

GEMÜ 505

Manually operated angle seat globe valve



Features

- Free from non-ferrous metals
- Welded valve plug/valve spindle design to remove possible contamination areas
- Low maintenance, fixed seat plug (without threads)
- Stainless steel bellows as spindle seal for high operating temperatures
- Batch traceability for all media-wetted components

Description

The GEMÜ 505 2/2-way angle seat globe valve has a plastic handwheel resistant to high temperatures and is manually operated. The valve is suitable for pure steam and gaseous media. The sealing at the valve seat is made of PTFE. The valve spindle is sealed with a stainless steel bellows. Valve plug and valve spindle are welded together to prevent dirt ingress.

Technical specifications

- **Media temperature :** -10 to 185 °C
- **Ambient temperature:** -10 to 60 °C
- **Operating pressure :** 0 to 10 bar
- **Nominal sizes:** DN 8 to 80
- **Body configurations:** 2/2-way body
- **Connection types:** Clamp | Spigot
- **Connection standards:** ASME | DIN | EN | ISO
- **Body materials:** 1.4435 (316L), block material | 1.4435, investment casting material
- **Seat seal materials:** PTFE
- **Conformities:** ATEX | CRN | EAC | FDA | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | USP

Technical data depends on the respective configuration



further information
webcode: GW-505



Product description

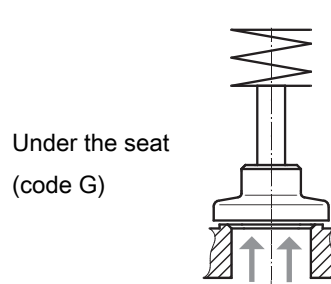
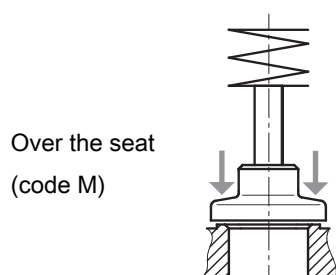
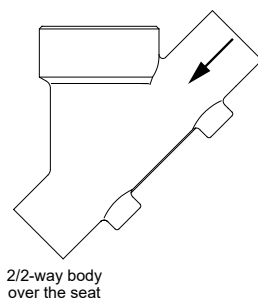
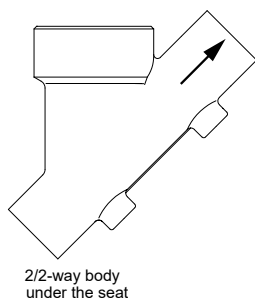
Construction



Item	Name	Materials
1	Handwheel	
2	Distance piece with leak detection hole	1.4305 / 1.4408
3	Valve body	1.4435 (316L), block material 1.4435, investment casting

Flow direction

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



Under the seat (code G) is the preferred flow direction with incompressible liquid media to avoid water hammer
Over the seat (code M) only with control function - Normally closed (NC)

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 valve bodies

Spigot

DN	Connection type code ¹⁾				
	17		59		60
	Material code ²⁾				
	C2	41	C2	41	C2
8	-	X	-	X	X
10	X	-	-	X	X
15	X	-	X	-	X
20	X	-	X	-	X
25	X	-	X	-	X
32	X	-	-	-	X
40	X	-	X	-	X
50	X	-	X	-	X
65	X	-	X	-	X
80	X	-	X	-	X

X = Standard

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 issue)/DIN 11866 series C

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

2) Valve body material

Code 41: 1.4435 (316L), block material

Code C2: 1.4435, investment casting

Clamp

DN	Connection type code ¹⁾		
	82	86	88
	Material code C2 ²⁾		
8	X	-	-
10	X	X	-
15	X	X	X
20	X	X	X
25	X	X	X
32	X	X	-
40	X	X	X
50	X	X	X
65	X	X	X
80	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 C2: 1.4435, investment casting

Range overview for food applications

Valve body material		
Seat seal	41	C2
5P	X	X

Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Order codes

Block material	
1 Type	Code
Pharmaceutical angle seat globe valve, manually operated with plastic handwheel	505
2 DN	Code
DN 8	8
DN 10	10
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50
DN 65	65
DN 80	80
3 Body configuration	Code
2/2-way body	D
4 Connection type	Code
Spigot	
Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2	17
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
Clamp	
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
Investment casting material	
1.4435, investment casting	C2
Block material	
1.4435 (316L), block material	41
6 Seat seal	Code
PTFE FDA compliant, USP class VI	5P
7 Control function	Code
Manually operated, with handwheel locknut	0

8 Actuator version	Code
Actuator size 1, under the seat, plastic handwheel, manually operated	1GP
Actuator size 1, over the seat, plastic handwheel, manually operated	1MP
Actuator size 2GP	2GP
Actuator size 2MP	2MP
Actuator size 3GP	3GP
Actuator size 3MP	3MP
9 Surface	Code
Ra ≤ 0.6 µm (25 µinch) for media wetted surfaces, in accordance with ASME BPE SF2 and 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
Ra ≤ 0.4 µm for media wetted surfaces, in accordance with DIN 11866 HE4/ASME BPE SF5, electropolished internal/external	1959
10 Special version	Code
Special version with bellows	F
11 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

Order example

Ordering option	Code	Description
1 Type	505	Pharmaceutical angle seat globe valve, manually operated with plastic handwheel
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	5P	PTFE FDA compliant, USP class VI
7 Control function	0	Manually operated, with handwheel locknut
8 Actuator version	2GP	Actuator size 2GP
9 Surface	1903	Ra ≤ 0.6 µm (25 µinch) for media wetted surfaces, in accordance with ASME BPE SF2 and SF3, mechanically polished internal
10 Special version	F	Special version with bellows
11 CONEXO		Without

Technical data

Medium

Working medium: Pure steam and gaseous media which have no negative impact on the physical and chemical properties of the respective valve body and seal material.

Temperature

Media temperature: Butt weld spigot
 Connection code 17, 59, 60: -10 – 185 °C
 Clamp
 Connection code 82, 86, 88: -10 – 140 °C

Ambient temperature: -10 – 60 °C

Storage temperature: 0 – 40 °C

Pressure

Operating pressure: max. 10 bar

Leakage rate: Leakage rate A according to P12 EN 12266-1

Kv values:

DN	Actuator size	Kv value
8	1	1.8
10	1	3.5
15	1	4.0
20	1	8.0
25	2	16.5
32	2	22.0
40	3	28.0
50	3	32.0
65	3	55.0
80	3	66.0

Kv values in m³/h

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 connections or body materials) may differ.

Product conformity

Machinery Directive: 2006/42/EC

Food: Regulation (EC) No. 1935/2004*
Regulation (EC) No. 10/2011*
Regulation (EC) No. 2023/2006*
USP* Class VI
FDA*
CRN

Explosion protection: ATEX (2014/34/EU)*
* depending on version and/or operating parameters

Environment: RoHS

Mechanical data**Weight:****Actuator**

DN	Actuator size	Weight
8	1	0.60
10	1	0.60
15	1	0.60
20	1	0.61
25	2	1.30
32	2	1.50
40	3	1.60
50	3	2.40
65	3	3.00
80	3	3.50

Weights in kg

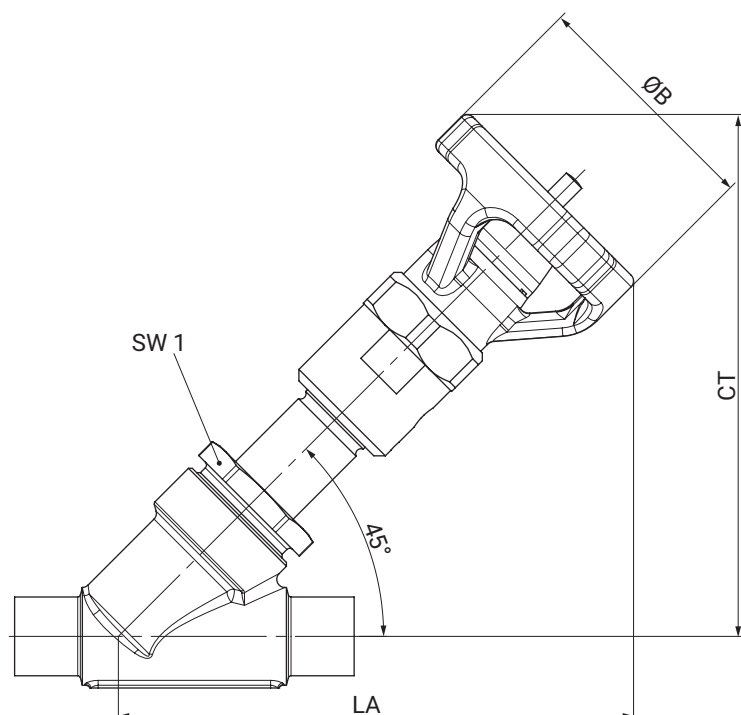
Valve body

DN	Spigot	Clamp
	Connection type code	
	17, 59, 60	82, 86, 88
8	0.12	-
10	0.25	-
15	0.24	0.37
20	0.50	0.63
25	0.50	0.63
32	0.90	1.08
40	1.10	1.28
50	1.80	2.07
65	3.40	3.69
80	4.20	4.60

Weights in kg

Dimensions

Installation and actuator dimensions

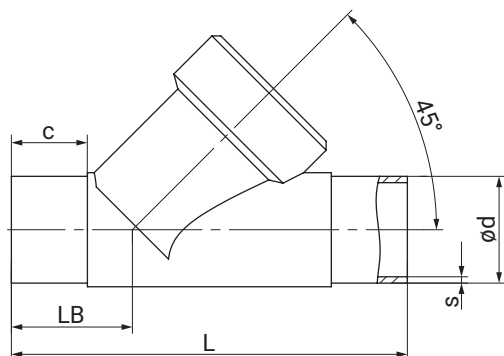


DN	Actuator size	ØB	CT/LA	SW1
8	1	63.0	161.0	36.0
10	1	63.0	161.0	36.0
15	1	63.0	161.0	36.0
20	1	63.0	161.0	41.0
25	2	92.0	196.0	46.0
32	2	92.0	197.0	55.0
40	3	114.0	265.0	60.0
50	3	114.0	268.0	55.0
65	3	114.0	268.0	75.0
80	3	114.0	273.0	75.0

Dimensions in mm

Body dimensions

Spigot EN/ISO/ASME (code 17, 59, 60)



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

Connection type: Spigot ER/ISO/BS/ASME (code 17, 59, 60) ; Investment casting material (code 02)												
DN	NPS	c (min)			ød			L	LB	s		
		Connection type			Connection type					Connection type		
		17	59	60	17	59	60			17	59	60
8	1/4"	-	-	20	-	-	13.5	105.0	35.5	-	-	1.6
10	3/8"	20	-	20	13.0	-	17.2	105.0	35.5	1.5	-	1.6
15	1/2"	20	15	20	19.0	12.70	21.3	105.0	35.5	1.5	1.65	1.6
20	3/4"	25	25	25	23.0	19.05	26.9	120.0	39.0	1.5	1.65	1.6
25	1"	24	24	24	29.0	25.40	33.7	125.0	39.5	1.5	1.65	2.0
32	1¼"	27	-	26.1	35.0	-	42.4	155.0	48.0	1.5	-	2.0
40	1½"	24	23	28.9	41.0	38.10	48.3	160.0	47.0	1.5	1.65	2.0
50	2"	28.23	28.23	48	53.0	50.80	60.3	180.0	48.0	1.5	1.65	2.0
65	2½"	52.5	58	52.5	70.0	63.50	76.1	290.0	96.0	2.0	1.65	2.0
80	3"	50.2	58	46.82	85.0	76.20	88.9	310.0	95.0	2.0	1.65	2.3

Connection type spigot EN/ISO/ASME (code 17, 59)¹⁾, block material 1.4435 (code 41)²⁾

Connection type spigot EN/ISO/ASME (code 17, 59) ; block material 1.4435 (code 41)									
DN	NPS	c (min)		ød		L	LB	s	
		Connection type		Connection type				Connection type	
		17	59	17	59			17	59
8	1/4"	20	10	10.0	6.35	80.0	35.5	1.0	0.89
10	3/8"	-	20	-	9.35	100.0	35.5	-	0.89

Dimensions in mm

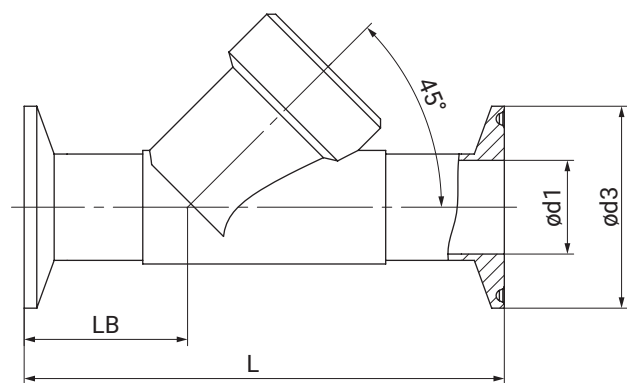
1) Connection type

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

2) Valve body material

Code 41: 1.4435 (316L), block material
 Code C2: 1.4435, investment casting

Clamp DIN/ASME (code 82, 86, 88)



Connection type clamp DIN/ASME (code 82, 86, 88)¹⁾, investment casting material (code C2)²⁾

DN	NPS	ød1						L	LB
		Connection type			Connection type				
		82	86	88	82	86	88		
		82	86	88	82	86	88		
8	1/4"	10.3	-	-	25.0	-	-	130.0	47.5
10	3/8"	14.0	10.0	-	25.0	34.0	-	130.0	47.5
15	1/2"	18.1	16.0	9.40	50.5	34.0	25.0	130.0	47.5
20	3/4"	23.7	20.0	15.75	50.5	34.0	25.0	150.0	54.0
25	1"	29.7	26.0	22.10	50.5	50.5	50.5	160.0	56.0
32	1¼"	38.4	32.0	-	64.0	50.5	-	180.0	62.0
40	1½"	44.3	38.0	34.80	64.0	50.5	50.5	200.0	67.0
50	2"	56.3	50.0	47.50	77.5	64.0	64.0	230.0	73.0
65	2½"	72.1	66.0	60.20	91.0	91.0	77.5	290.0	120.0
80	3"	84.3	81.0	72.90	106.0	106.0	91.0	310.0	119.0

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 C2: 1.4435, investment casting



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