

Angle Seat Globe Valve, Metal

Construction

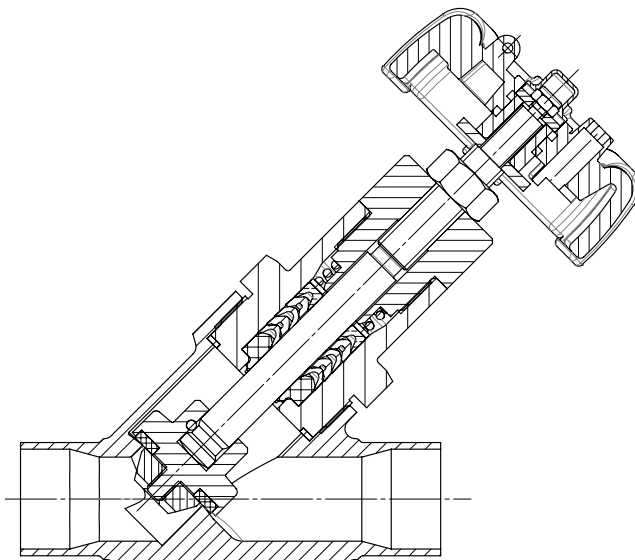
The GEMÜ 507 manually operated 2/2-way angle seat globe valve has an ergonomically designed plastic handwheel. The valve spindle is sealed by a self-adjusting gland packing providing low maintenance and reliable valve spindle sealing even after a long service life. The wiper ring fitted in front of the gland packing protects it against contamination and damage. A handwheel extension (not for bonnet size 0) is available as an option enabling full operator isolation.

Features

- Various valve body connections: threaded sockets, threaded spigots, butt weld spigots
- Standard floating plug on spindle ensures excellent seat sealing
- Good flow capability due to angle seat design
- Optionally suitable for contact with food according to Regulation (EC) No. 1935/2004 (K-No. 2013)
- Standard gland packing suitable for vacuum up to 20 mbar (abs.)
- Handwheel locknut as standard
- Optionally available as control valve with regulating cone



Sectional drawing



Technical data

Working medium

Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the body and seal material.

Max. perm. pressure of working medium see table

Media temperature -10 °C to 180 °C

Max. permissible viscosity 600 mm²/s (cSt)

Other versions for lower/higher temperatures and viscosities on request.

Ambient conditions

Max. ambient temperature 60 °C

Maximum permissible seat leakage rate / Open-Closed-Valve

Seat seal	Standard	Test procedure	Leakage rate	Test medium
PTFE	DIN EN 12266-1	P12	A	air

Maximum permissible seat leakage class / Control valve

Seat seal	Standard	Test procedure	Leakage rate	Test medium
PTFE	DIN EN 60534-4	1	VI	air
Metal	DIN EN 60534-4	1	IV	air

Bonnet weight [kg]

Bonnet size	DN 6	DN 8	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80
0	0.3	0.3	0.3	0.3	-	-	-	-	-	-	-
1 / 1E	-	1.0	1.0	1.0	1.2	1.4	2.4	2.6	3.8	-	-
2 / 2E	-	-	-	-	-	-	-	-	-	6.8	8.4

Technical data

Max. operating pressure [bar]

Bonnet size	DN 6	DN 8	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80
0	25	25	25	25	-	-	-	-	-	-	-
1 / 1E	-	25	25	25	25	25	25	25	25	-	-
2 / 2E	-	-	-	-	-	-	-	-	-	16	16

All pressures are gauge pressures.

Pressure / temperature correlation for angle seat globe valve bodies

Connection code	Material code	Max. allowable operating pressures in bar at temperature °C*					
		RT	100	150	200	250	300
1, 9, 17, 37, 60, 63, 3C, 3D	37	25.0	23.8	21.4	18.9	17.5	16.1
0, 16, 17, 37, 59, 60, 65	34	25.0	24.5	22.4	20.3	18.2	16.1
13 (DN 15 - DN 50)	34	25.0	23.6	21.5	19.8	18.6	17.2
80, 88 (DN 15 - DN 40)	34	25.0	21.2	19.3**	-	-	-
80, 88 (DN 50 - DN 80)	34	16.0	16.0	16.0**	-	-	-
82 (DN 15 - DN 32)	34	25.0	21.2	19.3**	-	-	-
82 (DN 40 - DN 65)	34	16.0	16.0	16.0**	-	-	-
86 (DN 15 - DN 40)	34	25.0	21.2	19.3**	-	-	-
86 (DN 50 - DN 65)	34	16.0	16.0	16.0**	-	-	-
10 (DN 15 - DN 50)	37	25.0	25.0	22.7	21.0	19.8	18.5
47 (DN 15 - DN 50)	34	15.9	13.3	12.0	11.1	10.2	9.7
0, 16, 17, 59, 60	40	25.0	20.6	18.7	17.1	15.8	14.8
17, 59, 60	C2	25.0	21.2	19.3	17.9	16.8	15.9

* The valves can be used down to -10°C
All pressures are gauge pressures.

** max. temperature 140 °C

RT = Room Temperature

Kv values [m³/h]

	DN 6	DN 8	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80
Butt weld spigots, DIN 11850	1.6	1.8	2.4	2.4	-	-	-	-	-	-	-
Butt weld spigots, DIN 11866	-	2.2	4.5	5.5	11.7	20.5	33.0	51.0	61.0	110.0	117.0
Threaded sockets, DIN ISO 228	-	-	4.5	5.4	10.0	15.2	23.0	41.0	68.0	95.0	130.0

Kv values determined in accordance with DIN EN 60534. The Kv value specifications refer to the largest actuator for the respective nominal size. The Kv values for other product configurations (e.g. other connection types or body materials) may differ.

Technical data

Correlation* Kv value, operating pressure, regulating cone number

Nominal size DN	Kv value [m ³ /h]	Operating pressure [bar]	Actuator size	Regulating cone no.	
				linear	equal-percentage
15	5	25	1	RS235	RS245
20	10	25	1	RS236	RS246
25	15	25	1	RS237	RS247
32	24	25	1	RS238	RS248
40	38	25	1	RS239	RS249
50	60	25	1	RS240	RS250

* not for connection code 37, 59, 80, 88

Correlation* Kv value, operating pressure, regulating cone number

Nominal size DN	Kv value [m ³ /h]	Operating pressure [bar]	Actuator size	Regulating cone no.	
				linear	equal-percentage
15	2.7	25	1	RS251	RS261
20	6.3	25	1	RS252	RS262
25	13.3	25	1	RS253	RS263
40	35.6	25	1	RS254	RS264
50	58.0	25	1	RS255	RS265

* only for connection code 37, 59, 80, 88

Please always order standard regulating cone with special function "C" – rigid valve plug.

Order data

Body configuration	Code	Valve body material	Code
2/2-way body	D	1.4435 (ASTM A 351 CF3M \cong 316L), Investment cast.	34
Angle body only in material code 37 (DN 15 - 50)	E	1.4408, Investment casting	37
		1.4435 (316 L), Forged body	40
		1.4435, Investment casting	C2*
		Material equivalency 316 L	
		* A surface finish from the order code table "K number" must be specified for valve body material C2.	

Connection	Code	Seat seal	Code
Butt weld spigots		PTFE	5
Spigots DIN	0	PTFE, glass fibre reinforced	5G
Spigots EN 10357 series B	16	PTFE, USP Class VI	5P
Spigots EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A	17	PEEK (for bonnet 0)	PK
Spigots SMS 3008	37		
Spigots ASME BPE	59		
Spigots ISO 1127 / EN 10357 series C / DIN 11866 series B	60		
Spigots ANSI/ASME B36.19M Schedule 10s	63		
Spigots ANSI/ASME B36.19M Schedule 40s	65		
Threaded connections			
Threaded sockets DIN ISO 228	1		
Threaded socket Rc ISO 7-1, EN 10226-1, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8	3C		
Threaded spigots DIN ISO 228	9		
Threaded sockets NPT length DIN 3202-4 series M8	3D		
Flanges			
Flanges EN 1092 / PN25 / form B length EN 558, series 1	10		
Flanges EN 1092 / PN25 /form B length see body dimensions	13		
Flanges ANSI Class 125/150 RF length see body dimensions	47		
Clamp connections			
Clamps ASME BPE for pipe ASME BPE, length ASME BPE	80		
Clamps DIN 32676 series B for pipe EN ISO 1127, length EN 558, series 1	82		
Clamps DIN 32676 series A for pipe DIN 11850, length EN 558, series 1	86		
Clamps ASME BPE for pipe ASME BPE, length EN 558, series 1	88		

Control function	Code
Manually operated with handwheel lock nut	0

Bonnet size	Code
Handwheel diameter 32 mm	0
Handwheel diameter 90 mm	1
Handwheel diameter 90 mm Handwheel extension	1E
Handwheel diameter 140 mm	2
Handwheel diameter 140 mm Handwheel extension	2E

Regulating cone	R-No.
For the regulating cone no. (R-No.) - linear or equal-percentage (mod.)- please refer to the table	

Version	Code
Gland packing PTFE / PTFE suitable for contact with food according to EU Regulation 1935/2004	2013
Media temperature -10 to 210 °C (only with seat seal Code 5G and 10)	2023
Surface finish for valve body material C2	
Ra \leq 0.6 μ m (25 μ inch) for process contact surfaces, in accordance with ASME BPE SF2 + SF3, mechanically polished internal	1903
Ra \leq 0.8 μ m (30 μ inch) for process contact surfaces, in accordance with DIN 11866 H3, mechanically polished internal	1904
Ra \leq 0.4 μ m (15 μ inch) for process contact surfaces, in accordance with DIN 11866 H4, ASME BPE SF1, mechanically polished internal	1909
Ra \leq 0.6 μ m for process contact surfaces, in accordance with ASME BPE SF6, electropolished internal/external	1953
Ra \leq 0.8 μ m for process contact surfaces, in accordance with DIN 11866 HE3, electropolished internal/external	1954
Ra \leq 0.4 μ m for process contact surfaces, in accordance with DIN 11866 HE4/ASME BPE SF5, electropolished internal/external	1959

Order data

Special version	Code
Rigid plug fixing *, special version for oxygen	B
Rigid plug fixing *	C
Special version for oxygen (max. temperature 60 °C, max. operating pressure 10 bar), Flow direction: under the seat	S
* Standard for bonnet size 0	

Order example	507	25	D	60	34	5	0	1	RS237	-	C
Type	507										
Nominal size		25									
Body configuration (code)			D								
Connection (code)				60							
Valve body material (code)					34						
Seat seal (code)						5					
Control function (code)							0				
Bonnet size (code)								1			
Regulating cone (R-No.)									RS237		
Version (code)										-	
Special version (code)											C

Version for food contact

For food contact, the product must be ordered with the following ordering options:

Version code 2013

Seat seal code 5, 5G

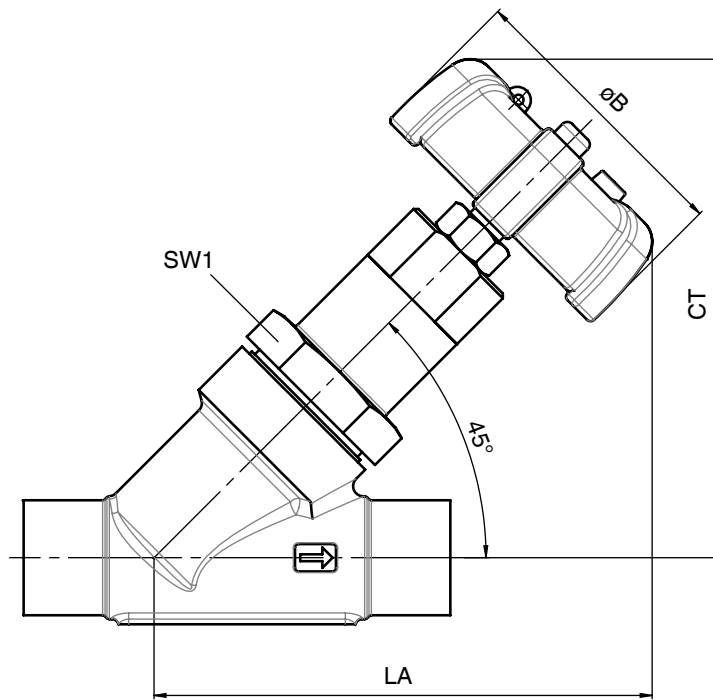
Valve body material code 34, 37, 40, C2

Dimensions [mm]

Installation dimensions - Valve with 2/2-way body

Bonnet	DN	SW1		øB	CT/LA (max. height)	
					Control function code 0	Bonnet code 1E, 2E*
0	6	24	hexagonal	32	89	-
0	8	24	hexagonal	32	89	-
0	10	24	hexagonal	32	89	-
0	15	24	hexagonal	32	89	-
1	8	41	hexagonal	90	149	168
1	10	41	hexagonal	90	149	168
1	15	41	hexagonal	90	152	171
1	20	46	hexagonal	90	159	179
1	25	46	hexagonal	90	167	186
1	32	41	double flat	90	176	196
1	40	41	double flat	90	185	205
1	50	41	double flat	90	196	216
2	65	60	double flat	140	259	277
2	80	60	double flat	140	276	294

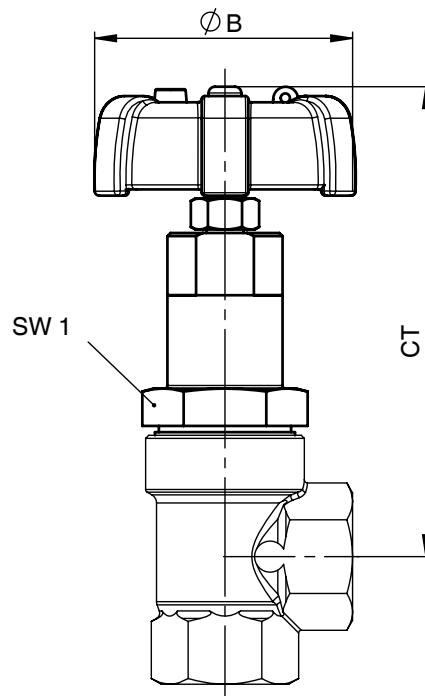
* Bonnet code 1E, 2E (handwheel extension) are necessary for valve bodies with flanges



Dimensions [mm]

Installation dimensions - Valve with angle body

Bonnet	DN	SW1		øB	CT (max. height)
1	15	41	hexagonal	90	153
1	20	46	hexagonal	90	158
1	25	46	hexagonal	90	167
1	32	41	double flat	90	172
1	40	41	double flat	90	183
1	50	41	double flat	90	194



Dimensions [mm]

Butt weld spigots, connection code 0, 16, 17, 37, 60 Valve body material: 1.4435 (code 34), 1.4408 (code 37)

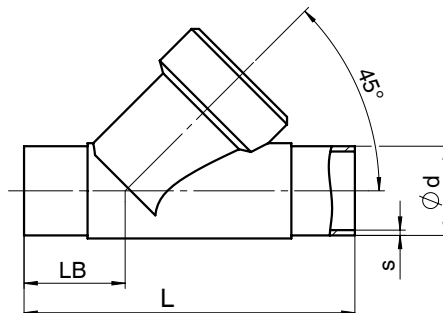
		Connection code													
		Material code 34		Material code 37		0		16		17		37		60	
DN	L	LB	L	LB	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s	
10	105	35.5	-	-	-	-	12	1.0	13	1.5	-	-	17.2	1.6	
15	105	35.5	100	33	18	1.5	18	1.0	19	1.5	-	-	21.3	1.6	
20	120	39.0	108	33	22	1.5	22	1.0	23	1.5	-	-	26.9	1.6	
25	125	38.5	112	32	28	1.5	28	1.0	29	1.5	25.0	1.2	33.7	2.0	
32	155	48.0	137	39	-	-	34	1.0	35	1.5	-	-	42.4	2.0	
40	160	47.0	146	40	40	1.5	40	1.0	41	1.5	38.0	1.2	48.3	2.0	
50	180	48.0	160	38	52	1.5	52	1.0	53	1.5	51.0	1.2	60.3	2.0	
65	-	-	290	96	-	-	-	-	70	2.0	63.5	1.6	76.1	2.0	
80	-	-	310	95	-	-	-	-	85	2.0	76.1	1.6	88.9	2.3	

For materials see overview on page 14

Butt weld spigots, connection code 59, 63, 65 Valve body material: 1.4435 (code 34), 1.4408 (code 37)

		Connection code									
		Material code 34		Material code 37		59		63		65	
DN	L	LB	L	LB	ø d	s	ø d	s	ø d	s	
10	105	35.5	-	-	-	-	-	-	-	-	
15	105	35.5	100	33	12.70	1.65	21.3	2.11	21.3	2.77	
20	120	39.0	108	33	19.05	1.65	26.7	2.11	26.7	2.87	
25	125	38.5	112	32	25.40	1.65	33.4	2.75	33.4	3.88	
32	155	48.0	137	39	-	-	-	-	42.4	3.56	
40	160	47.0	146	40	38.10	1.65	48.3	2.77	48.3	3.68	
50	180	48.0	160	38	50.80	1.65	60.3	2.77	60.3	3.91	
65	-	-	290	96	63.50	1.65	73.0	3.05	-	-	
80	-	-	310	95	76.20	1.65	88.9	3.05	-	-	

For materials see overview on page 14



Dimensions [mm]

Butt weld spigots, connection code 0, 16, 17, 59, 60 Valve body material: Forged body (code 40)

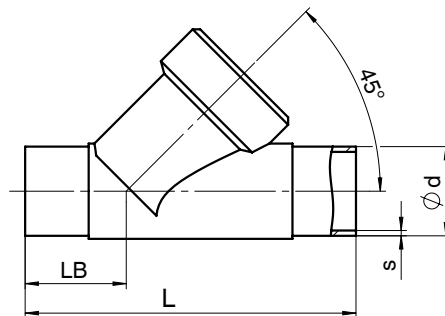
			Connection code									
			0		16		17		59		60	
DN	L	LB	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s
6*	80	26.5	8	1.0	-	-	-	-	-	-	-	-
8*	80	26.5	10	1.0	-	-	-	-	-	-	13.5	1.6
10*	80	26.5	-	-	12	1.0	13	1.5	9.53	0.89	-	-
15*	80	26.5	-	-	-	-	-	-	12.70	1.65	-	-

* only with actuator size 0

Butt weld spigots, connection code 17, 59, 60 Valve body material: 1.4435 (code C2)

			Connection code					
			17		60		59	
DN	L	LB	ø d	s	ø d	s	ø d	s
8	105*	35.5*	-	-	13.5	1.6	-	-
10	105	35.5	13	1.5	17.2	1.6	-	-
15	105	35.5	19	1.5	21.3	1.6	12.70	1.65
20	120	39.0	23	1.5	26.9	1.6	19.05	1.65
25	125	39.5	29	1.5	33.7	2.0	25.40	1.65
32	155	48.0	35	1.5	42.4	2.0	-	-
40	160	47.0	41	1.5	48.3	2.0	38.10	1.65
50	180	48.0	53	1.5	60.3	2.0	50.80	1.65
65	290	96.0	70	2.0	76.1	2.0	63.50	1.65
80	310	95.0	85	2.0	88.9	2.3	76.20	1.65

* Connection code 1A: L = 100, LB = 33,5



Body dimensions [mm]

Threaded sockets DIN, connection code 1 Valve body material: 1.4408 (code 37)

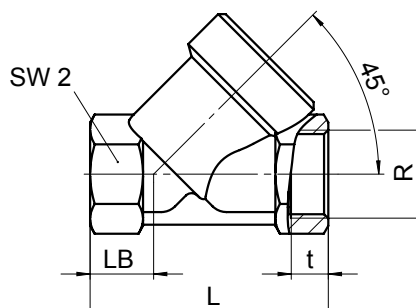
DN	L	LB	R	t	SW2	
8*	65	19.0	G 1/4	12.0	17	hexagonal
10*	65	19.0	G 3/8	12.0	24	hexagonal
15*	65	19.0	G 1/2	11.4	24	hexagonal
10	65	16.5	G 3/8	11.4	27	hexagonal
15	65	16.5	G 1/2	15.0	27	hexagonal
20	75	17.5	G 3/4	16.3	32	hexagonal
25	90	24.0	G 1	19.1	41	hexagonal
32	110	33.0	G 1 1/4	21.4	50	octagonal
40	120	30.0	G 1 1/2	21.4	55	octagonal
50	150	40.0	G 2	25.7	70	octagonal
65	190	46.0	G 2 1/2	30.2	85	octagonal
80	220	50.0	G 3	33.3	100	octagonal

* only with bonnet size 0

Threaded sockets NPT, BS 21 Rc, connection code 3C, 3D Valve body material: 1.4408 (code 37)

					Connection code			
					3C		3D	
DN	L	LB	SW2		R	t	R	t
8*	65	19.0	17	hexagonal	-	-	1/4" NPT	10.1
10*	65	27.0	24	hexagonal	-	-	3/8" NPT	10.4
15*	65	27.0	24	hexagonal	-	-	1/2" NPT	13.6
15	65	16.5	27	hexagonal	Rc 1/2	15.0	1/2" NPT	13.6
20	75	17.5	32	hexagonal	Rc 3/4	16.3	3/4" NPT	14.1
25	90	24.0	41	hexagonal	Rc 1	19.1	1" NPT	17.0
32	110	33.0	50	octagonal	Rc 1 1/4	21.4	1 1/4" NPT	17.5
40	120	30.0	55	octagonal	Rc 1 1/2	21.4	1 1/2" NPT	17.3
50	150	40.0	70	octagonal	Rc 2	25.7	2" NPT	17.8
65	190	46.0	85	octagonal	Rc 2 1/2	30.2	2 1/2" NPT	23.7
80	220	50.0	100	octagonal	Rc 3	33.3	3" NPT	25.8

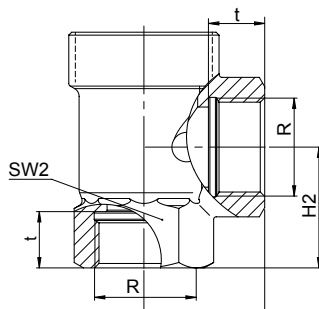
* only with bonnet size 0



Body dimensions [mm]

Threaded sockets DIN, connection code 1, 3D / Angle body Valve body material: 1.4408 (code 37)

DN	SW2	LE	H2	Connection code 1		Connection code 3D	
				R	t	R	t
15	27	30	30.0	G 1/2	15.0	1/2" NPT	13.6
20	32	35	37.5	G 3/4	16.3	3/4" NPT	14.1
25	41	41	41.0	G 1	19.1	1" NPT	17.0
32	50	50	48.0	G 1 1/4	21.4	1 1/4" NPT	17.5
40	55	50	55.0	G 1 1/2	21.4	1 1/2" NPT	17.3
50	70	60	62.0	G 2	25.7	2" NPT	17.8

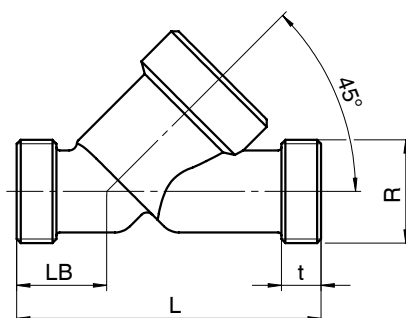


Threaded spigots, connection code 9 Valve body material: 1.4408 (code 37), Forged body (code 40)

DN	L	LB	t	R
6*	65	19	12	G 1/4
8*	65	19	12	G 3/8
10*	65	19	12	G 1/2
15*	65	19	12	G 3/4
15	90	25	12	G 3/4
20	110	30	15	G 1
25	118	30	15	G 1 1/4
32	130	38	13	G 1 1/2
40	140	35	13	G 1 3/4
50	175	50	15	G 2 3/8
65	216	52	15	G 3
80	254	64	18	G 3 1/2

* only with bonnet size 0

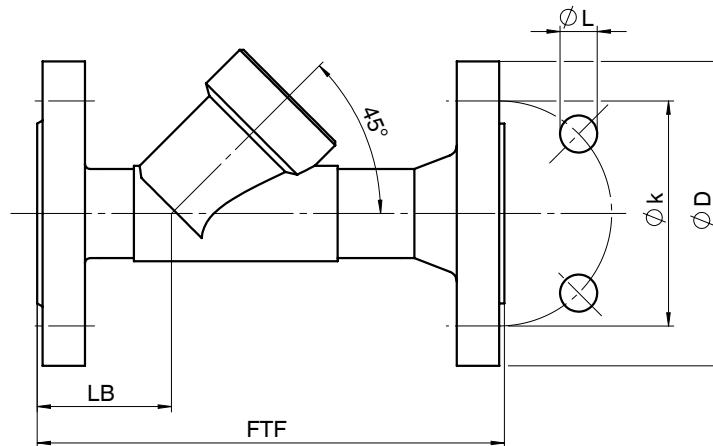
For materials see overview on page 14



Body dimensions [mm]

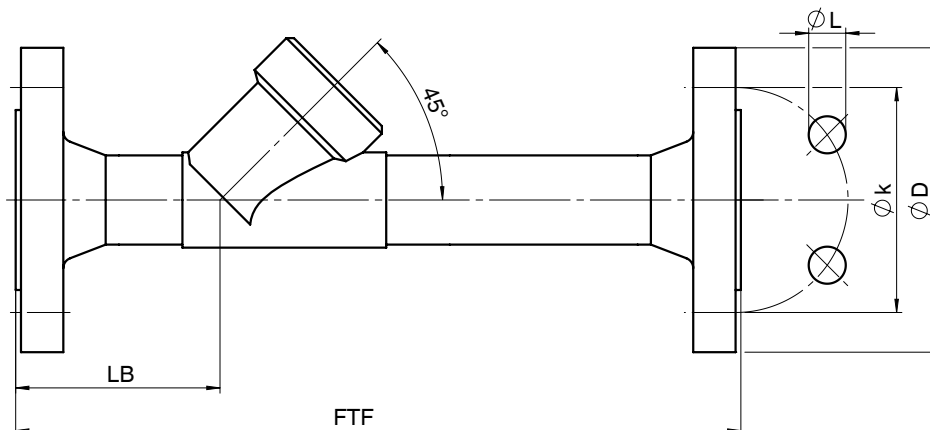
**Flanges, connection code 10
Valve body material: 1.4408 (code 37)**

DN	FTF	LB	ø D	ø L	ø k	Number of bolts
15	130	33	95	14	65	4
20	150	45	105	14	75	4
25	160	44	115	14	85	4
32	180	51	140	18	100	4
40	200	52	150	18	110	4
50	230	50	165	18	125	4



**Flanges, connection code 13, 47
Valve body material: 1.4435 (code 34)**

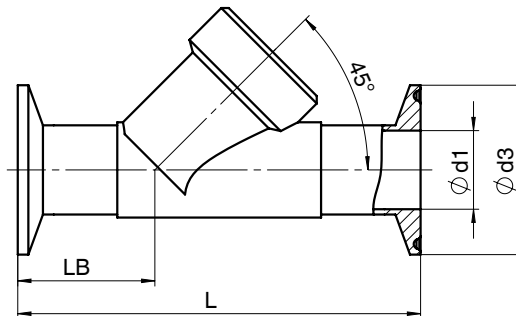
DN	FTF	LB	Connection code 13				Connection code 47			
			ø D	ø L	ø k	Number of bolts	ø D	ø L	ø k	Number of bolts
15	210	72	95	14	65	4	89.0	15.7	60.5	4
20	280	78	105	14	75	4	98.6	15.7	69.8	4
25	280	77	115	14	85	4	108.0	15.7	79.2	4
32	310	89	140	18	100	4	117.3	15.7	88.9	4
40	320	91	150	18	110	4	127.0	15.7	98.6	4
50	330	95	165	18	125	4	152.4	19.1	120.7	4



Body dimensions [mm]

Clamp connections, connection code 80, 82, 86, 88
Valve body material: 1.4435 (code 34)

DN	NPS	Connection code								Connection code			
		LB	L	82		86		88		80			
				ø d1	ø d3	ø d1	ø d3	ø d1	ø d3	LB	L	ø d1	ø d3
15	1/2"	47.5	130	18.1	50.5	16	34.0	9.40	25.0	33.5	101.6	9.40	25.0
20	3/4"	54.0	150	23.7	50.5	20	34.0	15.75	25.0	30.0	101.6	15.75	25.0
25	1"	56.0	160	29.7	50.5	26	50.5	22.10	50.5	33.0	114.3	22.10	50.5
32	1 1/4"	62.0	180	38.4	64.0	32	50.5	-	-	-	-	-	-
40	1 1/2"	67.0	200	44.3	64.0	38	50.5	34.80	50.5	37.0	139.7	34.80	50.5
50	2"	73.0	230	56.3	77.5	50	64.0	47.50	64.0	36.5	158.8	47.50	64.0



Overview of metal bodies for GEMÜ 507

Connection code	Spigots																				
	0		16		17				37		59				60				63	65	
Material code	34	40	34	40	34	37	40	C2	34	37	34	37	40	C2	34	37	40	C2	37	34	
DN 6	-	X*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DN 8	-	X*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X*	-	-	-	-
DN 10	-	-	-	X*	-	-	X*	-	-	-	-	-	X*	-	-	-	-	-	-	-	-
DN 15	-	-	-	-	-	-	-	-	-	-	-	-	X*	-	-	-	-	-	-	-	-
DN 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
DN 10	-	-	X	-	X	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	-
DN 15	X	-	X	-	X	X	-	X	-	-	X	-	-	X	X	X	-	X	X	X	X
DN 20	X	-	X	-	X	X	-	X	-	-	X	-	-	X	X	X	-	X	X	X	X
DN 25	X	-	X	-	X	X	-	X	X	-	X	-	-	X	X	X	-	X	X	X	X
DN 32	-	-	X	-	X	X	-	X	-	-	-	-	-	-	X	X	-	X	-	X	X
DN 40	X	-	X	-	X	X	-	X	X	-	X	-	-	X	X	X	-	X	X	X	X
DN 50	X	-	X	-	X	X	-	X	X	-	X	-	-	X	X	X	-	X	X	X	X
DN 65	-	-	-	-	-	X	-	X	-	X	-	X	-	X	-	X	-	X	X	X	-
DN 80	-	-	-	-	-	X	-	X	-	X	-	X	-	X	-	X	-	X	X	X	-

* only with bonnet size 0

Overview of metal bodies for GEMÜ 507

Connection code	Threaded connections						Clamps				Flanges				
	1		3C	9		3D		80	82	86	88	10**	13	47	
Material code	37	37	37	37	40	37	37	34	34	34	34	37	34	34	
Body configuration	2/2-way body	Angle body				2/2-way body	Angle body								
DN 6	-	-	-	-	X*	-	-	-	-	-	-	-	-	-	-
DN 8	X*	-	-	X*	-	X*	-	-	-	-	-	-	-	-	-
DN 10	X*	-	-	X*	-	X*	-	-	-	-	-	-	-	-	-
DN 15	X*	-	-	X*	-	X*	-	-	-	-	-	-	-	-	-
DN 10	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DN 15	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X
DN 20	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X
DN 25	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X
DN 32	X	X	X	X	-	X	X	-	X	X	-	X	X	X	X
DN 40	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X
DN 50	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X
DN 65	X	-	X	X	-	X	-	-	-	-	-	-	-	-	-
DN 80	X	-	X	X	-	X	-	-	-	-	-	-	-	-	-

* only with bonnet size 0

** only with bonnet size 1E or 2E

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