GEMÜ®

Angle Seat Globe Valve, Metal

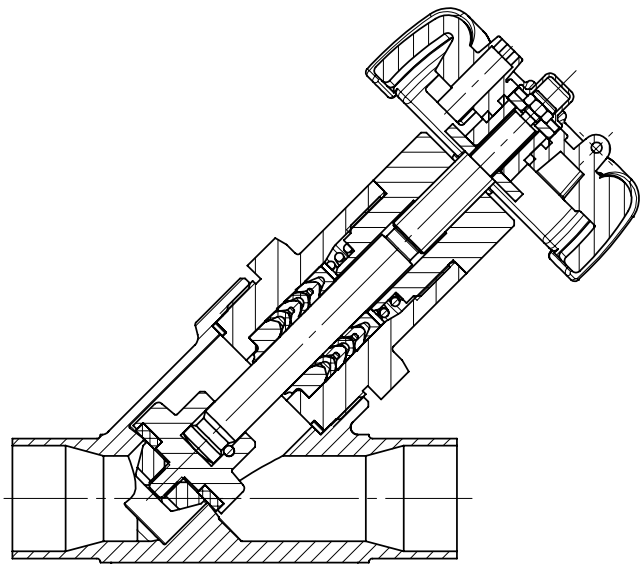
Construction

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 stainless steel bellows and a handwheel extension (not for bonnet size 0) are available as options enabling full operator isolation.

Advantages

- Various valve body connections:
  threaded sockets, threaded spigots, butt weld spigots
- Good flow capability due to angle seat design
- Optionally suitable for contact with food according to Regulation (EC) No. 1935/2004 (K-No. 1935)
- Standard gland packing suitable for vacuum up to 20 mbar (abs.)

Sectional drawing



GEMÜ® 507

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 mm^2/s (cSt)

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

Leakage rate

Open-Closed-Valve: Leakage rate A to P11/P12 EN 12266-1	
Control valve: DIN IEC 60534-4 VI L 1	PTFE seal
Control valve: DIN IEC 60534-4 IV L 1	metal seal

Ambient conditions

Max. ambient temperature	60 °C

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	-	25	25	25	25	25	25	25	25	-	-
2	-	-	-	-	-	-	-	-	-	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, 3C, 3D	37	25.0	23.8	21.4	18.9	17.5	16.1
0, 16, 17, 18, 37, 59, 60	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, 18, 59, 60	40	25.0	20.6	18.7	17.1	15.8	14.8
1A, 1B, 59	C2	25.0	21.2	19.3	17.9	16.8	15.9

* The valves can be used down to -10°C ** max. temperature 140 °C RT = Room Temperature
All pressures are gauge pressures.

Kv values [m^3/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 acc. to DIN EN 60534. Kv values may be different for other combinations. Consult GEMÜ.

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	-	1.0	1.0	1.0	1.2	1.4	2.4	2.6	3.8	-	-
2	-	-	-	-	-	-	-	-	-	6.8	8.4

Order data

Body configuration	Code
2/2-way body	D
Angle body only in material code 37 (DN 15 - 50)	E

Connection	Code
Butt weld spigots	
Spigots DIN	0
Spigots DIN 11850, series 1	16
Spigots DIN 11850, series 2	17
Spigots DIN 11850, series 3	18
Spigots DIN 11866, series A	1A
Spigots DIN 11866, series B	1B
Spigots SMS 3008	37
Spigots ASME BPE	59
Spigots EN ISO 1127	60
Threaded connections	
Threaded sockets DIN ISO 228	1
Threaded sockets BS 21 Rc length 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

Valve body material	Code
1.4435 (ASTM A 351 CF3M ≙ 316L), Investment cast.	34
1.4408, Cast stainless steel	37
1.4435 (316 L), Forged body	40
1.4435, Investment casting Material equivalency 316 L	C2*

* A surface finish from the order code table “K number“ must be specified for valve body material C2.

Seat seal	Code
PTFE	5
PTFE, glass reinforced	5G
PEEK (for bonnet 0)	PK

Control function	Code
Manually operated	0
Manually operated with handwheel clamp	L

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

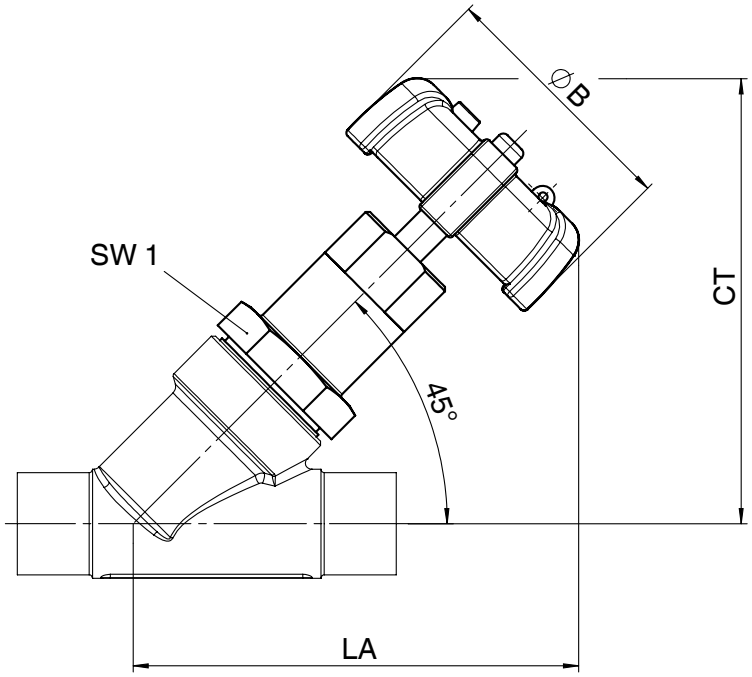
K number	Code
Media temperature -10 to 210 °C (only with seat seal Code 5G and 10)	2023
Handwheel extension	3007
Surface finish for valve body material C2	
external surface electrolytically gloss polished / mechanically polished internal Ra ≤ 0.6 µm	1903
external surface electrolytically gloss polished / mechanically polished internal Ra ≤ 0.8 µm	1904
external surface electrolytically gloss polished / mechanically polished internal Ra ≤ 0.4 µm	1909

Order example	507	25	D	60	34	5	0	1	-
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	
K-number (Code)									-

Dimensions [mm]

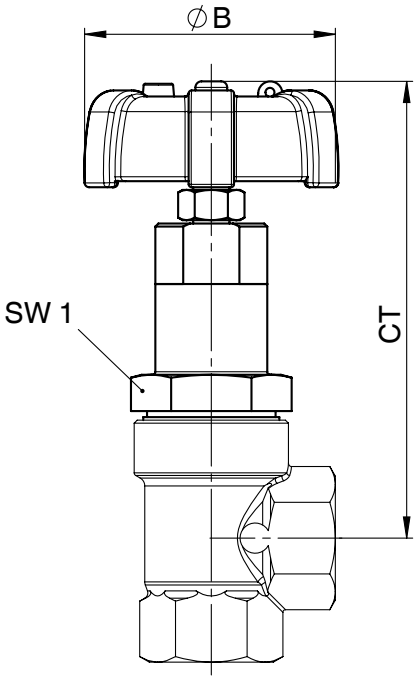
Installation dimensions - Valve with 2/2-way body						
Bonnet	**DN**	**SW1**		**øB**	**CT/LA (max. height)**	
						K-no. 3007*
0	6	24	hexagonal	32	82	-
0	8	24	hexagonal	32	82	-
0	10	24	hexagonal	32	82	-
0	15	24	hexagonal	32	82	-
1	8	41	hexagonal	90	140	-
1	10	41	hexagonal	90	140	168
1	15	41	hexagonal	90	143	166
1	20	46	hexagonal	90	150	173
1	25	46	hexagonal	90	158	178
1	32	41	double flat	90	167	189
1	40	41	double flat	90	177	201
1	50	41	double flat	90	187	212
2	65	60	double flat	140	248	-
2	80	60	double flat	140	265	-

* K number 3007 (handwheel extension) is 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	135
1	20	46	hexagonal	90	140
1	25	46	hexagonal	90	149
1	32	41	double flat	90	154
1	40	41	double flat	90	165
1	50	41	double flat	90	176



Dimensions [mm]

Butt weld spigots, connection code 0, 16, 17, 18, 37, 59, 60
Valve body material: 1.4435 (code 34), 1.4408 (code 37)

	Material code 34		Material code 37		Connection code													
					0		16		17		18		37		59		60	
DN	L	LB	L	LB	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s
10	105	35.5	-	-	-	-	12	1.0	13	1.0	14	2.0	-	-	-	-	17.2	1.6
15	105	35.5	100	33	18	1.5	18	1.0	19	1.5	20	2.0	-	-	12.70	1.65	21.3	1.6
20	120	39.0	108	33	22	1.5	22	1.0	23	1.5	24	2.0	-	-	19.05	1.65	26.9	1.6
25	125	38.5	112	32	28	1.5	28	1.0	29	1.5	30	2.0	25.0	1.2	25.40	1.65	33.7	2.0
32	155	48.0	137	39	-	-	34	1.0	35	1.5	36	2.0	-	-	-	-	42.4	2.0
40	160	47.0	146	40	40	1.5	40	1.0	41	1.5	42	2.0	38.0	1.2	38.10	1.65	48.3	2.0
50	180	48.0	160	38	52	1.5	52	1.0	53	1.5	54	2.0	51.0	1.2	50.80	1.65	60.3	2.0
65	-	-	290	96	-	-	-	-	70	2.0	-	-	63.5	1.6	63.50	1.65	76.1	2.0
80	-	-	310	95	-	-	-	-	85	2.0	-	-	76.1	1.6	76.20	1.65	88.9	2.3

For materials see overview on page 9

Butt weld spigots, connection code 0, 16, 17, 18, 59, 60
Valve body material: Forged body (code 40)

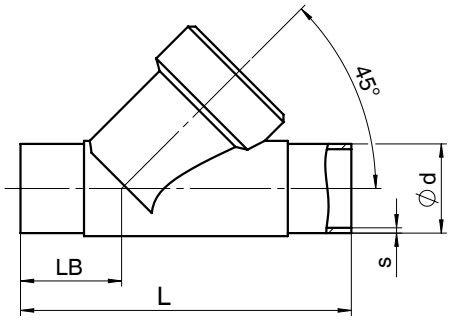
			Connection code											
			0		16		17		18		59		60	
DN	L	LB	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s
6*	80	26.5	8	1.0	-	-	-	-	-	-	-	-	-	-
8*	80	26.5	10	1.0	-	-	-	-	-	-	-	-	13.5	1.6
10*	80	26.5	-	-	12	1.0	13	1.5	14	2.0	9.53	0.89	-	-
15*	80	26.5	-	-	-	-	-	-	-	-	12.70	1.65	-	-

* only with actuator size 0

Butt weld spigots, connection code 1A, 1B, 59
Valve body material: 1.4435 (code C2)

			Connection code					
			1A		1B		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



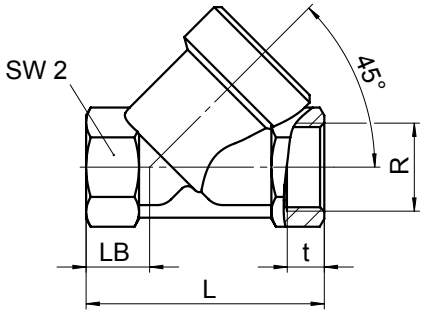
Body dimensions [mm]

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	9.0	17	hexagonal
10*	65	19.0	G 3/8	9.0	24	hexagonal
15*	65	19.0	G 1/2	9.0	24	hexagonal
10	65	16.5	G 3/8	9.0	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

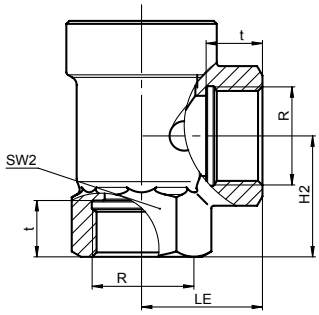
Threaded sockets NPT, BS 21 Rc, connection code 3C, 3D Valve body material: 1.4408 (code 37)								
					Connection code			
					3C		**3D**	
DN	**L**	**LB**	**SW2**		**R**	**t**	**R**	**t**
8*	65	19.0	17	hexagonal	-	-	1/4” NPT	10.1
10*	65	27.0	24	hexagonal	-	-	3/8” NPT	10.4
15*	65	27.0	24	hexagonal	-	-	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



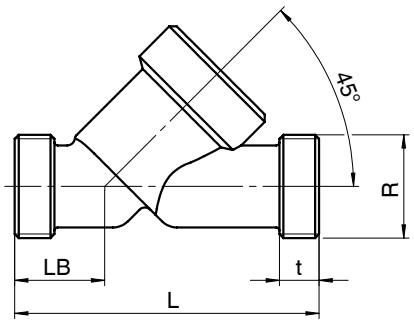
Body dimensions [mm]

Threaded sockets DIN, connection code 1, 3D / Angle body Valve body material: 1.4408 (code 37)							
				Connection code 1		Connection code 3D	
DN	SW2	LE	H2	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



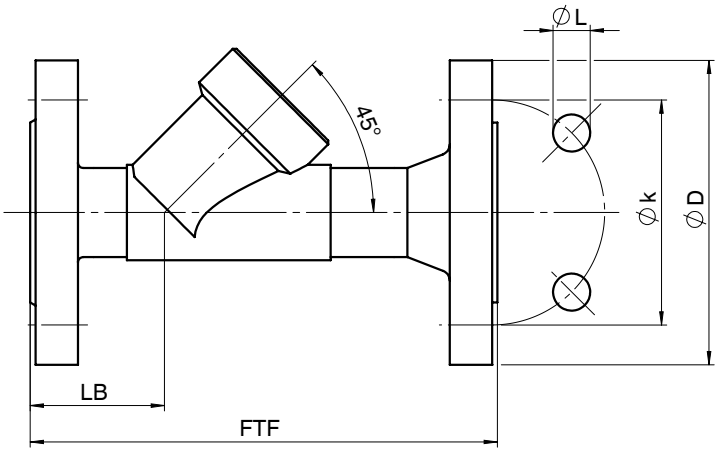
Threaded spigots, connection code 9 Valve body material: 1.4408 (code 37), Forged body (code 40)				
DN	L	LB	t	R
6*	65	19	12	G 1/4
8*	65	19	12	G 3/8
10*	65	19	12	G 1/2
15*	65	19	12	G 3/4
15	90	25	12	G 3/4
20	110	30	15	G 1
25	118	30	15	G 1 1/4
32	130	38	13	G 1 1/2
40	140	35	13	G 1 3/4
50	175	50	15	G 2 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 last page

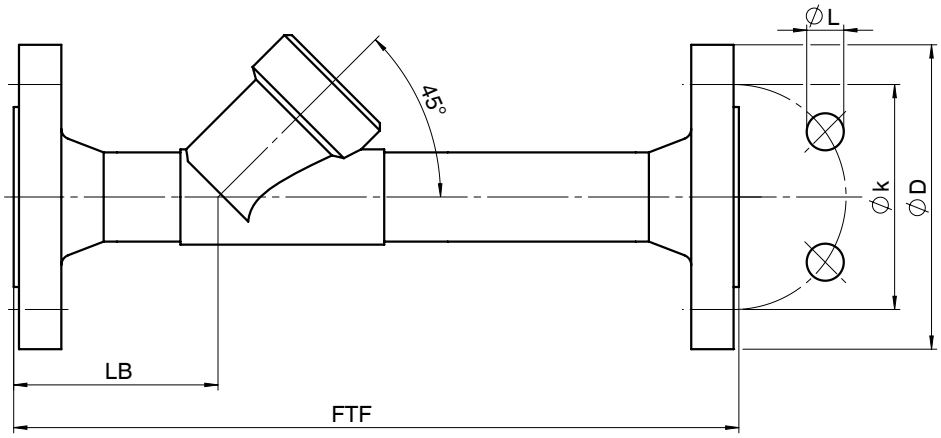


Body dimensions [mm]

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

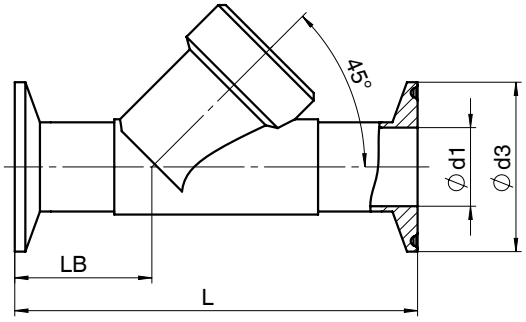


Flanges, connection code 13, 47 Valve body material: 1.4435 (code 34)										
			Connection code 13				**Connection code 47**			
DN	**FTF**	**LB**	**ø D**	**ø L**	**ø k**	**Number of bolts**	**ø D**	**ø L**	**ø k**	**Number of bolts**
15	210	72	95	14	65	4	89.0	15.7	60.5	4
20	280	78	105	14	75	4	98.6	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“	35.5	130	18.1	50.5	16	34.0	9.40	25.0	33.5	101.6	9.40	25.0
20	3/4“	39,0	150	23.7	50.5	20	34.0	15.75	25.0	30.0	101.6	15.75	25.0
25	1“	38,5	160	29.7	50.5	26	50.5	22.10	50.5	33.0	114.3	22.10	50.5
32	1 1/4“	48,0	180	38.4	64.0	32	50.5	-	-	-	-	-	-
40	1 1/2“	47,0	200	44.3	64.0	38	50.5	34.80	50.5	37.0	139.7	34.80	50.5
50	2“	48,0	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

	Spigots																		
Connection code	**0**		**16**		**17**			**18**		**1A**	**1B**	**37**		**59**				**60**		
Material code	**34**	**40**	**34**	**40**	**34**	**37**	**40**	**34**	**40**	**C2**	**C2**	**34**	**37**	**34**	**37**	**40**	**C2**	**34**	**37**	**40**
DN 6	-	X*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DN 8	-	X*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X*
DN 10	-	-	-	X*	-	-	X*	-	X*	-	-	-	-	-	-	X*	-	-	-	-
DN 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X*	-	-	-	-
DN 8	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
DN 10	-	-	X	-	X	-	-	X	-	X	X	-	-	-	-	-	-	X	-	-
DN 15	X	-	X	-	X	X	-	X	-	X	X	-	-	X	-	-	X	X	X	-
DN 20	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	-
DN 32	-	-	X	-	X	X	-	X	-	X	X	-	-	-	-	-	-	X	X	-
DN 40	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	-
DN 65	-	-	-	-	-	X	-	-	-	X	X	-	X	-	X	-	X	-	X	-
DN 80	-	-	-	-	-	X	-	-	-	X	X	-	X	-	X	-	X	-	X	-

* only with bonnet size 0

Overview of metal bodies for GEMÜ 507

	Threaded connections							Clamps				Flanges		
Connection code	**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
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
DN 32	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
DN 50	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 K number code 3007

For further globe valves, accessories and other products, please see our Product Range catalogue and Price List. Contact GEMÜ.

GEMÜ® VALVES, MEASUREMENT AND CONTROL SYSTEMS

TÜVRheinland® CERT ISO 9001

GEMÜ Gebr.Müller · Apparatebau GmbH & Co.KG · Fritz-Müller-Str. 6-8 · D-74653 Ingelfingen-Criesbach · Telefon +49(0)7940/123-0 · Telefax +49(0)7940/123-192
info@gemue.de · www.gemu-group.com

Subject to alteration · 12/2015 · 88054467