

GEMÜ 653 / 654 BioStar

Manually operated diaphragm valve



GEMÜ 653



GEMÜ 654

Features

- Handwheel made of chemical- and temperature-resistant plastic or stainless steel
- Opening stroke and closing stroke limiter
- Handwheel locking available upon request (electric or mechanical)
- Configurable with proximity switches for position feedback
- CIP/SIP capable
- Autoclave capability

Description

The GEMÜ 653 / 654 2/2-way diaphragm valve has a stainless steel bonnet and is manually operated. The valve is available in two versions - GEMÜ 653 has a handwheel in high temperature and chemically resistant plastic, GEMÜ 654 a stainless steel handwheel. An integrated optical position indicator is standard.

Technical specifications

- **Media temperature:** -30 to 130 °C
- **Sterilization temperature:** Max. 150 °C
- **Ambient temperature:** -20 to 60 °C
- **Operating pressure:** 0 to 10 bar
- **Nominal sizes:** DN 4 to 100
- **Body configurations:** i-body | Multi-port body | Straight through body | T body | Tank valve body | Welding configuration
- **Connection types:** Clamp | Flange | Spigot | thread
- **Connection standards:** ANSI | ASME | BS | DIN | EN | ISO | JIS | SMS
- **Body materials:** (316L), forging material | 1.4408, investment casting material | 1.4408, investment casting material, PFA lined | 1.4435 (BN2), forged material | 1.4435, investment casting material | 1.4539 (904L), block material | 1.4539 (904L), forged material | 2.4602, block material | 3.7035, titanium, block material
- **Diaphragm materials:** EPDM | FKM | PTFE/EPDM
- **Conformities:** 3A | CRN | EAC | FDA | Functional safety | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act) | USP

Technical data depends on the respective configuration



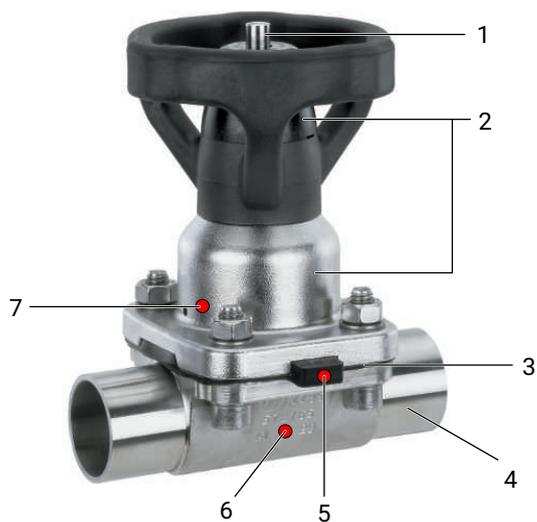
further information
webcode: GW-653 / 654



Product description

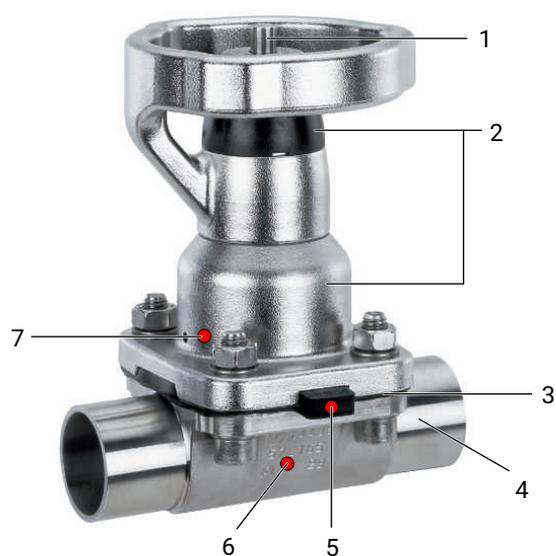
Construction

GEMÜ 653



Item	Name	Materials
1	Position indicator	
2	Manual actuator	Bonnet A4, stainless steel Cap (DN 10–DN 40), PEEK Cap (DN 50–DN 100), PES Handwheel, PPS, glass fibre reinforced
3	Diaphragm	EPDM FKM PTFE/EPDM (one-piece, two-piece) PTFE/PVDF/EPDM (three-piece)
4	Valve body	1.4408, investment casting 1.4435, investment casting 1.4408, PFA lined 1.4435 (F316L), forged body 1.4435 (BN2), forged body, $\Delta Fe < 0.5\%$ 1.4539, forged body 2.4602, block material 3.7035, titanium
5	CONEXO diaphragm RFID chip (see Conexo information)	
6	CONEXO body RFID chip (see Conexo information)	
7	CONEXO actuator RFID chip (see Conexo information)	

GEMÜ 654



Item	Name	Materials
1	Position indicator	
2	Manual actuator	Bonnet A4, stainless steel Cap (DN 10–DN 40), PEEK Cap (DN 50–DN 100), PES Handwheel, A4, stainless steel
3	Diaphragm	EPDM FKM PTFE/EPDM (one-piece, two-piece) PTFE/PVDF/EPDM (three-piece)
4	Valve body	1.4408, investment casting 1.4435, investment casting 1.4408, PFA lined 1.4435 (F316L), forged body 1.4435 (BN2), forged body, Δ Fe < 0.5% 1.4539, forged body 2.4602, block material 3.7035, titanium
5	CONEXO diaphragm RFID chip (see Conexo information)	
6	CONEXO body RFID chip (see Conexo information)	
7	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

Ordering

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

Availabilities

Availability of grades of surface finish

Internal surface finishes for forged and block material bodies ¹⁾

Process contact surfaces	Mechanically polished ²⁾		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 ³⁾	H5	1527	HE5	1516

Media wetted internal surface finishes in accordance with ASME BPE 2016 ⁴⁾	Mechanically polished ²⁾		Electropolished	
	ASME BPE surface designation	Code	ASME BPE surface designation	Code
Ra max. = 0.76 µm (30 µinch)	SF3	SF3	-	-
Ra max. = 0.64 µm (25 µinch)	SF2	SF2	SF6	SF6
Ra max. = 0.51 µm (20 µinch)	SF1	SF1	SF5	SF5
Ra max. = 0.38 µm (15 µinch)	-	-	SF4	SF4

Internal surface finishes for investment cast bodies

Process contact surfaces	Mechanically polished ²⁾	
	Hygiene class DIN 11866	Code
Ra ≤ 6.30 µm	-	1500
Ra ≤ 0.80 µm	H3	1502
Ra ≤ 0.60 µm ⁵⁾	-	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 ¹⁾																	
		0		16	17		18	35	36	37		55	59		60		63	64	65
		Material code ²⁾																	
		C3	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	C3	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	C3	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	C3	40, 42, 44, A1, A3, F4	C3	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4	40, 42, 44, A1, A3, F4
8	4	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	X	X	-	-	X	-	-	-	-	-	-	X	X	-	X
	8	-	-	-	X	X	-	-	X	-	-	X	X	X	X	X	X	-	X
	10	-	-	X	X	X	X	-	-	-	-	X	X	X	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-
10	10	-	-	X	X	X	X	-	X	-	-	X	-	X	X	X	X	-	X
	15	-	X	X	X	X	X	-	X	-	-	X	-	X	X	X	X	X	X
	20	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-
25	15	-	X	X	X	X	X	-	X	-	-	-	-	-	X	X	X	X	X
	20	-	X	X	X	X	X	-	X	-	-	X	X	X	X	X	X	X	X
	25	-	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X
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: DIN spigot

Code 16: Spigots 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: SMS 3008 spigot

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: ANSI/ASME B36.19M Schedule 40s spigot

2) Valve body material

Code 40: 1.4435 (F316L), forged body

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

Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Code C3: 1.4435, investment casting

Material code F4 only up to MG 50, from MG 80 material code 44.

Threaded connection

MG	DN	Connection type code ¹⁾	
		1	6, 6K
		Material code ²⁾	
		37	40, 42, 44, A3, F4
8	8	X	-
	10	-	W
10	10	-	W
	12	X	-
	15	X	W
25	15	X	W
	20	X	W
	25	X	W
40	32	X	W
	40	X	W
50	50	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 6: Threaded spigot DIN 11851

Code 6K: Tapered connector 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%

Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Flange

MG	DN	Connection type code ¹⁾							
		8			34	38	39		
		Material code ²⁾							
		C3	39	40, 42, A1, A3	39	39	C3	39	40, 42, A1, A3
25	15	W	X	W	X	-	W	X	W
	20	W	X	W	X	X	W	X	W
	25	W	X	W	X	X	W	X	W
40	32	W	X	W	X	-	W	X	W
	40	W	X	W	X	X	W	X	W
50	50	W	X	W	X	X	W	X	W
	65	-	X	-	-	X	-	X	-
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) **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

Code 34: Flange JIS B2220, 10K, RF, Overall length FTF EN 558 Series 1, ISO 5752, basic series 1, Overall length only for enclosure type 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 39: 1.4408, PFA lined

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 A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Clamp

MG	DN	Connection type code ¹⁾				
		80, 8P	82	88, 8T	8A	8E
		Material code ²⁾				
		40, 42, 44, A3, F4	40, 42, 44, A3, F4	40, 42, 44, A3, F4	40, 42, 44, A3, F4	40, 42, 44, A3, F4
8	6	-	K	-	K	-
	8	K	K	-	K	-
	10	K	-	-	W	-
	15	K	-	W	-	-
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, X = standard

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, Clamp SMS 3017 for pipe SMS 3008 Overall length FTF EN 558 Series 7, Overall length only for housing type 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 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Availability of product conformity

	Diaphragm material code ¹⁾
Food	
3A	54, 5M

1) **Diaphragm material**

Code 54: PTFE/EPDM one-piece

Code 5M: PTFE/EPDM two-piece

Design versions

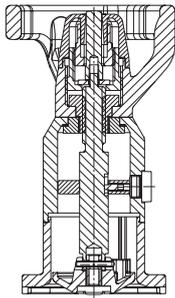
The actuator version can be found in the order data; see Actuator version (see page 12). The actuator version corresponds to the last digit in the three-digit code, e.g.: __ A, __ B, __ F, __ K.

The design of the bonnet corresponds to the second digit in the three-digit code, e.g.: _ X _.

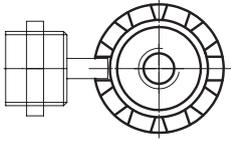
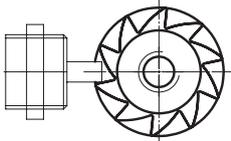
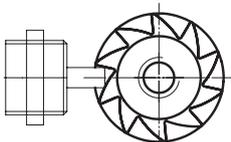
Bonnet functions

Code __ H	With seal adjuster and stroke limiter	GEMÜ 653 diaphragm size 10–50 GEMÜ 654 diaphragm size 8–100
Code __ N	Without seal adjuster and stroke limiter	GEMÜ 653 diaphragm size 10–100 GEMÜ 654 diaphragm size 8–100
Code __ S	With seal adjuster	Diaphragm size 80–100

Additional functions (only in connection with bonnet version code _ X _)

Code __ A		Diaphragm size 10–50 With seal adjuster and stroke limiter, mounting for proximity switches, M8x1
		Diaphragm size 80–100 With seal adjuster, mounting for proximity switches, M12x1

Types of locking devices (only in connection with bonnet version code _ X _)

Code __ B		Diaphragm size 10–50 With seal adjuster and stroke limiter, locking device (both directions) Mounting for proximity switches, M8x1
		Diaphragm size 80–100 With seal adjuster, locking device (both directions) Mounting for proximity switches, M12x1
Code __ K		Diaphragm size 10–50 With seal adjuster and stroke limiter, locking device to prevent opening Mounting for proximity switches, M8x1
		Diaphragm size 80–100 With seal adjuster, locking device to prevent opening Mounting for proximity switches, M12x1
Code __ F		Diaphragm size 10–50 With seal adjuster and stroke limiter, locking device to prevent closing Mounting for proximity switches, M8x1
		Diaphragm size 80–100 With seal adjuster, locking device to prevent closing Mounting for proximity switches, M12x1

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, stainless steel distance piece electropolished, optical position indicator	653
Diaphragm valve, manually operated, stainless steel handwheel electropolished, optical position indicator	654

2 DN	Code
DN 4	4
DN 6	6
DN 8	8
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
Floor drain	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
Spigot	
DIN spigot	0
Spigots 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
SMS 3008 spigot	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

4 Connection type	Code
Spigot ANSI/ASME B36.19M Schedule 5s	64
ANSI/ASME B36.19M Schedule 40s spigot	65
Threaded connection	
Threaded socket DIN ISO 228	1
Threaded spigot DIN 11851	6
Tapered connector and union nut DIN 11851	6K
Flange	
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, Overall length FTF EN 558 Series 1, ISO 5752, basic series 1, Overall length only for enclosure type 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
Flange ANSI Class 125/150 FF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D	41
Flange ANSI Class 125/150 FF, face-to-face dimension FTF MSS SP-88, length only for body configuration D	44
Clamp	
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, Clamp SMS 3017 for pipe SMS 3008 Overall length FTF EN 558 Series 7, Overall length only for housing type D	8E
Clamp DIN 32676 series C, face-to-face dimension FTF ASME BPE, length only for body configuration D	8P

Order data

4 Connection type	Code
Clamp DIN 32676 series C, face-to-face dimension FTF EN 558 series 7, length only for body configuration D	8T
Aseptic connections	
Flange	
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
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
Threaded connection	
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 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 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
Clamp	
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

4 Connection type	Code
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
Investment casting material	
1.4408, investment casting	37
1.4408, PFA lined	39
1.4435, investment casting	C3
Forged material	
1.4435 (F316L), forged body	40
1.4435 (BN2), forged body, $\Delta Fe < 0.5\%$	42
1.4539 / UNS N08904, forged body	F4
Block material	
1.4435 (316L), block material	41
1.4435 (BN2), block material, $\Delta Fe < 0.5\%$	43
1.4539/UNS N08904, block material	44
3.7035, titanium	A1
2.4602, Alloy 22 block material, (NiCr21Mo14W)	A3

6 Diaphragm material	Code
Elastomer	
EPDM	3A
FKM	4
FKM	4A
EPDM	13
EPDM	17
EPDM	19
Note: The EPDM diaphragms (code 3A, 4A) are only available for diaphragm size 8.	
PTFE	
PTFE/EPDM one-piece	54
PTFE/EPDM two-piece	5M
PTFE/EPDM two-piece for lining bodies	5Y
PTFE/PVDF/EPDM three-piece	71
Note: The PTFE/EPDM diaphragm (code 5M) is available from diaphragm size 10.	
Note: The PTFE/EPDM diaphragm (code 5Y) is available for diaphragm size 25 and can only be combined with PFA-lined valve bodies.	
Note: The PTFE/PVDF/EPDM diaphragm (code 71) can only be combined with PFA lined valve bodies.	

7 Control function	Code
Manually operated	0

8 Actuator version	Code
Design versions (see page 10)	

8 Actuator version	Code
With diaphragm size 8	
With seal adjuster and stroke limiter	0TH
Without seal adjuster and stroke limiter	0TN
With seal adjuster and stroke limiter, for mounting for proximity switches, M8x1	0XA
With seal adjuster and stroke limiter, locking device (both directions), for mounting for proximity switches, M8x1, correct setting of the seal adjuster absolutely essential	0XB
With seal adjuster and stroke limiter, locking device to prevent closing, for mounting for proximity switches, M8x1	0XF
With seal adjuster and stroke limiter, locking device to prevent opening, for mounting for proximity switches, M8x1	0XK
With diaphragm size 10	
Actuator size 1DH, for 2/2-way bodies, with seal adjuster and stroke limiter	1DH
Actuator size 1DN, for 2/2-way bodies	1DN
With seal adjuster and stroke limiter	1TH
With seal adjuster and stroke limiter, for mounting for proximity switches, M8x1	1XA
With seal adjuster and stroke limiter, locking device (both directions), for mounting for proximity switches, M8x1	1XB
With seal adjuster and stroke limiter, locking device to prevent closing, for mounting for proximity switches, M8x1	1XF
With seal adjuster and stroke limiter, locking device to prevent opening, for mounting for proximity switches, M8x1	1XK
With diaphragm size 25	
Actuator size 2DH, for 2/2-way bodies, with seal adjuster and stroke limiter	2DH
Actuator size 2DN, for 2/2-way bodies	2DN
With seal adjuster and stroke limiter	2TH
Without seal adjuster and stroke limiter	2TN
With seal adjuster and stroke limiter, for mounting for proximity switches, M8x1	2XA
With seal adjuster and stroke limiter, locking device (both directions), for mounting for proximity switches, M8x1	2XB
With seal adjuster and stroke limiter, locking device to prevent closing, for mounting for proximity switches, M8x1	2XF
With seal adjuster and stroke limiter, locking device to prevent opening, for mounting for proximity switches, M8x1	2XK
With diaphragm size 40	
Actuator size 3DH, for 2/2-way bodies, with seal adjuster and stroke limiter	3DH
Actuator size 3DN, for 2/2-way bodies	3DN

8 Actuator version	Code
With seal adjuster and stroke limiter	3TH
Without seal adjuster and stroke limiter	3TN
With seal adjuster and stroke limiter, for mounting for proximity switches, M8x1	3XA
With seal adjuster and stroke limiter, locking device (both directions), for mounting for proximity switches, M8x1	3XB
With seal adjuster and stroke limiter, locking device to prevent closing, for mounting for proximity switches, M8x1	3XF
With seal adjuster and stroke limiter, locking device to prevent opening, for mounting for proximity switches, M8x1	3XK
With diaphragm size 50	
Actuator size 4DH, for 2/2-way bodies, with seal adjuster and stroke limiter	4DH
Actuator size 4DN, for 2/2-way bodies	4DN
With seal adjuster and stroke limiter	4TH
Without seal adjuster and stroke limiter	4TN
With seal adjuster and stroke limiter, for mounting for proximity switches, M8x1	4XA
With seal adjuster and stroke limiter, locking device (both directions), for mounting for proximity switches, M8x1	4XB
With seal adjuster and stroke limiter, locking device to prevent closing, for mounting for proximity switches, M8x1	4XF
With seal adjuster and stroke limiter, locking device to prevent opening, for mounting for proximity switches, M8x1	4XK
With diaphragm size 80	
With seal adjuster and stroke limiter	5TH
Without seal adjuster and stroke limiter	5TN
With seal adjuster	5TS
With seal adjuster, for mounting for proximity switches, M12x1	5XA
With seal adjuster, locking device (both directions), for mounting for proximity switches, M12x1	5XB
With seal adjuster, locking device to prevent opening, for mounting for proximity switches, M12x1	5XK
Note: Code 5TH is only available for diaphragm valve 654.	
With diaphragm size 100	
Actuator size 6TH, with seal adjuster and stroke limiter	6TH
Without seal adjuster and stroke limiter	6TN
With seal adjuster	6TS
With seal adjuster, for mounting for proximity switches, M12x1	6XA
With seal adjuster, locking device (both directions), for mounting for proximity switches, M12x1	6XB

Order data

8 Actuator version	Code
With seal adjuster, locking device to prevent opening, for mounting for proximity switches, M12x1	6XK
Note: Code 5TH is only available for diaphragm valve 654.	

9 Surface	Code
Ra ≤ 6.3 µm for surfaces in contact with media, mechanically polished on the inside	1500
Ra ≤ 0.8 µm for surfaces in contact with media, in accordance with DIN 11866 H3 mechanically polished on the inside	1502
Ra ≤ 0.8 µm for surfaces in contact with media, in accordance with DIN 11866 HE3, electropolished inside/outside	1503
Ra ≤ 0.6 µm for surfaces in contact with media, mechanically polished on the inside	1507
Ra ≤ 0.6 µm for surfaces in contact with media, electropolished inside/outside	1508
Ra ≤ 0.25 µm for surfaces in contact with media *), in accordance with DIN 11866 HE5, electropolished inside/outside, *) for pipe inner diameter < 6 mm, Ra ≤ 0.38 µm in the spigot	1516
Ra ≤ 0.25 µm for surfaces in contact with media *), in accordance with DIN 11866 H5, mechanically polished on the inside, *) for pipe inner Ø < 6 mm, Ra ≤ 0.38 µm in the spigot	1527
Ra ≤ 0.4 µm for surfaces in contact with media, in accordance with DIN 11866 H4, mechanically polished on the inside	1536
Ra ≤ 0.4 µm for surfaces in contact with media, in accordance with DIN 11866 HE4, electropolished inside/outside	1537
Ra max. 0.51 µm (20 µin.) for surfaces in contact with media, in accordance with ASME BPE SF1, internally mechanically polished	SF1
Ra max. 0.64 µm (25 µin.) for surfaces in contact with media, in accordance with ASME BPE SF2, internally mechanically polished	SF2
Ra max. 0.76 µm (30 µin.) for surfaces in contact with media, in accordance with ASME BPE SF3, mechanically polished interior	SF3
Ra max. 0.38 µm (15 µin.) for media wetted surfaces, in accordance with ASME BPE SF4, electropolished internal/external	SF4
Ra max. 0.51 µm (20 µin.) for surfaces in contact with media, in accordance with ASME BPE SF5, electropolished inside/outside	SF5
Ra max. 0.64 µm (25 µin.) for surfaces in contact with media, in accordance with ASME BPE SF6, electropolished inside/outside	SF6

10 Special version	Code
Without	
Special version for 3A	M

10 Special version	Code
Special design 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	654	Diaphragm valve, manually operated, stainless steel handwheel electropolished, optical position indicator
2 DN	50	DN 50
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	0	Manually operated
8 Actuator version	4DH	Actuator size 4DH, for 2/2-way bodies, with seal adjuster and stroke limiter
9 Surface	1503	Ra ≤ 0.8 µm for surfaces in contact with media, in accordance with DIN 11866 HE3, electropolished inside/outside
10 Special version		Without
11 CONEXO		Without

Technical data

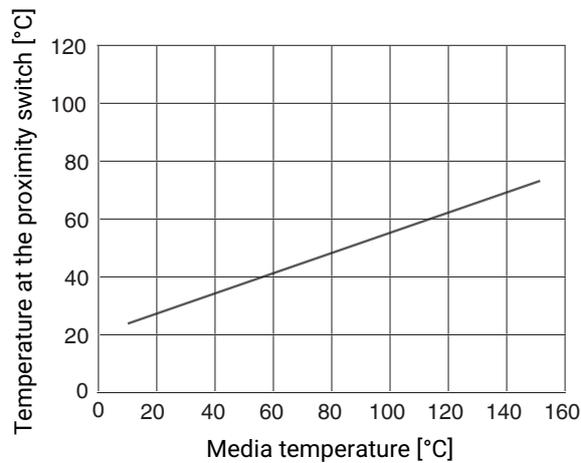
Medium

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.
 The valve will seal in both flow directions up to full operating pressure (gauge pressure).
 For special oxygen version (code S): only gaseous oxygen

Temperature

Media temperature:

Temperature development at the proximity switch depending on the media temperature



Data at room temperature

MG	Diaphragm material	Valve body material	Standard	Special version for oxygen
8, 10, 25, 40, 50, 80, 100	EPDM (code 3A/13)	1.4408, investment casting (code 37) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 2.4602, Alloy 22 block material, (NiCr21Mo14W) (code A3) 3.7035, titanium (code A1)	-10 to 100 °C	0 to 60 °C
8, 10, 25, 40, 50, 80, 100	EPDM (code 17)	1.4408, investment casting (code 37) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 2.4602, Alloy 22 block material, (NiCr21Mo14W) (code A3) 3.7035, titanium (code A1)	-10 to 100 °C	0 to 60 °C
8, 10, 25, 40, 50, 80, 100	EPDM (code 19)	1.4435, investment casting (code C3) 1.4539, forged body (code F4)	-10 to 100 °C	0 to 60 °C
8, 10, 25, 40, 50, 80, 100	EPDM (code 19)	1.4408, investment casting (code 37) 1.4435, forged body (code 40, 42) 2.4602, Alloy 22 block material, (NiCr21Mo14W) (code A3)	-20 to 130 °C*	0 to 60 °C
		3.7035, titanium (code A1)	-10 to 130 °C*	
25, 40, 50, 80, 100	EPDM (code 19)	1.4408, PFA lined (code 39)	-20 to 100 °C*	-

MG	Diaphragm material	Valve body material	Standard	Special version for oxygen
8, 10, 25, 40, 50, 80, 100	PTFE/EPDM (code 54)	1.4435, investment casting (code C3) 1.4539, forged body (code F4)	-10 to 100 °C	0 to 60 °C
8, 10, 25, 40, 50, 80, 100	PTFE/EPDM (code 54)	1.4408, investment casting (code 37)	-20 to 130 °C*	0 to 60 °C
		1.4435, forged body (code 40, 42) 2.4602, Alloy 22 block material, (NiCr21Mo14W) (code A3)	-30 to 130 °C*	0 to 60 °C
		3.7035, titanium (code A1)	-10 to 130 °C*	
25, 40, 50, 80, 100	PTFE/EPDM (code 54)	1.4408, PFA lined (code 39)	-20 to 100 °C*	-
25, 40, 50, 80, 100	PTFE/PVDF/EPDM (code 71)	1.4408, PFA lined (code 39)	-10 to 100 °C	-
10, 25, 40, 50, 80, 100	PTFE/EPDM (code 5M)	1.4435, investment casting (code C3) 1.4539, forged body (code F4) 1.4539, block material (code 44)	-10 to 100 °C	0 to 60 °C
10, 25, 40, 50, 80, 100	PTFE/EPDM (code 5M)	1.4408, investment casting (code 37)	-20 to 130 °C*	-
		1.4435, forged body (code 40, 42) 1.4435, block material (code 41, 43) 2.4602, Alloy 22 block material, (NiCr21Mo14W) (code A3)	-30 to 130 °C*	-
		3.7035, titanium (code A1)	-10 to 130 °C*	
25, 40, 50, 80, 100	PTFE/EPDM (code 5M)	1.4408, PFA lined (code 39)	-20 to 100 °C*	-
8, 10, 25, 40, 50, 80, 100	FKM (code 4/4A)	1.4408, investment casting (code 37) 1.4435, investment casting (code C3) 1.4435, forged body (code 40, 42) 1.4539, forged body (code F4) 1.4408, PFA lined (code 39)	-10 to 90 °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.

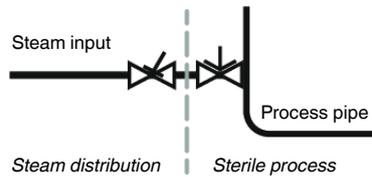
Technical data

Sterilization temperature:

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
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

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: -20 – 60 °C
 With electrical locking device (code MAG): 0 – 35 °C

Storage temperature: 0 – 40 °C

Autoclavability: No limitations

Pressure

Operating pressure:

MG	DN	Diaphragm material			
		Elastomer	PTFE		Investment cast body
			Forged body*		
			Diaphragm material code 54	Diaphragm material code 5M	
8	4 - 15	0 - 10	0 - 10	-	0 - 6
10	10 - 20	0 - 10	0 - 10	-	0 - 6
25	15 - 25	0 - 10	0 - 10	0 - 10	0 - 6
40	32 - 40	0 - 10	0 - 10	0 - 10	0 - 6
50	50 - 65	0 - 10	0 - 10	0 - 10	0 - 6
80	65 - 80	0 - 10	0 - 10	-	0 - 6
100	100	0 - 10	0 - 10	-	0 - 6

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.
 * For Code _ T _ and _ X _ actuator versions. Code _ D _ actuator versions: 0 - 6 bar

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:

- Diaphragm codes 54, 5M, 17 and 19
- Diaphragm sizes 8–100
- Valve body material codes 40, 41, 42, 43, 44, A1, A3, F4

Pressure rating: PN 16

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

Kv values:

MG	DN	Connection type code								
		0	16	17	18	37	59	60	1	31
8	4	0.5	-	-	-	-	-	-	-	-
	6	-	-	1.1	-	-	-	1.2	-	-
	8	-	-	1.3	-	-	0.6	2.2	1.4	-
	10	-	2.1	2.1	2.1	-	1.3	-	-	-
	15	-	-	-	-	-	2.0	-	-	-
10	10	-	2.4	2.4	2.4	-	2.2	3.3	-	-
	12	-	-	-	-	-	-	-	3.2	-
	15	3.3	3.8	3.8	3.8	-	2.2	4.0	3.4	-
	20	-	-	-	-	-	3.8	-	-	-
25	15	4.1	4.7	4.7	4.7	-	-	7.4	6.5	6.5
	20	6.3	7.0	7.0	7.0	-	4.4	13.2	10.0	10.0
	25	13.9	15.0	15.0	15.0	12.6	12.2	16.2	14.0	14.0
40	32	25.3	27.0	27.0	27.0	26.2	-	30.0	26.0	26.0
	40	29.3	30.9	30.9	30.9	30.2	29.5	32.8	33.0	33.0
50	50	46.5	48.4	48.4	48.4	51.7	50.6	55.2	60.0	60.0
	65	-	-	-	-	62.2	61.8	-	-	-
80	65	-	-	77.0	-	68.5	68.5	96.0	-	-
	80	-	-	111.0	-	80.0	87.0	111.0	-	-
100	100	-	-	194.0	-	173.0	188.0	214.0	-	-

MG = diaphragm size, Kv values in m³/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:

Kv values for plastic lining

MG	DN	Material code 39
25	15	5.0
	20	9.0
	25	13.0
40	32	23.0
	40	26.0
50	50	47.0
	65	47.0
80	80	110
100	100	177

MG = diaphragm size, Kv values in m³/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

Pressure Equipment Directive:	2014/68/EU
Food:	FDA* Regulation (EC) No. 1935/2004 (only for material code C3, 40, 42, 41, 43, A1, A3) Regulation (EC) No. 10/2011* USP* Class VI 3A (special version code M)
TA Luft (German Clean Air Act):	The product meets the following requirements under the maximum permissible operating conditions: - Tightness or compliance with the specific leak rate as defined in TA Luft (German Clean Air Act) and VDI 2440 and VDI 2290 - Compliance with the requirements in accordance with DIN EN ISO 15848-1, Table C.2, Class BH
Oxygen:	BAM compliant, the product is suitable for application with oxygen (special version code S)
BSE/TSE:	The product conforms to EMA/410/01 revision 3 and is free of animal substances
Explosion protection:	Explosion-proof design available on request

* depending on version and/or operating parameters

Mechanical data

Weight:

Actuator

MG	DN	Weight	
			Actuator version Code __ A, __ B, __ F, __ _ K
8	4 - 15	0.35	0.7
10	10 - 20	0.65	1.0
25	15 - 25	1.40	1.7
40	32 - 40	2.20	2.8
50	50 - 65	3.20	4.3
80	65 - 80	7.80	10.5
100	100	8.50	12.5

Weights in kg
MG = diaphragm size

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	6, 6K	8, 38, 39	80, 82, 88, 8A, 8E, 8P, 8T
8	4	0.09	-	-	-	-
	6	0.09	-	-	-	-
	8	0.09	0.09	-	-	0.15
	10	0.09	-	0.21	-	0.18
	15	0.09	-	-	-	0.18
10	10	0.30	-	0.33	-	0.30
	12	-	0.17	-	-	-
	15	0.30	0.26	0.35	-	0.43
	20	-	-	-	-	0.43
25	15	0.62	0.32	0.71	1.50	0.75
	20	0.58	0.34	0.78	2.20	0.71
	25	0.55	0.39	0.79	2.80	0.63
40	32	1.45	0.88	1.66	3.40	1.62
	40	1.32	0.93	1.62	4.50	1.50
50	50	2.25	1.56	2.70	6.30	2.50
	65	2.20	-	-	10.30	2.30
80	65	8.60	-	9.22	10.20	8.90
	80	8.00	-	9.20	13.80	8.50
100	100	24.10	-	-	20.80	24.80

Weights in kg
MG = diaphragm size

Installation position:

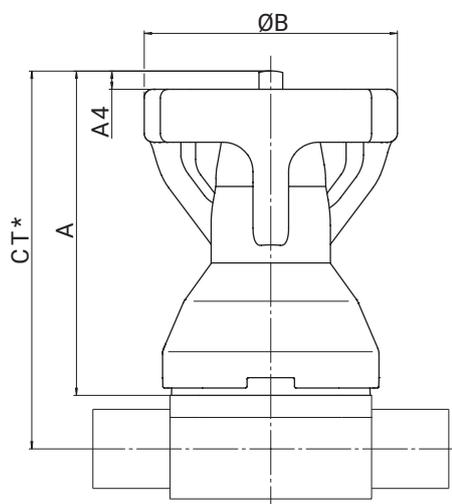
Optional

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

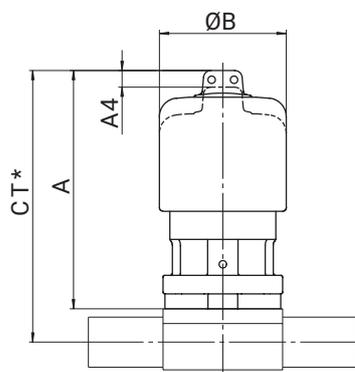
Dimensions

Actuator dimensions

GEMÜ 653, 654



MG 10-100



MG 8

MG	DN	A			A4			ØB
		__ H	__ N	__ S	__ H	__ N	__ S	
8	4 - 15	85.0	65.0	-	4.5	4.5	-	36.0
10	10 - 20	86.0	86.0	-	2.0	2.0	-	63.0
25	15 - 25	108.0	108.0	-	5.0	5.0	-	92.0
40	32 - 40	145.0	145.0	-	9.0	9.0	-	114.0
50	50 - 65	171.0	171.0	-	21.0	21.0	-	132.0
80	65 - 80	231.0**	202.0	231.0	33.0**	18.0	33.0	211.0
100	100	255.0**	223.0	255.0	43.0**	28.0	43.0	211.0

Dimensions in mm

MG = diaphragm size

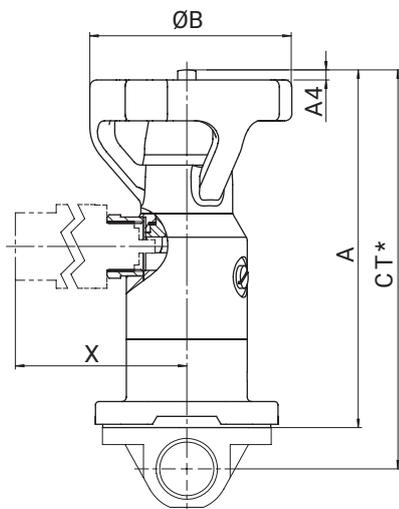
* CT = A + H1 (see body dimensions)

** only GEMÜ 654

A4: Protrusion of indicator spindle over highest point when actuator is in the open position (approximate values)

GEMÜ 653, 654 with actuator versions A, B, F, K

The actuator version can be found in the order data; see Actuator version (see page 12). The actuator version corresponds to the last digit in the three-digit code, e.g.: __ A, __ B, __ F, __ K.



MG	DN	A	A4	ØB	Locking device X MAG	Locking device X LOC
8	4 - 15	123.0	1.0	63.0	107.0	73.0
10	10 - 20	124.0	2.0	63.0	107.0	73.0
25	15 - 25	159.0	5.0	92.0	112.0	78.0
40	32 - 40	192.0	9.0	114.0	119.0	85.0
50	50 - 65	236.0	21.0	132.0	125.0	91.0
80	65 - 80	290.0	33.0	211.0	142.0	108.0
100	100	323.0	43.0	211.0	152.0	118.0

Dimensions in mm

MG = diaphragm size

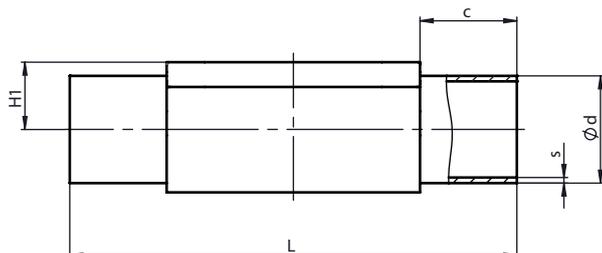
* CT = A + H1 (see body dimensions)

A4: Protrusion of indicator spindle over highest point when actuator is in the open position (approximate values)

X: Only with additional function __ B, __ F, __ K

Body dimensions

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



Connection type: Spigot DIN/EN/ISO (code 0, 16, 17, 18, 60)¹⁾, forged material (code 40, 42, F4), block material (code 44, A1, A3)²⁾

MG	DN	NPS	c (min)	$\varnothing d$					H1	L	s				
				Connection type							Connection type				
				0	16	17	18	60			0	16	17	18	60
8	4	-	20.0	6.0	-	-	-	-	8.5	72.0	1.0	-	-	-	-
	6	-	20.0	-	-	8.0	-	10.2	8.5	72.0	-	-	1.0	-	1.6
	8	1/4"	20.0	-	-	10.0	-	13.5	8.5	72.0	-	-	1.0	-	1.6
	10	3/8"	20.0	-	12.0	13.0	14.0	-	8.5	72.0	-	1.0	1.5	2.0	-
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	1 1/4"	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	1 1/2"	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	2 1/2"	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: DIN spigot

Code 16: Spigots 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, $\Delta Fe < 0.5\%$

Code 44: 1.4539/UNS N08904, block material

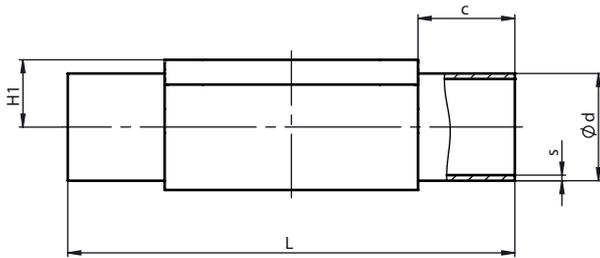
Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Dimensions



Connection type spigot DIN/EN/ISO (code 0, 17, 60)¹⁾, investment casting material (code C3)²⁾

MG	DN	NPS	c (min)	ød			H1	L	s		
				Connection type					Connection type		
				0	17	60			0	17	60
8	4	-	20.0	6.0	-	-	8.5	72.0	1.0	-	-
	6	-	20.0	-	8.0	-	8.5	72.0	-	1.0	-
	8	1/4"	20.0	-	10.0	13.5	8.5	72.0	-	1.0	1.6
	10	3/8"	20.0	-	13.0	-	8.5	72.0	-	1.5	-
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	1 1/4"	25.0	-	35.0	42.4	24.0	153.0	-	1.5	2.0
	40	1 1/2"	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) **Connection type**

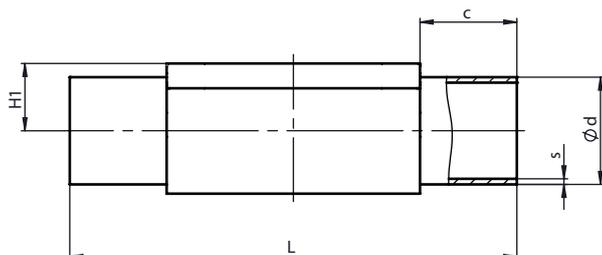
Code 0: DIN spigot

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

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

2) **Valve body material**

Code C3: 1.4435, investment casting

Spigot ASME/BS (code 55, 59, 63, 64, 65)

Connection type: Spigot DIN/EN/ISO (code 55, 59, 63, 64, 65)¹⁾, forged material (code 40, 42, F4), block material (code 44, A1, A3)²⁾

MG	DN	NPS	c (min)	Ød					H1	L	s				
				Connection type							Connection type				
				55	59	63	64	65			55	59	63	64	65
8	6	-	20.0	-	-	10.3	-	10.3	8.5	72.0	-	-	1.24	-	1.73
	8	1/4"	20.0	6.35	6.35	13.7	-	13.7	8.5	72.0	1.2	0.89	1.65	-	2.24
	10	3/8"	20.0	9.53	9.53	-	-	-	8.5	72.0	1.2	0.89	-	-	-
	15	1/2"	20.0	12.70	12.70	-	-	-	8.5	72.0	1.2	1.65	-	-	-
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	1 1/4"	25.0	-	-	42.2	42.2	42.2	26.0	153.0	-	-	2.77	1.65	3.56
	40	1 1/2"	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	2 1/2"	30.0	-	63.50	-	-	-	34.0	173.0	-	1.65	-	-	-
80	65	2 1/2"	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: ANSI/ASME B36.19M Schedule 40s spigot

2) **Valve body material**

Code 40: 1.4435 (F316L), forged body

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

Code 44: 1.4539/UNS N08904, block material

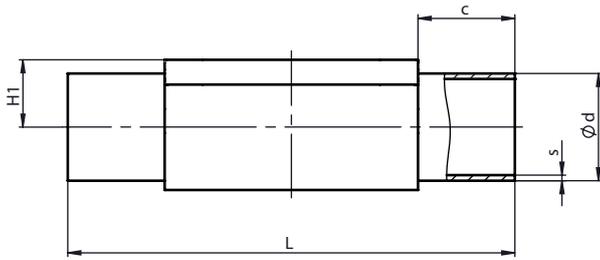
Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Dimensions



Connection type spigot ASME BPE (code 59)¹⁾, investment casting material (code C3)²⁾

MG	DN	NPS	c (min)	ød	H1	L	s
8	8	1/4"	20.0	6.35	8.5	72.0	0.89
	10	3/8"	20.0	9.53	8.5	72.0	0.89
	15	1/2"	20.0	12.70	8.5	72.0	1.65
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

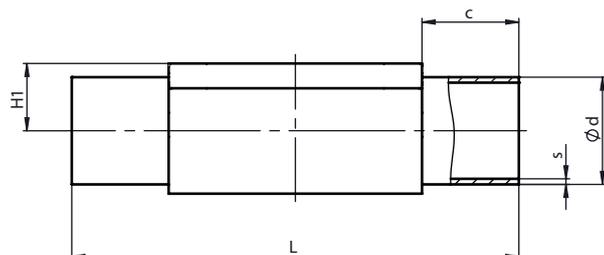
MG = diaphragm size

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)¹⁾, forged material (code 40, 42, F4), block material (code 44, A1, A3)²⁾

MG	DN	NPS	c (min)	Ød			H1	L	s		
				Connection type					Connection type		
				35	36	37			35	36	37
8	6	-	20.0	-	10.5	-	8.5	72.0	-	1.20	-
	8	1/4"	20.0	-	13.8	-	8.5	72.0	-	1.65	-
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)¹⁾, investment casting material (code C3)³⁾

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: SMS 3008 spigot

2) **Valve body material**

Code 40: 1.4435 (F316L), forged body

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

Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

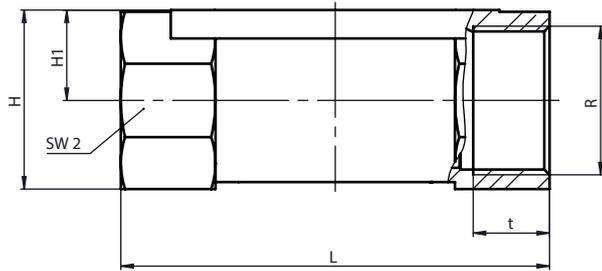
Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

3) **Valve body material**

Code C3: 1.4435, investment casting

Material code F4 only up to MG 50, from MG 80 material code 44.

Threaded socket DIN (code 1)



Connection type threaded socket (code 1)¹⁾, investment casting material (code 37)²⁾

MG	DN	NPS	H	H1	L	n	R	SW 2	t
8	8	1/4"	19.0	9.0	72.0	6	G 1/4	18.0	11.0
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	19.0
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

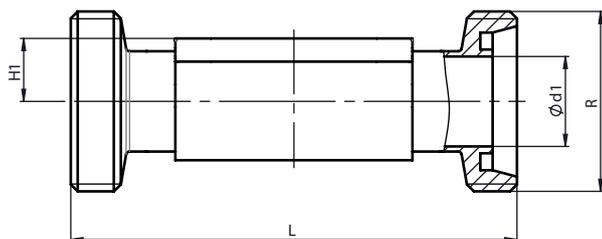
n = number of flats

1) Connection type

Code 1: Threaded socket DIN ISO 228

2) Valve body material

Code 37: 1.4408, investment casting

Threaded spigot DIN (code 6)

Connection type: Threaded spigot DIN (code 6)¹⁾, forged material (code 40, 42, F4), block material (44, A1, A3)²⁾

MG	DN	NPS	Ød1	H1	L	R
8	10	3/8"	10.0	8.5	92.0	Rd 28 x 1/8
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	1 1/4"	32.0	26.0	147.0	Rd 58 x 1/6
	40	1 1/2"	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	2 1/2"	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 < 0.5%

Code 44: 1.4539/UNS N08904, block material

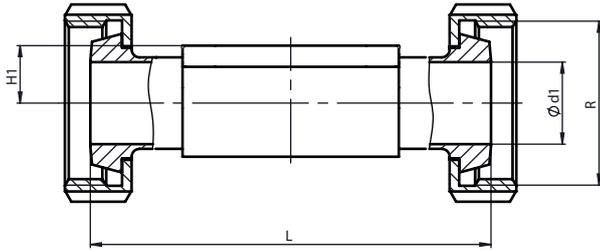
Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Cone spigot DIN (code 6K)



Connection type: Cone spigot DIN (code 6)¹⁾, forged material (code 40, 42, F4), block material (44, A1, A3)²⁾

MG	DN	NPS	Ød1	H1	L	R
8	10	3/8"	10.0	8.5	90.0	Rd 28 x 1/8
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: Tapered connector 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%

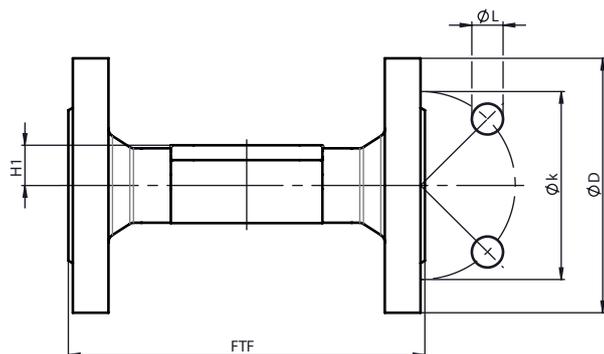
Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Flange EN (code 8)

Connection type: Flange, length EN 558 (code 8)¹⁾, investment casting material (code 39, C3), forged material (code 40, 42, F4), block material (code 44, A1, A3)²⁾

MG	DN	NPS	øD	FTF			H1			øk	øL	n
				Material			Material					
				39	C3	40, 42, A1	39	C3	40, 42, A1			
25	15	1/2"	95.0	130.0	150.0	150.0	18.0	13.0	19.0	65.0	14.0	4
	20	3/4"	105.0	150.0	150.0	150.0	20.5	16.0	19.0	75.0	14.0	4
	25	1"	115.0	160.0	160.0	160.0	23.0	19.0	19.0	85.0	14.0	4
40	32	1 1/4"	140.0	180.0	180.0	180.0	28.7	24.0	26.0	100.0	19.0	4
	40	1 1/2"	150.0	200.0	200.0	200.0	33.0	26.0	26.0	110.0	19.0	4
50	50	2"	165.0	230.0	230.0	230.0	39.0	32.0	32.0	125.0	19.0	4
	65	2 1/2"	185.0	290.0	-	-	51.0	-	-	145.0	19.0	4
80	65	2 1/2"	185.0	-	-	290.0	-	-	62.0	145.0	19.0	4
	80	3"	200.0	310.0	-	310.0	59.5	-	62.0	160.0	19.0	8
100	100	4"	220.0	350.0	-	350.0	73.0	-	76.0	180.0	19.0	8

Dimensions in mm

MG = diaphragm size

n = number of bolt holes

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 39: 1.4408, PFA lined

Code 40: 1.4435 (F316L), forged body

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

Code 44: 1.4539/UNS N08904, block material

Code C3: 1.4435, investment casting

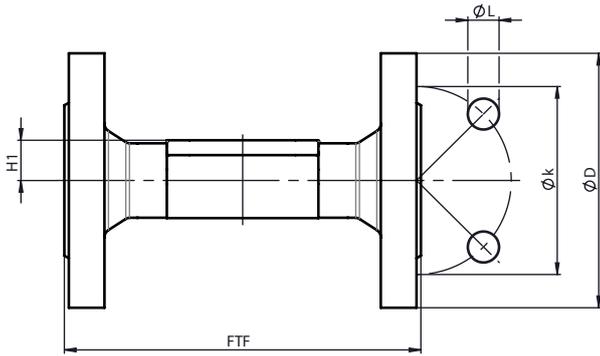
Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Flange JIS (code 34)



Connection type flange, length 558 (code 34)¹⁾, investment casting material (code 39)²⁾

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

n = number of bolt holes

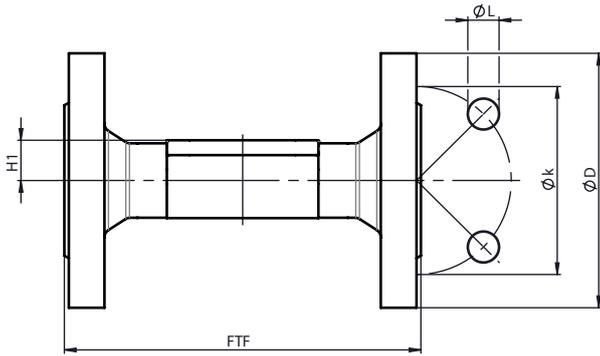
1) Connection type

Code 34: Flange JIS B2220, 10K, RF, Overall length FTF EN 558 Series 1, ISO 5752, basic series 1, Overall length only for enclosure type 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)¹⁾, investment casting material (code 39)²⁾

MG	DN	NPS	øD	FTF	H1	øk	øL	n
25	20	3/4"	100.0	146.0	20.5	69.9	15.9	4
	25	1"	110.0	146.0	23.0	79.4	15.9	4
40	40	1½"	125.0	175.0	33.0	98.4	15.9	4
50	50	2"	150.0	200.0	39.0	120.7	19.0	4
	65	2½"	180.0	226.0	51.0	139.7	19.0	4
80	80	3"	190.0	260.0	59.5	152.4	19.0	4
100	100	4"	230.0	327.0	73.0	190.5	19.0	8

Dimensions in mm

MG = diaphragm size

n = number of bolt holes

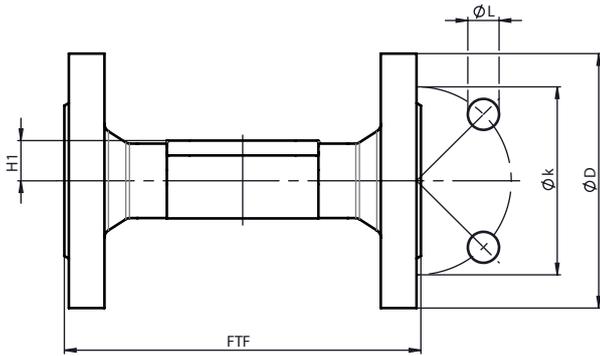
1) Connection type

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 39: 1.4408, PFA lined

Dimensions



Connection type: Flange, length EN 558 (code 39)¹⁾, investment casting material (code 39, C3), forged material (code 40, 42, F4), block material (code 44, A1, A3)²⁾

MG	DN	NPS	øD	FTF			H1			øk	øL	n
				Material			Material					
				39	C3	40, 42, A1	39	C3	40, 42, A1			
25	15	1/2"	90.0	130.0	150.0	150.0	-	13.0	19.0	60.3	15.9	4
	20	3/4"	100.0	150.0	150.0	150.0	20.5	16.0	19.0	69.9	15.9	4
	25	1"	110.0	160.0	160.0	160.0	23.0	19.0	19.0	79.4	15.9	4
40	32	1 1/4"	115.0	180.0	180.0	180.0	28.7	24.0	26.0	88.9	15.9	4
	40	1 1/2"	125.0	200.0	200.0	200.0	33.0	26.0	26.0	98.4	15.9	4
50	50	2"	150.0	230.0	230.0	230.0	39.0	32.0	32.0	120.7	19.0	4
	65	2 1/2"	180.0	290.0	-	-	51.0	-	-	139.7	19.0	4
80	65	2 1/2"	180.0	-	-	290.0	-	-	62.0	139.7	19.0	4
	80	3"	190.0	310.0	-	310.0	59.5	-	62.0	152.4	19.0	4
100	100	4"	230.0	350.0	-	350.0	73.0	-	76.0	190.5	19.0	8

Dimensions in mm

MG = diaphragm size

n = number of bolt holes

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 39: 1.4408, PFA lined

Code 40: 1.4435 (F316L), forged body

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

Code 44: 1.4539/UNS N08904, block material

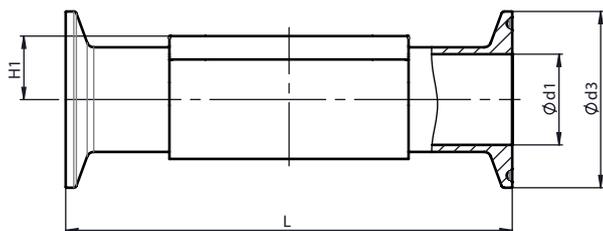
Code C3: 1.4435, investment casting

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Clamp (code 80, 82, 88, 8A, 8E, 8P, 8T)

Connection type: Clamp DIN/ASME (code 80, 88, 8P, 8T)¹⁾, forged material (code 40, 42, F4), block material (code 44, A1, A3)²⁾

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
8	8	1/4"	4.57	-	25.0	-	8.5	63.5	-
	10	3/8"	7.75	-	25.0	-	8.5	63.5	-
	15	1/2"	9.40	9.40	25.0	25.0	8.5	63.5	108.0
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 < 0.5%

Code 44: 1.4539/UNS N08904, block material

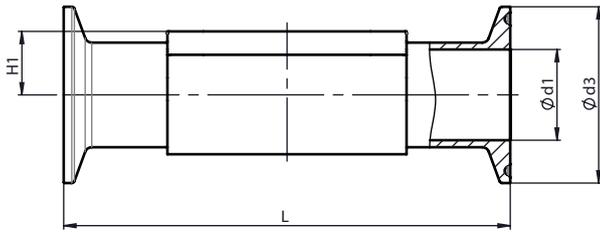
Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Dimensions



Connection type: Clamp DIN/ISO (code 82, 8A, 8E)¹⁾, forged material (code 40, 42, F4), block material (code 44, A1, A3)²⁾

MG	DN	NPS	$\phi d1$			$\phi d3$			H1	L		
			Connection type			Connection type				Connection type		
			82	8A	8E	82	8A	8E		82	8A	8E
8	6	1/8"	7.0	6.0	-	25.0	25.0	-	8.5	63.5	63.5	-
	8	1/4"	10.3	8.0	-	25.0	25.0	-	8.5	63.5	63.5	-
	10	3/8"	-	10.0	-	-	34.0	-	8.5	-	88.9	-
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, Clamp SMS 3017 for pipe SMS 3008 Overall length FTF EN 558 Series 7, Overall length only for housing type D

2) Valve body material

Code 40: 1.4435 (F316L), forged body

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

Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

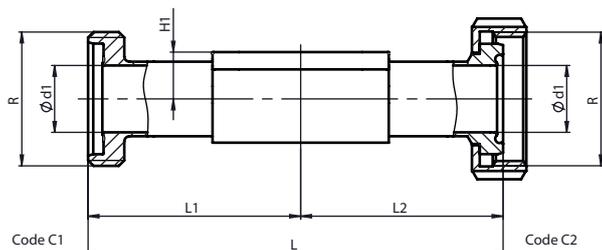
Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Aseptic connections

Aseptic union DIN



Aseptic union end DIN, series A (code C1, C2)¹⁾, forged body (code 40, 42, F4), block material (code 44, A1, A3)²⁾

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, $\Delta Fe < 0.5\%$

Code 44: 1.4539/UNS N08904, block material

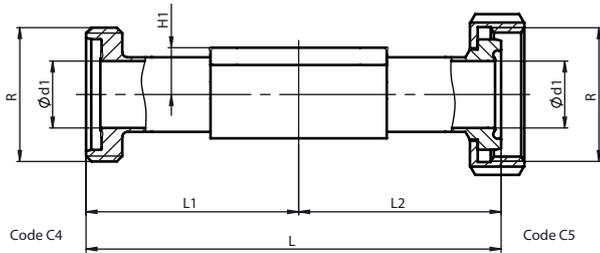
Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Dimensions



Aseptic union end DIN, series B (code C4, C5)¹⁾, forged body (code 40, 42, F4), block material (code 44, A1, A3)²⁾

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, $\Delta Fe < 0.5\%$

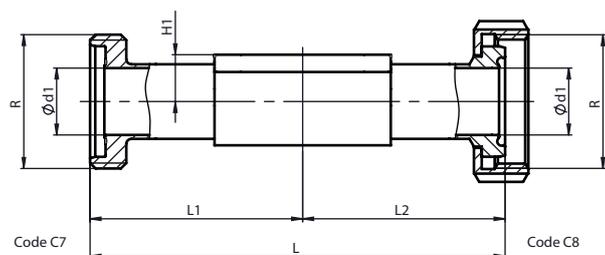
Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.



Aseptic union end DIN, series C (code C7, C8)¹⁾, forged body (code 40, 42, F4), block material (code 44, A1, A3)²⁾

MG	DN	H1	Ød1	Thread	Connection type (code)			
					C7		C8	
					R	L	L1, L2	L
8	15	8.5	9.4	RD 28 x 1/8	88.0	44.0	84.0	42.0
10	15	12.5	9.4	RD 28 x 1/8	120.0	60.0	116.0	58.0
	20	12.5	15.75	RD 34 x 1/8	144.0	72.0	138.0	69.0
25	15	19.0	9.4	RD 28 x 1/8	120.0	60.0	116.0	60.0
	20	19.0	15.75	RD 34 x 1/8	144.0	72.0	138.0	69.0
	25	19.0	22.1	RD 52 x 1/6	164.0	82.0	156.0	78.0
40	40	26.0	34.8	RD 65 x 1/6	214.0	107.0	204.0	102.0
50	50	32.0	47.5	RD 78 x 1/6	244.0	122.0	242.0	121.0
	65	32.0	60.2	RD 95 x 1/6	314.0	157.0	310.0	155.0
80	65	62.0	60.2	RD 95 x 1/6	314.0	157.0	310.0	155.0
	80	62.0	72.9	RD 110 x 1/4	342.0	171.0	334.0	167.0
100	100	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, $\Delta Fe < 0.5\%$

Code 44: 1.4539/UNS N08904, block material

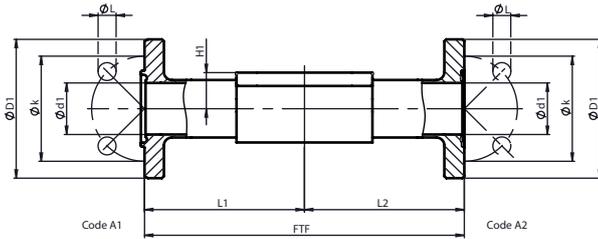
Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Aseptic flange DIN



Aseptic flange DIN, series A (code A1, A2)¹⁾, forged body (code 40, 42, F4), block material (code 44, A1, A3)²⁾

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%

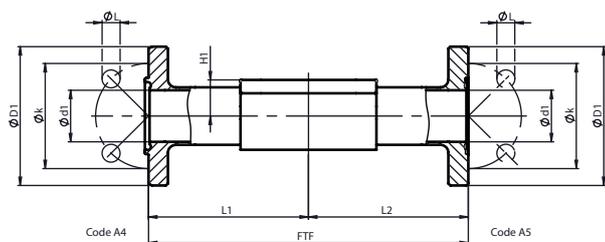
Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.


Aseptic flange DIN, series B (code A4, A5)¹⁾, forged body (code 40, 42, F4), block material (code 44, A1, A3)²⁾

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, $\Delta Fe < 0.5\%$

Code 44: 1.4539/UNS N08904, block material

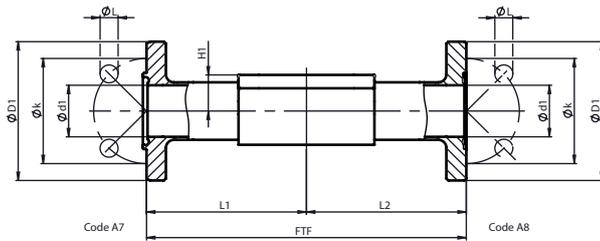
Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Dimensions



Aseptic flange DIN, series C (code A7, A8)¹⁾, forged body (code 40, 42, F4), block material (code 44, A1, A3)²⁾

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, Δ Fe < 0.5%

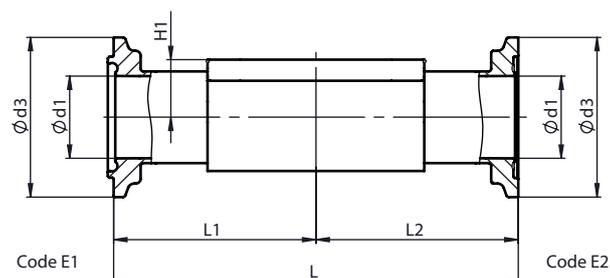
Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Aseptic clamp DIN**Aseptic clamp DIN, series A (code E1, E2)¹⁾, forged body (code 40, 42, F4), block material (code 44, A1, A3)²⁾**

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, $\Delta Fe < 0.5\%$

Code 44: 1.4539/UNS N08904, block material

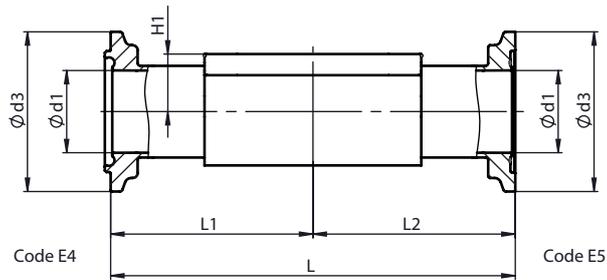
Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.

Dimensions



Aseptic clamp DIN, series B (code E4, E5)¹⁾, forged body (code 40, 42, F4), block material (code 44, A1, A3)²⁾

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, $\Delta Fe < 0.5\%$

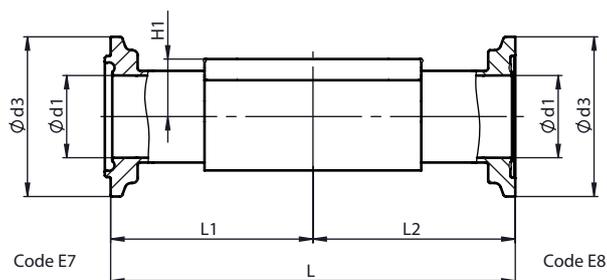
Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

Material code F4 only up to MG 50, from MG 80 material code 44.


Aseptic clamp DIN, series C (code E7, E8)¹⁾, forged body (code 40, 42, F4), block material (code 44, A1, A3)²⁾

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, $\Delta Fe < 0.5\%$

Code 44: 1.4539/UNS N08904, block material

Code F4: 1.4539 / UNS N08904, forged body

Code A1: 3.7035, titanium

Code A3: 2.4602, Alloy 22 block material, (NiCr21Mo14W)

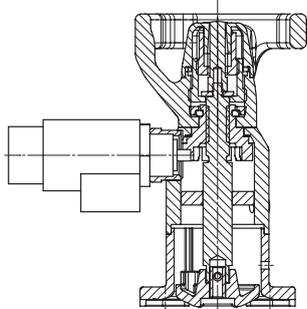
Material code F4 only up to MG 50, from MG 80 material code 44.

Accessories



GEMÜ 653MAG

Electromagnetic locking device, 24 V DC.



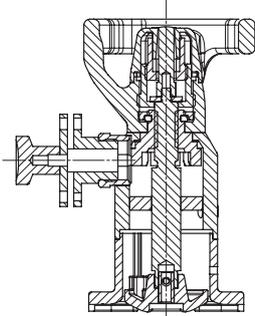
The magnets, locks, etc. for the additional "locking" function need to be ordered separately as accessories. Only in conjunction with the additional actuator functions that end with the code __ B, __ K or __ F!

Designation	Design	Item
653MAGVE1 C1 X	Electromagnetic locking device 24 V DC, normally closed, M22x1.5 ATEX	88264576
653MAGVE1 C1	Electromagnetic locking device 24 V DC, normally closed, M22x1.5 IP 54, plug design A DIN EN 175301-803	88232776
653MAGVE2 C1	Electromagnetic locking device 24 V DC, normally open, M22x1.5 IP 54, plug design A DIN EN 175301-803	88279388



GEMÜ 653LOC

M22x1.5 mechanical locking device with/without padlock.



The magnets, locks, etc. for the additional “locking” function need to be ordered separately as accessories. Only in conjunction with the additional actuator functions that end with the code _ _ B, _ _ K or _ _ F!

Designation	Design	Item
653LOCVML	M22x1.5 locking device with padlock.	88239348
653LOCVMB	M22x1.5 locking device without padlock.	88239405



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