, L2	L
8	10	8.5	10.0	RD 28 x 1/8	88.0	44.0	84.0	42.0
10	10	12.5	10.0	RD 28 x 1/8	120.0	60.0	116.0	58.0
	15	12.5	16.0	RD 34 x 1/8	120.0	60.0	116.0	58.0
25	15	19.0	16.0	RD 34 x 1/8	120.0	60.0	116.0	58.0
	20	19.0	20.0	RD 44 x 1/6	144.0	72.0	138.0	69.0
	25	19.0	26.0	RD 52 x 1/6	164.0	82.0	156.0	78.0
40	32	26.0	32.0	RD 58 x 1/6	192.0	96.0	182.0	91.0
	40	26.0	38.0	RD 65 x 1/6	214.0	107.0	204.0	102.0
50	50	32.0	50.0	RD 78 x 1/6	244.0	122.0	242.0	121.0
80	65	62.0	66.0	RD 95 x 1/6	314.0	157.0	310.0	155.0
	80	62.0	81.0	RD 110 x 1/4	342.0	171.0	334.0	167.0
100	100	76.0	100.0	RD 130 x 1/4	398.0	199.0	390.0	195.0

MG = diaphragm size

Dimensions in mm

#### 1) Connection type

Code C1: Aseptic threaded spigot DIN 11864-GS, for pipe DIN 11866 series A and EN 10357 series A

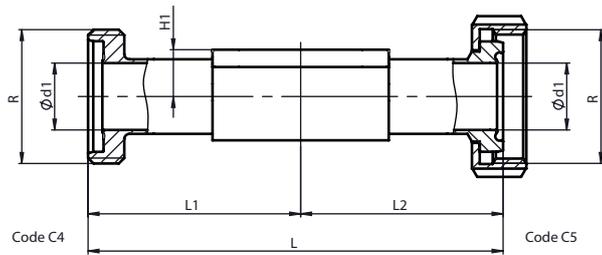
Code C2: Aseptic union nut with grooved union nut DIN 11864-BS, for pipe DIN 11866 series A and EN 10357 series A

#### 2) Valve body material

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

## Dimensions



### Aseptic union DIN, series B (code C4, C5)<sup>1)</sup>, forged body (code 40, 42)<sup>2)</sup>

MG	DN	H1	Ød1	Thread	Connection type (code)			
					C4		C5	
					R	L	L1, L2	L
8	8	8.5	10.3	RD 28 x 1/8	88.0	44.0	84.0	42.0
10	10	12.5	14.0	RD 34 x 1/8	120.0	60.0	116.0	58.0
	15	12.5	18.1	RD 44 x 1/6	120.0	60.0	116.0	58.0
25	15	19.0	18.1	RD 44 x 1/6	120.0	60.0	116.0	58.0
	20	19.0	23.7	RD 52 x 1/6	144.0	72.0	138.0	69.0
	25	19.0	29.7	RD 58 x 1/6	164.0	82.0	156.0	78.0
40	32	26.0	38.4	RD 65 x 1/6	192.0	96.0	182.0	91.0
	40	26.0	44.3	RD 78 x 1/6	214.0	107.0	204.0	102.0
50	50	32.0	56.3	RD 95 x 1/6	244.0	122.0	242.0	121.0
80	65	62.0	72.1	RD 110 x 1/4	314.0	157.0	310.0	155.0
	80	62.0	84.3	RD 130 x 1/4	342.0	171.0	334.0	167.0

MG = diaphragm size

Dimensions in mm

#### 1) Connection type

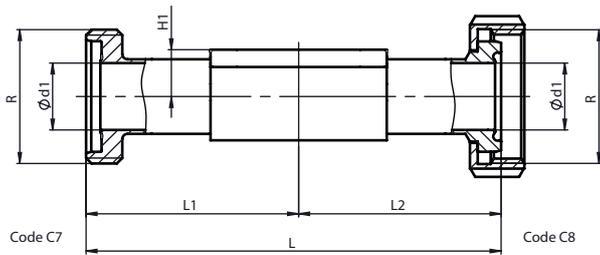
Code C4: Aseptic threaded spigot DIN 11864-GS, for pipe DIN 11866 series B and EN ISO 1127

Code C5: Aseptic union nut with grooved union nut DIN 11864-BS, for pipe DIN 11866 series B and EN ISO 1127

#### 2) Valve body material

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%


**Aseptic union DIN, series C (code C7, C8) <sup>1)</sup>, forged body (code 40, 42) <sup>2)</sup>**

MG	DN	H1	Ød1	Thread	Connection type (code)			
					C7		C8	
					R	L	L1, L2	L
<b>8</b>	<b>15</b>	8.5	9.4	RD 28 x 1/8	88.0	44.0	84.0	42.0
<b>10</b>	<b>15</b>	12.5	9.4	RD 28 x 1/8	120.0	60.0	116.0	58.0
	<b>20</b>	12.5	15.75	RD 34 x 1/8	144.0	72.0	138.0	69.0
<b>25</b>	<b>15</b>	19.0	9.4	RD 28 x 1/8	120.0	60.0	116.0	60.0
	<b>20</b>	19.0	15.75	RD 34 x 1/8	144.0	72.0	138.0	69.0
	<b>25</b>	19.0	22.1	RD 52 x 1/6	164.0	82.0	156.0	78.0
<b>40</b>	<b>40</b>	26.0	34.8	RD 65 x 1/6	214.0	107.0	204.0	102.0
<b>50</b>	<b>50</b>	32.0	47.5	RD 78 x 1/6	244.0	122.0	242.0	121.0
	<b>65</b>	32.0	60.2	RD 95 x 1/6	314.0	157.0	310.0	155.0
<b>80</b>	<b>65</b>	62.0	60.2	RD 95 x 1/6	314.0	157.0	310.0	155.0
	<b>80</b>	62.0	72.9	RD 110 x 1/4	342.0	171.0	334.0	167.0
<b>100</b>	<b>100</b>	76.0	97.38	RD 130 x 1/4	398.0	199.0	390.0	195.0

MG = diaphragm size

Dimensions in mm

**1) Connection type**

Code C7: Aseptic threaded spigot DIN 11864-GS for pipe DIN 11866 series C and ASME BPE

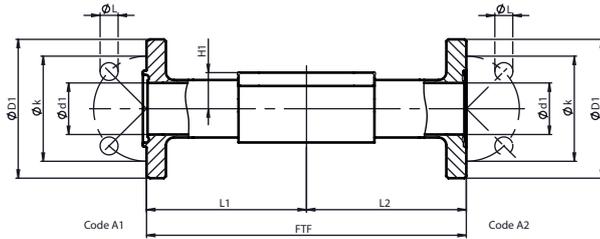
Code C8: Aseptic union nut with grooved union nut DIN 11864-BS, for pipe DIN 11866 series C and ASME BPE

**2) Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%

**Aseptic flange DIN**



**Aseptic flange DIN, series A (code A1, A2)<sup>1)</sup>, forged material (code 40, 42)<sup>2)</sup>**

MG	DN	H1	Ød1	ØD1	Øk	ØL	Connection type (code)			
							A1		A2	
							FTF	L1, L2	FTF	L1, L2
8	10	8.5	10.0	54.0	37.0	4 x 9	100.0	50.0	100.0	50.0
10	10	12.5	10.0	54.0	37.0	4 x 9	130.0	65.0	130.0	65.0
	15	12.5	16.0	59.0	42.0	4 x 9	130.0	65.0	130.0	65.0
25	15	19.0	16.0	59.0	42.0	4 x 9	130.0	65.0	130.0	65.0
	20	19.0	20.0	64.0	47.0	4 x 9	150.0	75.0	150.0	75.0
	25	19.0	26.0	70.0	53.0	4 x 9	160.0	80.0	160.0	80.0
40	32	26.0	32.0	76.0	59.0	4 x 9	180.0	90.0	180.0	90.0
	40	26.0	38.0	82.0	65.0	4 x 9	200.0	100.0	200.0	100.0
50	50	32.0	50.0	94.0	77.0	4 x 9	230.0	115.0	230.0	115.0
80	65	62.0	66.0	113.0	95.0	8 x 9	290.0	145.0	290.0	145.0
	80	62.0	81.0	133.0	112.0	8 x 11	310.0	155.0	310.0	155.0
100	100	76.0	100.0	159.0	137.0	8 x 11	350.0	175.0	350.0	175.0

MG = diaphragm size  
Dimensions in mm

1) **Connection type**

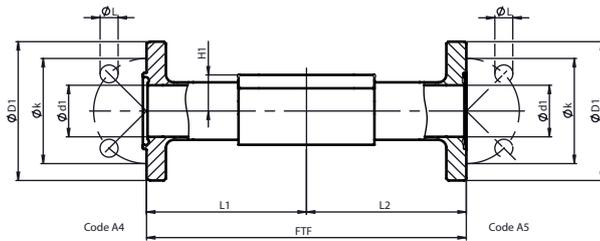
Code A1: Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

Code A2: Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

2) **Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body, Δ Fe < 0.5%



### Aseptic flange DIN, series B (code A4, A5)<sup>1)</sup>, forged material (code 40, 42)<sup>2)</sup>

MG	DN	H1	Ød1	ØD1	Øk	ØL	Connection type (code)			
							A4		A5	
							FTF	L1, L2	FTF	L1, L2
8	8	8.5	10.3	54.0	37.0	4 x 9.0	100.0	50.0	100.0	50.0
10	10	12.5	14.0	59.0	42.0	4 x 9.0	130.0	65.0	130.0	65.0
	15	12.5	18.1	62.0	45.0	4 x 9.0	130.0	65.0	130.0	65.0
25	15	19.0	18.1	62.0	45.0	4 x 9.0	130.0	65.0	130.0	65.0
	20	19.0	23.7	69.0	52.0	4 x 9.0	150.0	75.0	150.0	75.0
	25	19.0	29.7	74.0	57.0	4 x 9.0	160.0	80.0	160.0	80.0
40	32	26.0	38.4	82.0	65.0	4 x 9.0	180.0	90.0	180.0	90.0
	40	26.0	44.3	88.0	71.0	4 x 9.0	200.0	100.0	200.0	100.0
50	50	32.0	56.3	103.0	85.0	4 x 9.0	230.0	115.0	230.0	115.0
80	65	62.0	72.1	125.0	104.0	8 X 11.0	290.0	145.0	290.0	145.0
	80	62.0	84.3	137.0	116.0	8 X 11.0	310.0	155.0	310.0	155.0
100	100	76.0	109.7	168.0	146.0	8 X 11.0	350.0	175.0	350.0	175.0

MG = diaphragm size

Dimensions in mm

#### 1) Connection type

Code A4: Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

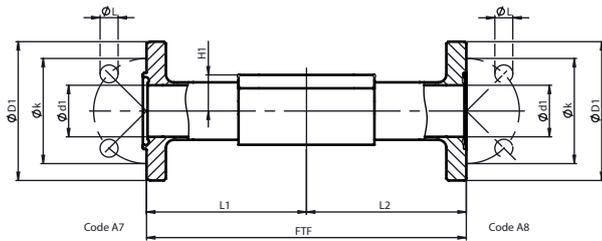
Code A5: Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

#### 2) Valve body material

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body,  $\Delta \text{Fe} < 0.5\%$

## Dimensions



### Aseptic flange DIN, series C (code A7, A8)<sup>1)</sup>, forged material (code 40, 42)<sup>2)</sup>

MG	DN	H1	Ød1	ØD1	Øk	ØL	Connection type (code)			
							A7		A8	
							FTF	L1, L2	FTF	L1, L2
8	15	8.5	9.40	54.0	37.0	4 x 9.0	100.0	50.0	100.0	50.0
10	15	12.5	9.40	54.0	37.0	4 x 9.0	130.0	65.0	130.0	65.0
	20	12.5	15.75	59.0	42.0	4 x 9.0	150.0	75.0	150.0	75.0
25	15	19.0	9.40	54.0	37.0	4 x 9.0	130.0	65.0	130.0	65.0
	20	19.0	15.75	59.0	42.0	4 x 9.0	150.0	75.0	150.0	75.0
	25	19.0	22.10	66.0	49.0	4 x 9.0	160.0	80.0	160.0	80.0
40	40	26.0	34.80	79.0	62.0	4 x 9.0	200.0	100.0	200.0	100.0
50	50	32.0	47.50	92.0	75.0	4 x 9.0	230.0	115.0	230.0	115.0
	65	32.0	60.20	107.0	89.0	8 x 9.0	290.0	145.0	290.0	145.0
80	65	62.0	60.20	107.0	89.0	8 x 9.0	290.0	145.0	290.0	145.0
	80	62.0	72.90	125.0	104.0	8 x 11.0	310.0	155.0	310.0	155.0
100	100	76.0	97.38	157.0	135.0	8 x 11.0	350.0	175.0	350.0	175.0

MG = diaphragm size

Dimensions in mm

#### 1) Connection type

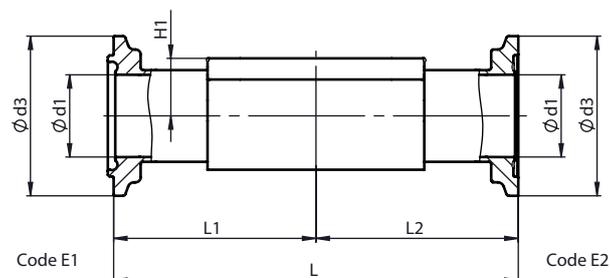
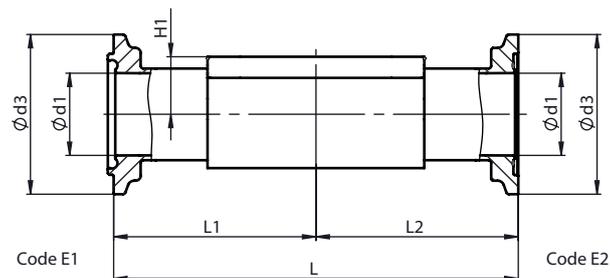
Code A7: Aseptic grooved flange DIN 11864-NF, for pipe DIN 11866 series C and ASME BPE, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

Code A8: Aseptic loose flange DIN 11864-BF, for pipe DIN 11866 series C and ASME BPE, face-to-face dimension FTF EN 558 series 1, length only for body configuration D

#### 2) Valve body material

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body,  $\Delta Fe < 0.5\%$

**Aseptic clamp DIN****Aseptic clamp DIN, series A (code E1, E2)<sup>1)</sup>, forged material (code 40, 42)<sup>2)</sup>**

MG	DN	H1	Ød1	Ød3	Connection type (code)			
					E1		E2	
					L	L1, L2	L	L1, L2
8	10	8.5	10.0	34.0	88.9	44.45	88.9	44.45
10	10	12.5	10.0	34.0	108.0	54.0	108.0	54.0
	15	12.5	16.0	34.0	108.0	54.0	108.0	54.0
25	15	19	16.0	34.0	108.0	54.0	108.0	54.0
	20	19	20.0	50.5	117.0	58.5	117.0	58.5
	25	19	26.0	50.5	127.0	63.5	127.0	63.5
40	32	26	32.0	50.5	146.0	73.0	146.0	73.0
	40	26	38.0	64.0	159.0	79.5	159.0	79.5
50	50	32	50.0	77.5	190.0	95.0	190.0	95.0
80	65	62	66.0	91.0	216.0	108.0	216.0	108.0
	80	62	81.0	106.0	254.0	127.0	254.0	127.0
100	100	76	100.0	130.0	305.0	152.5	305.0	152.5

MG = diaphragm size

Dimensions in mm

**1) Connection type**

Code E1: Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

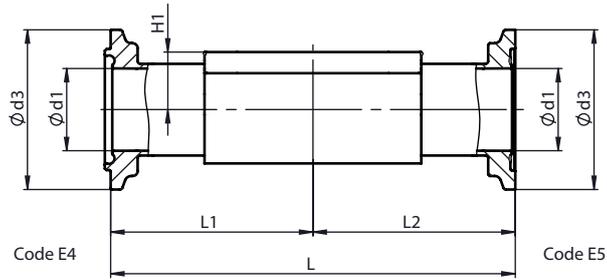
Code E2: Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series A and EN 10357 series A, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

**2) Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body,  $\Delta Fe < 0.5\%$

## Dimensions



### Aseptic clamp DIN, series B (code E4, E5)<sup>1)</sup>, forged body (code 40, 42)<sup>2)</sup>

MG	DN	H1	Ød1	Ød3	Connection type (code)			
					E4		E5	
					L	L1, L2	L	L1, L2
8	8	8.5	10.3	34.0	88.9	44.45	88.9	44.45
10	10	12.5	14.0	34.0	108.0	54.0	108.0	54.0
	15	12.5	18.1	34.0	108.0	54.0	108.0	54.0
25	15	19.0	18.1	34.0	108.0	54.0	108.0	54.0
	20	19.0	23.7	50.5	117.0	58.5	117.0	58.5
	25	19.0	29.7	50.5	127.0	63.5	127.0	63.5
40	32	26.0	38.4	64.0	146.0	73.0	146.0	73.0
	40	26.0	44.3	64.0	159.0	79.5	159.0	79.5
50	50	32.0	56.3	91.0	190.0	95.0	190.0	95.0
80	65	62.0	72.1	106.0	216.0	108.0	216.0	108.0
	80	62.0	84.3	130.0	254.0	127.0	254.0	127.0

MG = diaphragm size

Dimensions in mm

#### 1) Connection type

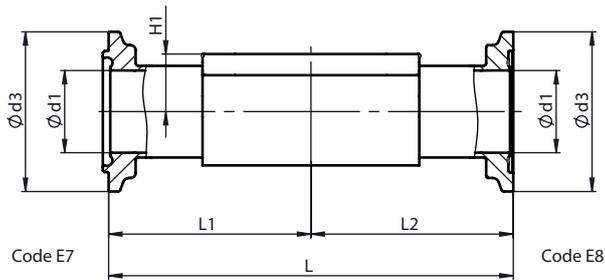
Code E4: Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code E5: Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series B and EN ISO 1127, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

#### 2) Valve body material

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body,  $\Delta Fe < 0.5\%$


**Aseptic clamp DIN, series C (code E7, E8)<sup>1)</sup>, forged body (code 40, 42)<sup>2)</sup>**

MG	DN	H1	Ød1	Ød3	Connection type (code)			
					E7		E8	
					L	L1, L2	L	L1, L2
8	15	8.5	9.4	34.0	88.9	44.45	88.9	44.45
10	15	12.5	9.4	34.0	108.0	54.0	108.0	54.0
	20	12.5	15.75	34.0	108.0	54.0	108.0	54.0
25	15	19.0	9.4	34.0	108.0	54.0	108.0	54.0
	20	19.0	15.75	34.0	117.0	58.5	117.0	58.5
	25	19.0	22.1	50.5	127.0	63.5	127.0	63.5
40	40	26.0	34.8	64.0	159.0	79.5	159.0	79.5
50	50	32.0	47.5	77.5	190.0	95.0	190.0	95.0
	65	32.0	60.2	91.0	216.0	108.0	216.0	108.0
80	65	62.0	60.2	91.0	216.0	108.0	216.0	108.0
	80	62.0	72.9	106.0	254.0	127.0	254.0	127.0
100	100	76.0	97.38	130.0	305.0	152.5	305.0	152.5

MG = diaphragm size

Dimensions in mm

**1) Connection type**

Code E7: Aseptic grooved clamp DIN 11864-NKS, for pipe DIN 11866 series C/ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

Code E8: Aseptic notched clamp DIN 11864-BKS, for pipe DIN 11866 series C/ASME BPE, face-to-face dimension FTF EN 558 series 7, length only for body configuration D

**2) Valve body material**

Code 40: 1.4435 (F316L), forged body

Code 42: 1.4435 (BN2), forged body,  $\Delta Fe < 0.5\%$



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