

## GEMÜ 550

### Pneumatically operated angle seat globe valve



#### Features

- Simple and fast commissioning
- High flow rates and compact design
- Valve and positioner are optimally adapted to each other
- Optional for food contact according to Regulation (EC) No. 1935/2004
- Suitable for vacuum up to 20 mbar (a)

#### Description

The GEMÜ 550 2/2-way angle seat globe control valve has a low-maintenance stainless steel piston actuator and is pneumatically operated. The valve is designed for demanding flow control applications. It can be combined with positioners or process controllers dependent on the control requirements. 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. A wiper ring fitted in front of the gland packing protects the seal against contamination and damage.

#### Technical specifications

- **Media temperature:** -40 to 210 °C
- **Ambient temperature:** -10 to 60 °C
- **Operating pressure:** 0 to 25 bar
- **Nominal sizes:** DN 15 to 50
- **Body configurations:** 2/2-way body | Angle valve body
- **Connection types:** Clamp | Flange | Spigot | Threaded connection
- **Connection standards:** ANSI | ASME | BS | DIN | EN | ISO | JIS | NPT | SMS
- **Body materials:** 1.4408, investment casting material | 1.4435 (316L), investment casting material | 1.4435, investment casting material
- **Seat seal materials:** 1.4404 | PTFE | PTFE, reinforced
- **Conformities:** ATEX | CRN | DVGW Gas | 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-550\_Regel



## Comparison of functions/positioner properties



**GEMÜ 1434**  
μPos

**GEMÜ 1435**  
ePos

**GEMÜ 1436**  
cPos

	<b>GEMÜ 1434</b> μPos	<b>GEMÜ 1435</b> ePos	<b>GEMÜ 1436</b> cPos
<b>Controller type</b>			
Positioner	●	●	-
Positioners and process controllers	-	-	●
<b>Ambient temperature</b>	0 to 60 °C	-20 to 60 °C	0 to 60 °C
<b>Supply voltage</b>			
24 V DC	●	●	●
<b>Flow rate</b>	15 NI/min	50 NI/min 90 NI/min	100 NI/min 172 NI/min 84 NI/min
<b>Measuring range</b>			
Max. 30 mm, linear	●	●	●
Max. 50 mm, linear	-	●	●
Max. 75 mm, linear	-	●	●
Max. 90°, radial	-	●	●
<b>Electrical connection type</b>			
M12 cable gland	-	●	-
M12 connector	●	●	●
<b>Programmable outputs</b>			
No	●	-	-
Yes	-	●	●
<b>Input option</b>			
No	●	-	-
Yes	-	●	●
<b>Conformity</b>			
EAC	●	●	●

## Product description

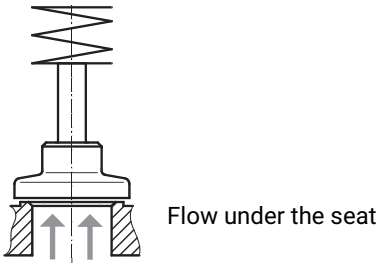
### Construction



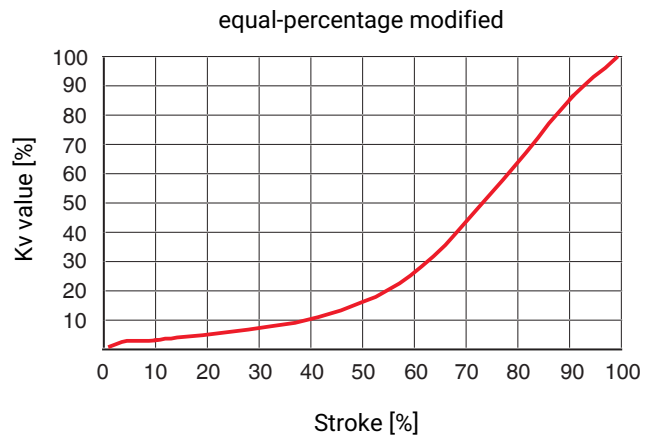
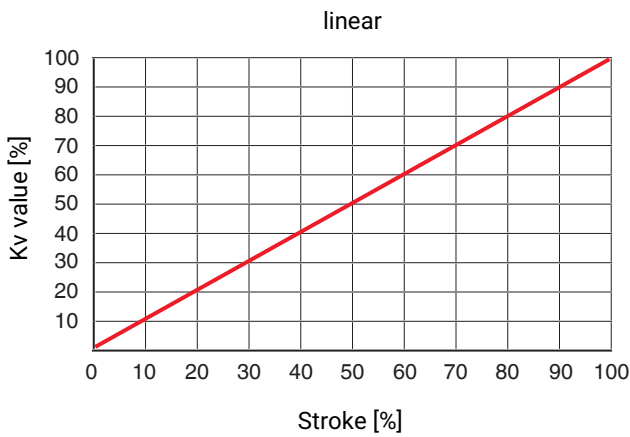
Item	Name	Materials
1	GEMÜ 1434 positioner	
2	Actuator	Stainless steel
3	Valve body	1.4435 investment casting; 1.4408 investment casting

### Flow direction

The flow direction is indicated by an arrow on the valve body.

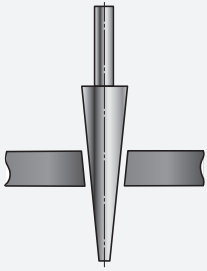
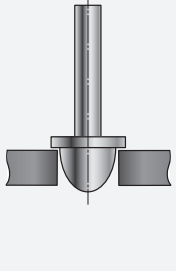


### Kv value diagram



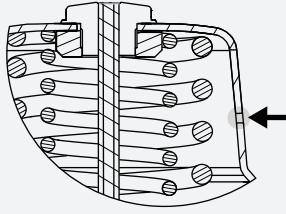
The diagram shows the approximative curve of the Kv value characteristic. The characteristic may deviate depending on valve body, nominal size, regulating cone and valve stroke.

### Regulating needle / Regulating cone

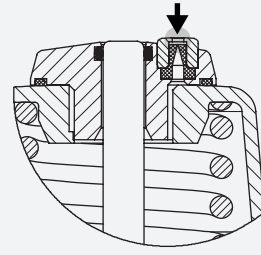
Regulating needle	Regulating cone
	
Regulating needle: RAxxx – RCxxx (reduced valve seat)	Regulating cone: DN 15 - 50

### Vent hole in the actuator

To vent the control medium, the pneumatic actuator has a vent hole that is located on the side of the actuator housing (control function normally closed). In certain areas of application (e.g. the foodstuff industry), dirty water or cleaning media could enter through this vent hole and penetrate the actuator, thereby adversely affecting correct operation. A special vent system with lip check valve is available for these applications, which prevents such functional impairment. The vent hole at the side is then closed.



Standard vent hole



Special vent system K-no. 6996

## GEMÜ CONEXO

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



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

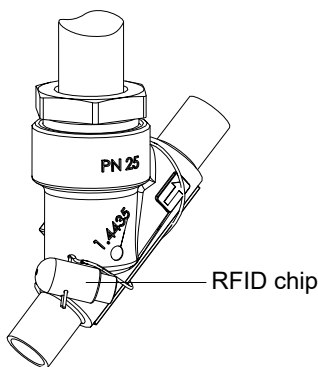
**For further information on GEMÜ CONEXO please visit:**

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

### Ordering

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

In the corresponding design with CONEXO, this product has an RFID chip (1) for electronic identification purposes. The position of the RFID chip can be seen below. The CONEXO pen helps read out information stored in the RFID chips. The CONEXO app or CONEXO portal is required to display this information.



## Range overview

### Availability of valve bodies

#### Butt weld spigots

DN	Connection type code <sup>1)</sup>										
	0	16	17			37	59		60		
	Material code <sup>2)</sup>										
	34	34	34	37	C2	34	34	C2	34	37	C2
15	X	X	X	X	X	-	X	X	X	X	X
20	X	X	X	X	X	-	X	X	X	X	X
25	X	X	X	X	X	X	X	X	X	X	X
32	-	X	X	X	X	-	-	-	X	X	X
40	X	X	X	X	X	X	X	X	X	X	X
50	X	X	X	X	X	X	X	X	X	X	X

X = Standard

#### 1) Connection type

Code 0: Spigot DIN

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

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

Code 37: Spigot SMS 3008

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

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

#### 2) Valve body material

Code 34: 1.4435, investment casting

Code 37: 1.4408, investment casting

Code C2: 1.4435, investment casting

**Threaded connections**

DN	Connection type code <sup>1)</sup>			
	1	3C	3D	9
	Material code 37 <sup>2)</sup>			
	Body configuration code D <sup>3)</sup>			
15	X	X	X	X
20	X	X	X	X
25	X	X	X	X
32	X	X	X	X
40	X	X	X	X
50	X	X	X	X

DN	Connection type code <sup>1)</sup>	
	1	3D
	Material code 37	
	Body configuration code E <sup>3)</sup>	
15	X	X
20	X	X
25	X	X
32	X	X
40	X	X
50	X	X

X = Standard

1) **Connection type**

Code 1: Threaded socket DIN ISO 228

Code 3C: Threaded socket Rc ISO 7-1, EN 10226-2, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8

Code 3D: Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8

Code 9: Threaded spigot DIN ISO 228

2) **Valve body material**

Code 37: 1.4408, investment casting

3) **Body configuration**

Code D: 2/2-way body

Code E: Angle valve body



**Flanges**

DN	Connection type code <sup>1)</sup>		
	10	13	47
	Material code <sup>2)</sup>		
	37	34	
15	X*	X	X
20	X*	X	X
25	X*	X	X
32	X*	X	X
40	X*	X	X
50	X*	X	X

X = Standard

1) **Connection type**

Code 10: Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

Code 13: Flange EN 1092, PN 25, form B

Code 47: Flange ANSI Class 150 RF

2) **Valve body material**

Code 34: 1.4435, investment casting

Code 37: 1.4408, investment casting

\* Actuators for connection type code 10

DN	Actuator size Code
15	1G1 + 2G1
20	1G1 + 2G1 + 3G1
25	2G1 + 3G1 + 4G1
32	2G1
40	4G1
50	3G1 + 4G1

**Clamp**

DN	Connection type code <sup>1)</sup>		
	82	86	88
	Material code <sup>2)</sup>		
	34		
15	X	X	X
20	X	X	X
25	X	X	X
32	X	X	-
40	X	X	X
50	X	X	X

X = Standard

1) **Connection type**

Code 82: Clamp DIN 32676 series B, face-to-face dimension FTF EN 558 series 1

Code 86: Clamp DIN 32676 series A, face-to-face dimension FTF EN 558 series 1

Code 88: Clamp ASME BPE, for pipe ASME BPE, face-to-face dimension FTF EN 558 series 1

2) **Valve body material**

Code 34: 1.4435, investment casting

**Design availability**

Design	
Grade of surface finish (code 1903, 1904, 1909, 1953, 1954 and 1959) as per order data	Valve body material (code C2)
Media temperature -10 to 210 °C (code 2023)	Seat seal (code 5G, 10)
For contact with foodstuffs, the product must be ordered with the following ordering options	Seat seal (code 5, 5G, 10) Valve body material (code 34, 37, 40, C2)

## 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
Angle seat globe valve, pneumatically operated, stainless steel piston actuator	550

2 DN	Code
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50

3 Body configuration	Code
2/2-way body	D
Angle valve body	E

4 Connection type	Code
<b>Spigot</b>	
Spigot DIN	0
Spigot DIN EN 10357 series B (2014 edition; formerly DIN 11850 series 1)	16
Spigot EN 10357 series A/DIN 11866 series A formerly DIN 11850 series 2	17
Spigot SMS 3008	37
Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C	59
Spigot ISO 1127/DIN EN 10357 series C (2014 edition)/DIN 11866 series B	60
<b>Threaded connection</b>	
Threaded socket DIN ISO 228	1
Threaded socket Rc ISO 7-1, EN 10226-2, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8	3C
Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8	3D
Threaded spigot DIN ISO 228	9
<b>Flange</b>	
Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1	10
Flange EN 1092, PN 25, form B	13
Flange ANSI Class 150 RF	47
<b>Clamp</b>	
Clamp DIN 32676 series B, face-to-face dimension FTF EN 558 series 1	82
Clamp DIN 32676 series A, face-to-face dimension FTF EN 558 series 1	86
Clamp ASME BPE, for pipe ASME BPE, face-to-face dimension FTF EN 558 series 1	88

5 Valve body material	Code
1.4435, investment casting	34
1.4408, investment casting	37
1.4435, investment casting	C2
<b>Note:</b> A surface finish from the order code table "Type of design"" must be specified for valve body material C2.	

6 Seat seal	Code
PTFE	5
1.4404	10
PTFE, glass fibre reinforced	5G
PTFE FDA compliant, USP class VI	5P
<b>Note:</b> Code 10, steel (standard up to Kv value 1.00 m <sup>3</sup> /h) R-No. on request	

7 Control function	Code
Normally closed (NC)	1
Double acting (DA)	3
Double acting and normally closed	8
<b>Note:</b> Code 3 and 8, R-No. on request	

8 Actuator version	Code
Actuator size 1G1	1G1
Actuator size 2G1	2G1
Actuator size 3G1	3G1
Actuator size 4G1	4G1

9 Regulating cone	Code
Please find the number of the optional regulating cone (R-No.) for the linear or equal-percentage modified regulating cone in the Kv value table.	R...

10 Type of design	Code
Standard	
Ra ≤ 0.6 µm (25 µinch) for media wetted surfaces, in accordance with ASME BPE SF2 + SF3 mechanically polished internal	1903
Ra ≤ 0.8 µm (30 µinch) for media wetted surfaces, in accordance with DIN 11866 H3, mechanically polished internal	1904
Ra ≤ 0.4 µm (15 µinch) for media wetted surfaces, in accordance with DIN 11866 H4, ASME BPE SF1 mechanically polished internal	1909
Ra ≤ 0.6 µm for media wetted surfaces, in accordance with ASME BPE SF6, electropolished internal/external	1953
Ra ≤ 0.8 µm for media wetted surfaces, in accordance with DIN 11866 HE3, electropolished internal/external	1954

## Order data

10 Type of design	Code
Ra ≤ 0.4 µm for media wetted surfaces, in accordance with DIN 11866 HE4/ASME BPE SF5, electropolished internal/external	1959
For higher operating temperatures	2023
Special bleed system integrated in actuator	6996

11 Special version	Code
Standard	

11 Special version	Code
Special version for oxygen, (max. temperature 60 °C; max. operating pressure 10 bar), flow direction only possible under the seat! Media-wetted seal materials and auxiliary materials with BAM testing	S

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

## Order example

Ordering option	Code	Description
1 Type	550	Angle seat globe valve, pneumatically operated, stainless steel piston actuator
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	17	Spigot EN 10357 series A/DIN 11866 series A formerly DIN 11850 series 2
5 Valve body material	C2	1.4435, investment casting
6 Seat seal	5	PTFE
7 Control function	1	Normally closed (NC)
8 Actuator version	2G1	Actuator size 2G1
9 Regulating cone	R...	Please find the number of the optional regulating cone (R-No.) for the linear or equal-percentage modified regulating cone in the Kv value table.
10 Type of design		Standard
11 Special version		Standard
12 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 seal material.

**Max. permissible viscosity:** 600 mm<sup>2</sup>/s  
Other versions for lower / higher temperatures and higher viscosities on request.

**Control medium:** Inert gases

### Temperature

**Media temperature:** Standard: -10 – 180 °C  
Special version: -10 – 210 °C \* only with ordering option Type of design (code 2023)  
\* dependent on body material

**Ambient temperature:** -10 – 60 °C

**Storage temperature:** -30 – 60 °C

**Control medium temperature:** max. 60 °C

**Pressure**

**Control valve:**

**All connection types**

**Valve body material 1.4435 (code 34, C2), 1.4408 (code 37)**

DN	Kv value [m³/h]	Operating pressure [bar]	Actuator size	Regulating cone number	
				Linear	Equal-percent- age (mod.)
15	0.1*	25.0	2G1	RA202	RA403
	0.16*	25.0	2G1	RB204	RA404
	0.25*	25.0	2G1	RB205	RB403
	0.4*	25.0	2G1	RB206	RB404
	0.63*	25.0	2G1	RC203	RC403
	1.0*	25.0	2G1	RC204	RC404
	1.6	25.0	2G1	RD203	RD403
	2.5**	25.0	2G1	RE204	RE404
20	1.6	25.0	2G1	RD204	RD404
	2.5	25.0	2G1	RE205	RE405
	4.0	25.0	2G1	RF204	RF404
	6.3**	21.0	2G1	RG205	RG405
25	2.5	25.0	2G1	RE206	RE406
	4.0	25.0	2G1	RF205	RF405
	6.3	18.0	2G1	RG206	RG406
	10.0**	10.0	2G1	RH205	RH405
32	4.0	25.0	2G1	RF206	RF406
	6.3	18.0	2G1	RG207	RG407
	10.0	10.0	2G1	RH206	RH406
	16.0	16.0	3G1	RJ204	RJ404
40	6.3	25.0	3G1	RG208	RG408
	10.0	24.0	3G1	RH207	RH407
	16.0	15.0	3G1	RJ205	RJ405
	25.0	18.0	4G1	RK203	RK403
50	10.0	18.0	3G1	RH208	RH408
	16.0	12.0	3G1	RJ206	RJ406
	25.0	16.0	4G1	RK204	RK404
	40.0	10.0	4G1	RM202	RM402

Note: Angle seat valve bodies with valve body material code C2 and reduced seat have a surface area of Ra ≤ 1.2 µm due to the reduction in the seat area.

\*Metallic sealing

\*\*Not for connection code 37, 59, 88

**Control valve:**
**Connection types connection code 37, 59, 88**
**Valve body material 1.4435 (code 34, C2)**

DN	Kv value [m <sup>3</sup> /h]	Operating pressure [bar]	Actuator size	Regulating cone number	
				Linear	Equal-percentage (mod.)
15	2.7	10.0	1G1	RS151	RS141
15	2.7	22.0	2G1	RS150	RS140
20	6.3	12.0	2G1	RS152	RS142
25	13.3	7.0	2G1	RS153	RS143
40	35.6	6.0	3G1	RS155	RS145
50	58.0	7.0	4G1	RS156	RS146

**All connection types except connection code 37, 59, 88**
**Valve body material 1.4435 (code 34, C2), 1.4408 (code 37)**

DN	Kv value [m <sup>3</sup> /h]	Operating pressure [bar]	Actuator size	Regulating cone number	
				Linear	Equal-percentage (mod.)
15	5.0	10.0	1G1	RS101	RS111
	5.0	22.0	2G1	RS100	RS110
20	10.0	12.0	2G1	RS102	RS112
25	15.0	7.0	2G1	RS103	RS113
32	24.0	10.0	3G1	RS104	RS114
40	38.0	6.0	3G1	RS105	RS115
50	60.0	7.0	4G1	RS106	RS116

Technical data

**Pressure/temperature correlation:**

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

\* max. temperature 140 °C

RT = room temperature

All pressures are gauge pressures.

The valves are suitable for temperatures as low as -10 °C

**Leakage rate:**

**Control valve**

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

**Filling volume:**

Actuator version code	Filling volume	Piston diameter
<b>1G1</b>	0.025 dm <sup>3</sup>	42 mm
<b>2G1</b>	0.084 dm <sup>3</sup>	60 mm
<b>3G1</b>	0.245 dm <sup>3</sup>	80 mm
<b>4G1</b>	0.437 dm <sup>3</sup>	100 mm

**Control pressure:**

max. 8.0 bar



## Product compliance

**Machinery Directive:** 2006/42/EC

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

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

**Approvals:** FDA\*  
\* depending on version and/or operating parameters

## Mechanical data

**Weight:**

**Actuator**

DN	Actuator size			
	1G1	2G1	3G1	4G1
15	0.66	0.97	-	-
20	0.73	1.00	1.70	-
25	-	1.10	1.80	3.20
32	-	1.30	2.00	3.40
40	-	-	2.10	3.50
50	-	-	2.30	3.70

Weights in kg

**Valve body**

DN	Spigot	Threaded socket	Threaded spigot	Flange	Clamp
	Connection type code				
	0, 16, 17, 37, 59, 60	1, 3C,3D	9	10, 13, 47	82, 86, 88
15	0.24	0.35	0.31	1.80	0.37
20	0.50	0.35	0.50	2.50	0.63
25	0.50	0.35	0.65	3.10	0.63
32	0.90	0.75	1.00	4.60	1.08
40	1.10	0.98	1.30	5.10	1.28
50	1.80	1.70	1.80	7.20	2.07

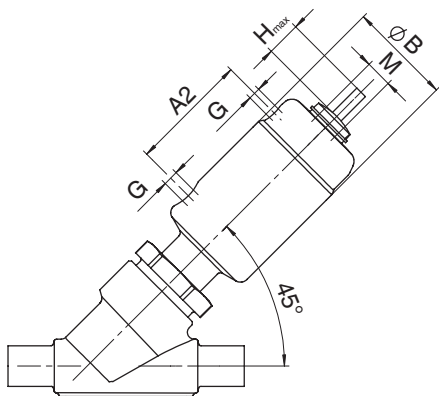
Weights in kg

## Technical data - Positioners

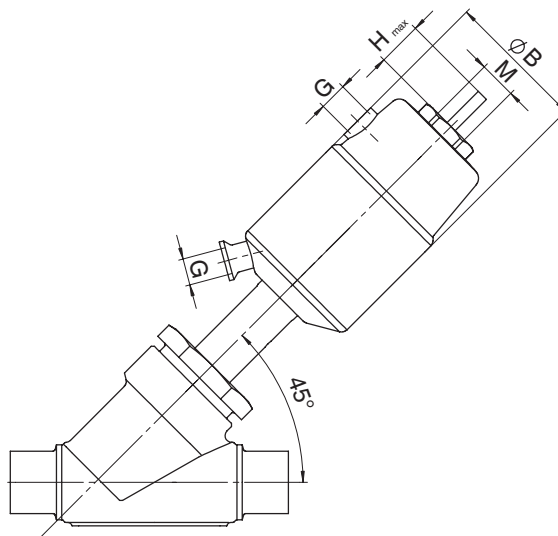
For the technical data and order data of the positioners, please refer to the GEMÜ 1434, 1435 and 1436 datasheets. Please also note the table on page 2.

## Dimensions without positioner

### Actuator dimensions



Actuator size 1G1



Actuator size 2G1-4G1

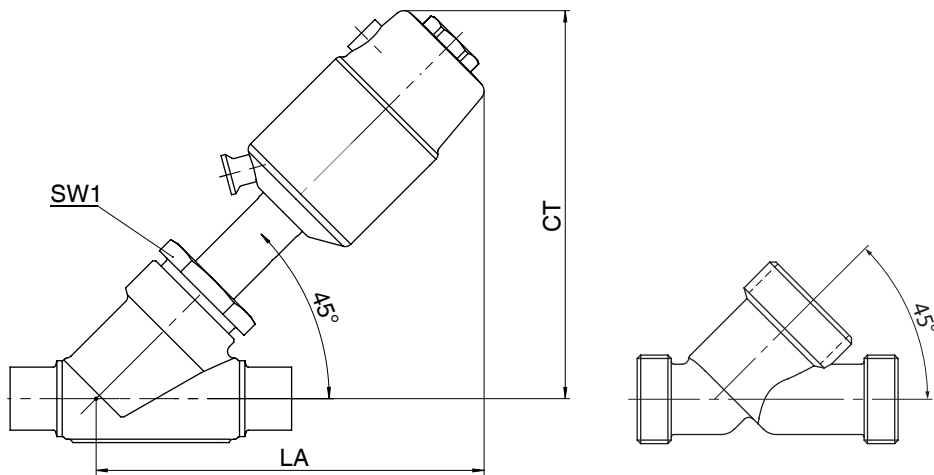
Actuator size	ØB	M	H max*	G	A2
<b>1G1</b>	46.0	M 16 x 1	12.0	G 1/8	53.0
<b>2G1</b>	63.0	M 16 x 1	22.0	G 1/8	-
<b>3G1</b>	84.0	M 16 x 1	28.0	G 1/4	-
<b>4G1</b>	104.0	M 22 x 1.5	32.0	G 1/4	-

Dimensions in mm

H max\*: Depends on the nominal size

## Installation dimensions

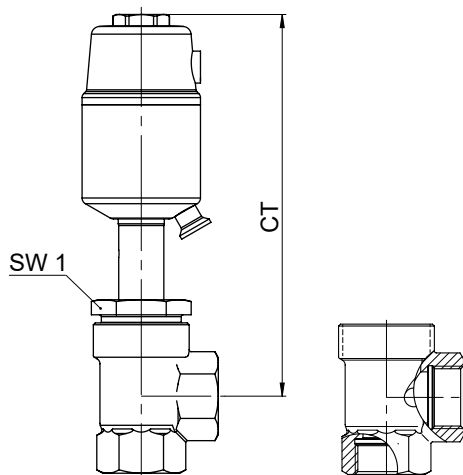
### Valve with 2/2-way body



DN	WAF metric	Actuator size			
		1G1	2G1	3G1	4G1
		CT/LA	CT/LA	CT/LA	CT/LA
15	36	137.0	174.0	-	-
20	41	143.0	180.0	198.0	-
25	46	-	184.0	202.0	235.0
32	55	-	192.0	210.0	243.0
40	60	-	187.0	215.0	248.0
50	55	-	-	223.0	256.0

Dimensions in mm

**Valve with angle valve body**



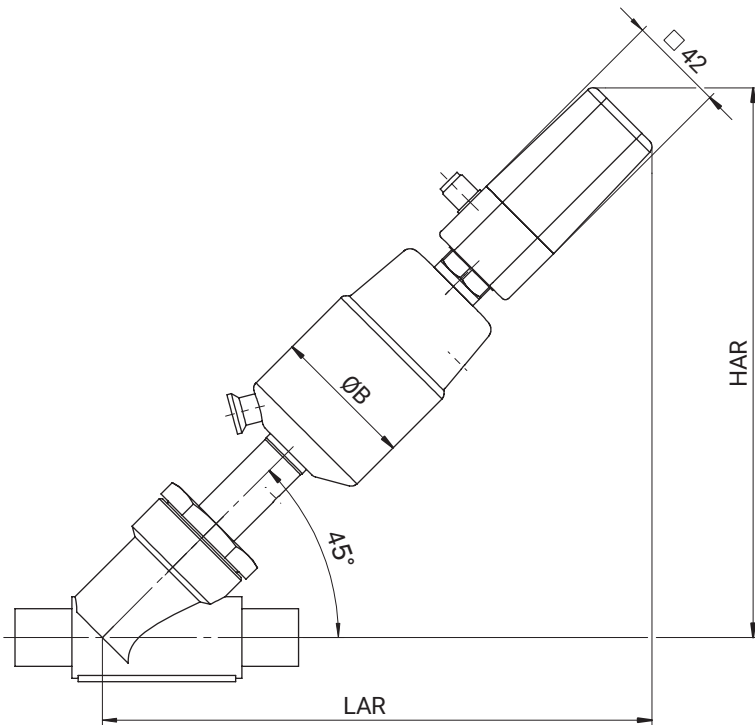
DN	WAF	Actuator size			
		1G1	2G1	3G1	4G1
		CT	CT	CT	CT
<b>15</b>	<b>36</b>	149.0	195.0	-	-
<b>20</b>	<b>41</b>	152.0	198.0	214.0	-
<b>25</b>	<b>46</b>	-	202.0	218.0	256.0
<b>32</b>	<b>55</b>	-	205.0	221.0	259.0
<b>40</b>	<b>60</b>	-	-	226.0	264.0
<b>50</b>	<b>55</b>	-	-	233.0	271.0

Dimensions in mm

## Dimensions with positioner

### Valve with 2/2-way body

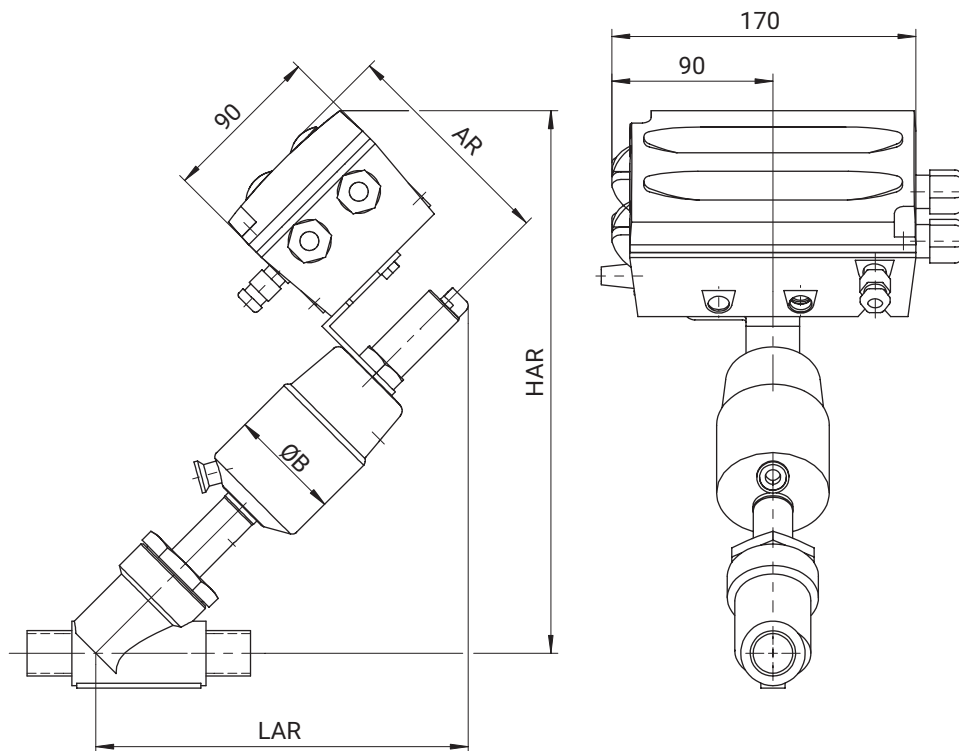
#### GEMÜ 550 with 1434 $\mu$ Pos



DN	Actuator size	Control function	ØB	LAR / HAR
15	1G1	1	46,0	209,0
	2G1	1	63,0	242,0
20	2G1	1	63,0	252,0
25	2G1	1	63,0	252,0
32	2G1	1	63,0	259,0
	3G1	1	84,0	271,0

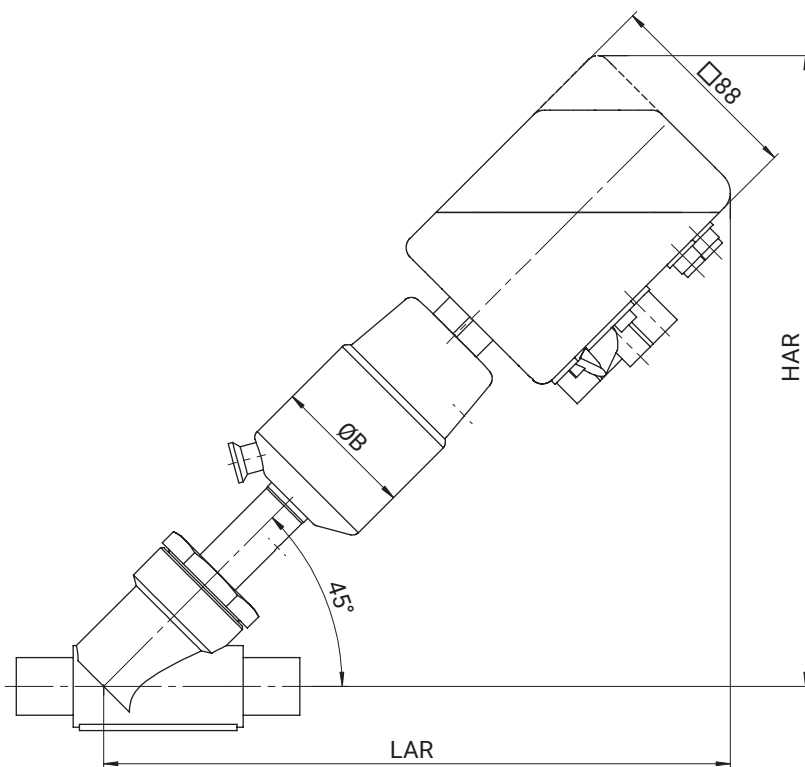
Dimensions in mm

**GEMÜ 550 with 1435 ePos**



DN	Actuator size	Control function	ØB	LAR	HAR	AR
15	2G1	1	63,0	205,0	299,0	118,0
		3, 8	63,0	222,0	316,0	118,0
20	2G1	1	63,0	215,0	309,0	118,0
		3, 8	63,0	231,0	326,0	118,0
25	2G1	1	63,0	215,0	309,0	118,0
		3, 8	63,0	231,0	326,0	118,0
32	2G1	1	63,0	222,0	317,0	118,0
		3, 8	63,0	239,0	333,0	239,0
	3G1	1	84,0	249,0	328,0	118,0
		3, 8	84,0	266,0	345,0	118,0
40	3G1	1	84,0	255,0	334,0	118,0
		3, 8	84,0	272,0	350,0	118,0
	4G1	1	104,0	285,0	378,0	138,0
		3, 8	104,0	299,0	391,0	138,0
50	3G1	1	84,0	263,0	341,0	118,0
		3, 8	84,0	280,0	358,0	118,0
	4G1	1	104,0	293,0	386,0	138,0
		3, 8	104,0	306,0	399,0	138,0

Dimensions in mm

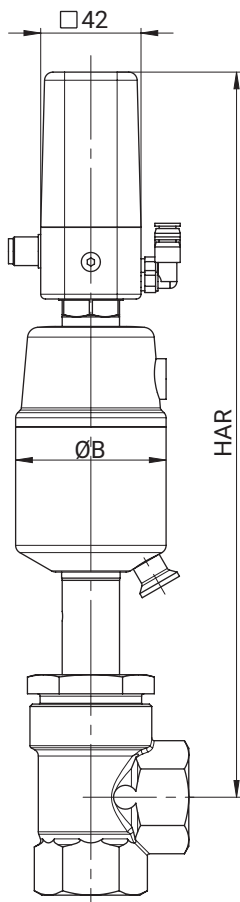
**GEMÜ 550 with 1436 cPos**

DN	Actuator size	Control function	ØB	LAR / HAR
15	2G1	1	63,0	279,0
		3, 8	63,0	295,0
20	2G1	1	63,0	289,0
		3, 8	63,0	305,0
25	2G1	1	63,0	289,0
		3, 8	63,0	305,0
32	2G1	1	63,0	296,0
		3, 8	63,0	313,0
	3G1	1	84,0	323,0
		3, 8	84,0	340,0
40	3G1	1	84,0	329,0
		3, 8	84,0	346,0
	4G1	1	104,0	359,0
		3, 8	104,0	373,0
50	3G1	1	84,0	337,0
		3, 8	84,0	354,0
	4G1	1	104,0	367,0
		3, 8	104,0	380,0

Dimensions in mm

## Valve with angle valve body

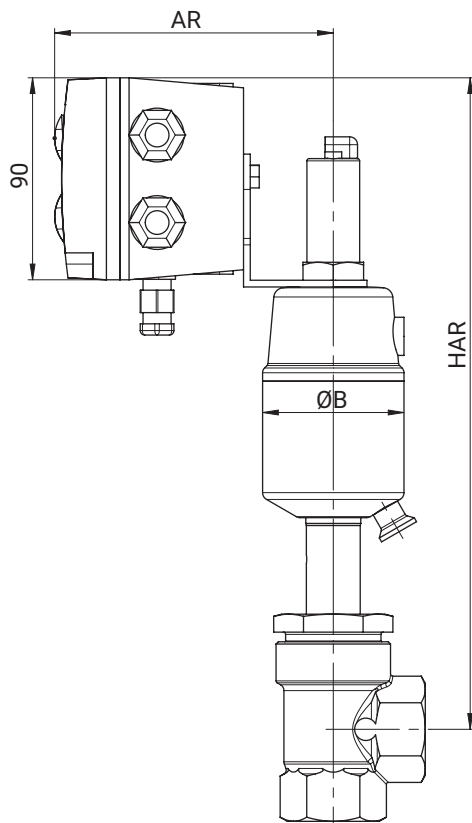
### GEMÜ 550 with 1434 $\mu$ Pos



DN	Actuator size	Control function	ØB	HAR
15	1G1	1	46,0	255,0
	2G1	1	63,0	301,0
20	2G1	1	63,0	304,0
25	2G1	1	63,0	308,0
32	2G1	1	63,0	311,0
	3G1	1	84,0	327,0

Dimensions in mm

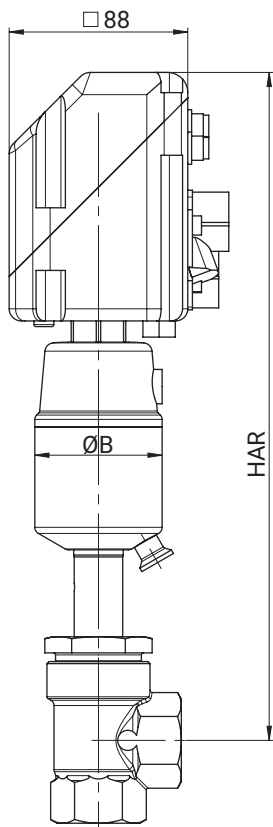


**GEMÜ 550 with 1435 ePos**

DN	Actuator size	Control function	ØB	HAR	AR
15	2G1	1	63,0	285,0	118,0
		3, 8	63,0	309,0	118,0
20	2G1	1	63,0	288,0	118,0
		3, 8	63,0	312,0	118,0
25	2G1	1	63,0	292,0	118,0
		3, 8	63,0	316,0	118,0
32	2G1	1	63,0	295,0	118,0
		3, 8	63,0	319,0	118,0
	3G1	1	84,0	311,0	118,0
		3, 8	84,0	335,0	118,0
40	3G1	1	84,0	316,0	118,0
		3, 8	84,0	340,0	118,0
	4G1	1	104,0	359,0	138,0
		3, 8	104,0	378,0	138,0
50	3G1	1	84,0	323,0	118,0
		3, 8	84,0	347,0	118,0
	4G1	1	104,0	366,0	138,0
		3, 8	104,0	385,0	138,0

Dimensions in mm

**GEMÜ 550 with 1436 cPos**

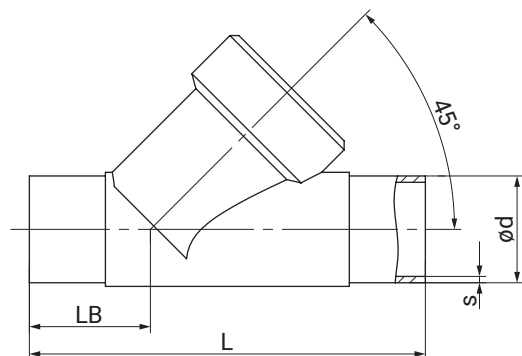


DN	Actuator size	Control function	ØB	HAR
15	2G1	1	63,0	320,0
		3, 8	63,0	344,0
20	2G1	1	63,0	323,0
		3, 8	63,0	347,0
25	2G1	1	63,0	327,0
		3, 8	63,0	351,0
32	2G1	1	63,0	330,0
		3, 8	63,0	354,0
	3G1	1	84,0	346,0
		3, 8	84,0	370,0
40	3G1	1	84,0	351,0
		3, 8	84,0	375,0
	4G1	1	104,0	394,0
		3, 8	104,0	413,0
50	3G1	1	84,0	358,0
		3, 8	84,0	382,0
	4G1	1	104,0	401,0
		3, 8	104,0	420,0

Dimensions in mm

## Body dimensions

### Spigot DIN/EN/ISO/ASME/SMS (code 0, 16, 17, 37, 59, 60)



#### Connection type spigot DIN/EN/ISO (code 0, 16, 17, 60)<sup>1)</sup>, investment casting material (code 34)<sup>2)</sup>

DN	NPS	ød				L	LB	s			
		Connection type						Connection type			
		0	16	17	60			0	16	17	60
10	3/8"	-	12.0	13.0	17.2	105.0	35.5	-	1.0	1.5	1.6
15	1/2"	18.0	18.0	19.0	21.3	105.0	35.5	1.5	1.0	1.5	1.6
20	3/4"	22.0	22.0	23.0	26.9	120.0	39.0	1.5	1.0	1.5	1.6
25	1"	28.0	28.0	29.0	33.7	125.0	38.5	1.5	1.0	1.5	2.0
32	1 1/4"	-	34.0	35.0	42.4	155.0	48.0	-	1.0	1.5	2.0
40	1 1/2"	40.0	40.0	41.0	48.3	160.0	47.0	1.5	1.0	1.5	2.0
50	2"	52.0	52.0	53.0	60.3	180.0	48.0	1.5	1.0	1.5	2.0

#### Connection type spigot ANSI/ASME/SMS (code 37, 59)<sup>1)</sup>, investment casting material (code 34)<sup>2)</sup>

DN	NPS	ød		L	LB	s	
		Connection type				Connection type	
		37	59			37	59
15	1/2"	-	12.70	105.0	35.5	-	1.65
20	3/4"	-	19.05	120.0	39.0	-	1.65
25	1"	25.0	25.40	125.0	38.5	1.2	1.65
32	1 1/4"	-	-	155.0	48.0	-	-
40	1 1/2"	38.0	38.10	160.0	47.0	1.2	1.65
50	2"	51.0	50.80	180.0	48.0	1.2	1.65

Dimensions in mm

#### 1) Connection type

Code 0: Spigot DIN

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

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

Code 37: Spigot SMS 3008

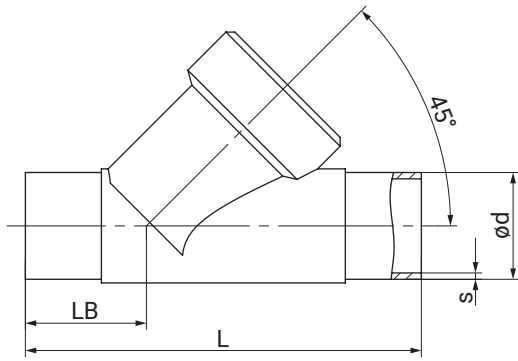
Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C

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

#### 2) Valve body material

Code 34: 1.4435, investment casting

**Spigot EN/ISO/ASME/SMS (code 17, 60)**



Connection type spigot EN/ISO/ASME (code 17, 60)<sup>1)</sup>, investment casting material (code 37)<sup>2)</sup>

DN	NPS	ød		L	LB	s	
		Connection type				Connection type	
		17	60			17	60
15	1/2"	19.0	21.3	100.0	33.0	1.5	1.6
20	3/4"	23.0	26.9	108.0	33.0	1.5	1.6
25	1"	29.0	33.7	112.0	32.0	1.5	2.0
32	1¼"	35.0	42.4	137.0	39.0	1.5	2.0
40	1½"	41.0	48.3	146.0	40.0	1.5	2.0
50	2"	53.0	60.3	160.0	38.0	1.5	2.0

Dimensions in mm

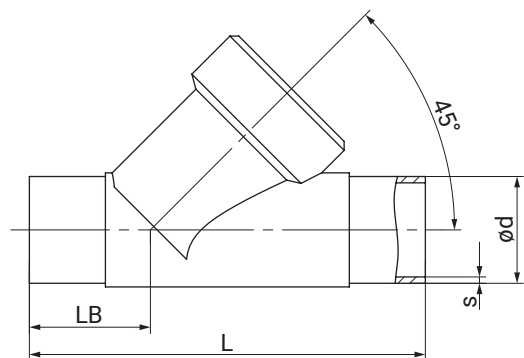
1) **Connection type**

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 edition)/DIN 11866 series B

2) **Valve body material**

Code 37: 1.4408, investment casting

**Spigot EN/ISO/ASME (code 17, 59, 60)****Connection type spigot EN/ISO/ASME (code 17, 59, 60)<sup>1)</sup>, investment casting material (code C2)<sup>2)</sup>**

DN	NPS	$\varnothing d$			L	LB	s		
		Connection type					Connection type		
		17	59	60			17	59	60
15	1/2"	19.0	12.70	21.3	105.0	35.5	1.5	1.65	1.6
20	3/4"	23.0	19.05	26.9	120.0	39.0	1.5	1.65	1.6
25	1"	29.0	25.40	33.7	125.0	39.5	1.5	1.65	2.0
32	1 1/4"	35.0	-	42.4	155.0	48.0	1.5	-	2.0
40	1 1/2"	41.0	38.10	48.3	160.0	47.0	1.5	1.65	2.0
50	2"	53.0	50.80	60.3	180.0	48.0	1.5	1.65	2.0

Dimensions in mm

**1) Connection type**

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

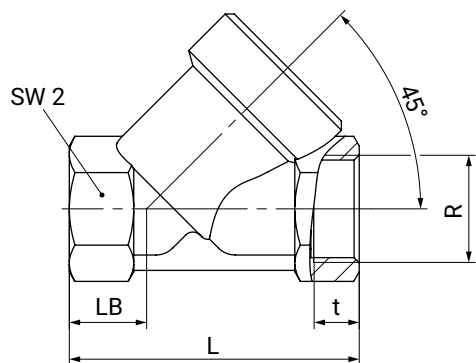
Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 edition)/DIN 11866 series C

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

**2) Valve body material**

Code C2: 1.4435, investment casting

**Threaded socket DIN/Rc/NPT body configuration D (code 1, 3C, 3D)**



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

DN	NPS	L	LB	R	SW2	t
15	1/2"	65.0	16.5	G 1/2	27	15.0
20	3/4"	75.0	17.5	G 3/4	32	16.3
25	1"	90.0	24.0	G 1	41	19.1
32	1 1/4"	110.0	33.0	G 1 1/4	50	21.4
40	1 1/2"	120.0	30.0	G 1 1/2	55	21.4
50	2"	150.0	40.0	G 2	70	25.7

Connection type threaded socket Rc/NPT (code 3C, 3D)<sup>1)</sup>, investment casting material (code 37)<sup>2)</sup>

DN	NPS	L	LB	R		SW2	t	
				Connection type			Connection type	
				3C	3D		3C	3D
15	1/2"	65.0	16.5	Rc 1/2	1/2" NPT	27	15.0	13.6
20	3/4"	75.0	17.5	Rc 3/4	3/4" NPT	32	16.3	14.1
25	1"	90.0	24.0	Rc 1	1" NPT	41	19.1	17.0
32	1 1/4"	110.0	33.0	Rc 1 1/4	1 1/4" NPT	50	21.4	17.5
40	1 1/2"	120.0	30.0	Rc 1 1/2	1 1/2" NPT	55	21.4	17.3
50	2"	150.0	40.0	Rc 2	2" NPT	70	25.7	17.8

Dimensions in mm

1) **Connection type**

Code 1: Threaded socket DIN ISO 228

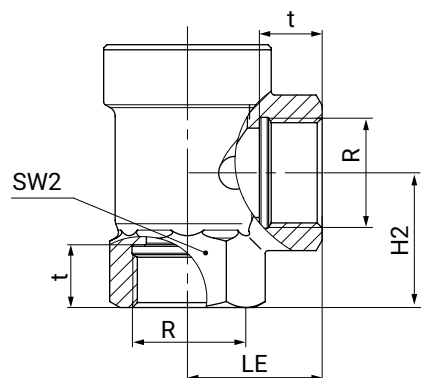
Code 3C: Threaded socket Rc ISO 7-1, EN 10226-2, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8

Code 3D: Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8

2) **Valve body material**

Code 37: 1.4408, investment casting

## Threaded socket DIN/NPT body configuration E (code 1, 3D)



Connection type threaded socket DIN/NPT (code 1, 3D)<sup>1)</sup>, investment casting material (code 37)<sup>2)</sup>

DN	NPS	H2	LE	SW2	R		t	
					Connection type		Connection type	
					1	3D	1	3D
15	1/2"	30.0	30.0	27	G 1/2	1/2" NPT	15.0	13.6
20	3/4"	37.5	35.0	32	G 3/4	3/4" NPT	16.3	14.1
25	1"	41.0	41.0	41	G 1	1" NPT	19.1	17.0
32	1 1/4"	48.0	50.0	50	G 1 1/4	1 1/4" NPT	21.4	17.5
40	1 1/2"	55.0	50.0	55	G 1 1/2	1 1/2" NPT	21.4	17.3
50	2"	62.0	60.0	70	G 2	2" NPT	25.7	17.8

Dimensions in mm

1) **Connection type**

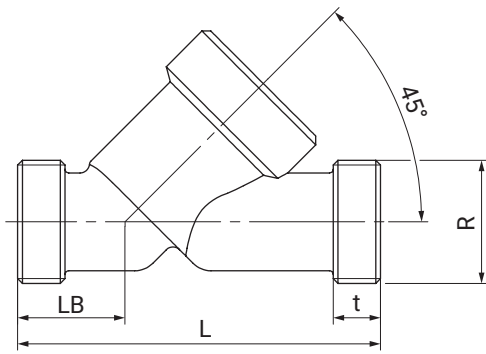
Code 1: Threaded socket DIN ISO 228

Code 3D: Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8

2) **Valve body material**

Code 37: 1.4408, investment casting

**Threaded spigot DIN (code 9)**



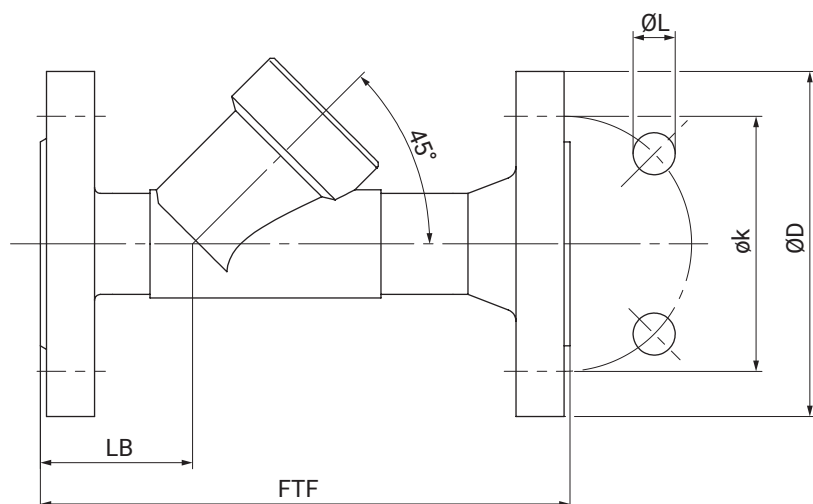
Connection type threaded socket DIN (code 9)<sup>1)</sup>, investment casting material (Code 37)<sup>2)</sup>

DN	L	LB	R	t
15	90.0	25.0	G 3/4	12.0
20	110.0	30.0	G 1	15.0
25	118.0	30.0	G 1¼	15.0
32	130.0	38.0	G 1½	13.0
40	140.0	35.0	G 1¾	13.0
50	175.0	50.0	G 2¾	15.0

Dimensions in mm

- 1) **Connection type**  
Code 9: Threaded spigot DIN ISO 228
- 2) **Valve body material**  
Code 37: 1.4408, investment casting



**Flange EN (code 10)****Connection type flange EN (code 10)<sup>1)</sup>, investment casting material (code 37)<sup>2)</sup>**

DN	NPS	$\text{Ø D}$	FTF	$\text{Ø k}$	$\text{Ø L}$	LB	n
15	1/2"	95.0	130.0	65.0	14.0	33.0	4
20	3/4"	105.0	150.0	75.0	14.0	45.0	4
25	1"	115.0	160.0	85.0	14.0	44.0	4
32	1¼"	140.0	180.0	100.0	18.0	51.0	4
40	1½"	150.0	200.0	110.0	18.0	52.0	4
50	2"	165.0	230.0	125.0	18.0	50.0	4

Dimensions in mm

n = number of bolts

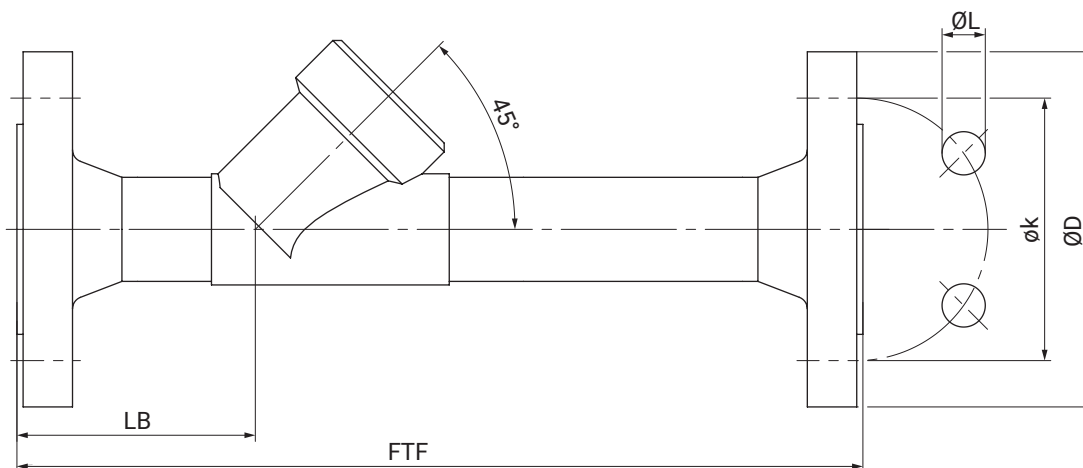
**1) Connection type**

Code 10: Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

**2) Valve body material**

Code 37: 1.4408, investment casting

**Flange, special length EN/ANSI (code 13, 47)**



Connection type flange, special length EN/ANSI (code 13, 47)<sup>1)</sup>, investment casting material (code 34)<sup>2)</sup>

DN	NPS	ØD		FTF	øk		ØL		LB	n
		Connection type			Connection type		Connection type			
		13	47		13	47	13	47		
15	1/2"	95.0	89.0	210.0	65.0	60.5	14.0	15.7	72.0	4
20	3/4"	105.0	98.6	280.0	75.0	69.8	14.0	15.7	78.0	4
25	1"	115.0	108.0	280.0	85.0	79.2	14.0	15.7	77.0	4
32	1 1/4"	140.0	117.3	310.0	100.0	88.9	18.0	15.7	89.0	4
40	1 1/2"	150.0	127.0	320.0	110.0	98.6	18.0	15.7	91.0	4
50	2"	165.0	152.4	330.0	125.0	120.7	18.0	19.1	95.0	4

Dimensions in mm

n = number of bolts

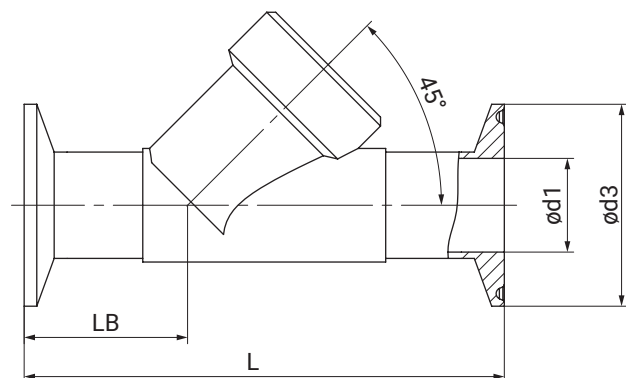
1) **Connection type**

Code 13: Flange EN 1092, PN 25, form B

Code 47: Flange ANSI Class 150 RF

2) **Valve body material**

Code 34: 1.4435, investment casting

**Clamp (Code 82, 86, 88)****Connection type clamp DIN/ASME (code 82, 86, 88)<sup>1)</sup>, investment casting material (code 34)<sup>2)</sup>**

DN	NPS	ød1			ød3			L			LB		
		Connection type			Connection type			Connection type			Connection type		
		82	86	88	82	86	88	82	86	88	82	86	88
15	1/2"	18.1	16.0	9.40	50.5	34.0	25.0	130.0	130.0	130.0	47.5	47.5	47.5
20	3/4"	23.7	20.0	15.75	50.5	34.0	25.0	150.0	150.0	150.0	54.0	54.0	54.0
25	1"	29.7	26.0	22.10	50.5	50.5	50.5	160.0	160.0	160.0	56.0	56.0	56.0
32	1¼"	38.4	32.0	-	64.0	50.5	-	180.0	180.0	-	62.0	62.0	-
40	1½"	44.3	38.0	34.80	64.0	50.5	50.5	200.0	200.0	200.0	67.0	67.0	67.0
50	2"	56.3	50.0	47.50	77.5	64.0	64.0	230.0	230.0	230.0	73.0	73.0	73.0

Dimensions in mm

**1) Connection type**

Code 82: Clamp DIN 32676 series B, face-to-face dimension FTF EN 558 series 1

Code 86: Clamp DIN 32676 series A, face-to-face dimension FTF EN 558 series 1

Code 88: Clamp ASME BPE, for pipe ASME BPE, face-to-face dimension FTF EN 558 series 1

**2) Valve body material**

Code 34: 1.4435, investment casting

## Specification | GEMÜ regulating cones for globe valves

Customer/Project \_\_\_\_\_ Contact person \_\_\_\_\_

Date \_\_\_\_\_ Phone \_\_\_\_\_

Contact person (GEMÜ) \_\_\_\_\_ E-mail \_\_\_\_\_

### Technical requirements

Medium <sup>1)</sup>

Requirement characteristic	1st operating point maximum flow	2nd operating point medium flow	3rd operating point minimum flow
Media temperature <sup>4)</sup>			
Inlet pressure			
Outlet pressure			
<b>Flow rate <sup>2,3)</sup></b>			
in [m <sup>3</sup> /h] for liquids			
for gases <sup>6)</sup>			
in [kg/h] for steam			

Operation	Manual					
	Pneumatic	Control function	NC (normally closed)	NO (normally open)	DA (double acting)	Double acting (normally open)
	Motorized	Voltage	24 V DC	Other		
Control fitting		Set value information	0-10 V	0/4-20 mA		
	Feature		linear	modified equal-percentage		

Valve body	Type		
	Required valve DN		
	Max. operating pressure (bar)		
	Ambient temperature <sup>4)</sup>		
	Max. media temperature		
	Connection type		
	Body material		
	Seat seal <sup>7)</sup>	PTFE	Other
	Control pressure	min	max

## 1) Liquid or gas?

For media other than water or air, it is useful to give data for the density and viscosity of the medium (with unit of measurement). Otherwise we will assume data for standard conditions.

## 2) For steam especially, the minimum or maximum flow rate should be assigned to the appropriate inlet or outlet pressure. The temperature of the medium should also be taken into account.

3) GEMÜ recommends a positioning ratio of 1 : 10 (e.g. minimal flow rate is 10 m<sup>3</sup>/h and the maximum flow rate is 100 m<sup>3</sup>/h). Please note that the valve only controls reliably from a flow of about 10% of the max. Kv value on account of the valve opening behaviour. Other positioning ratios are possible on request or in the selection of standard regulating cones.

4) The media temperature range must be specified for steam applications. T = 20 °C is assumed unless specified otherwise.

5) This data is not absolutely necessary. A room temperature of 20 °C is assumed unless specified otherwise.

6) Basis: standard conditions 0 °C, 1013.25 mbar. If conditions differ, please specify them.

7) The seat seal is made of PTFE as standard. For regulating needles with a Kv value between 0.1 and 1.0 m<sup>3</sup>/h, only a metal seal is possible. Other materials possible on request.

The technical details of each enquiry must be checked by GEMÜ.

Comment:



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