

Angle Seat Globe Valve, Metal

Construction

The GEMÜ 555 pneumatically operated 2/2-way valve has a piston actuator and is designed for pure steam applications. The valve has a PTFE seat for tight shut off and the valve spindle is sealed by a stainless steel bellows.

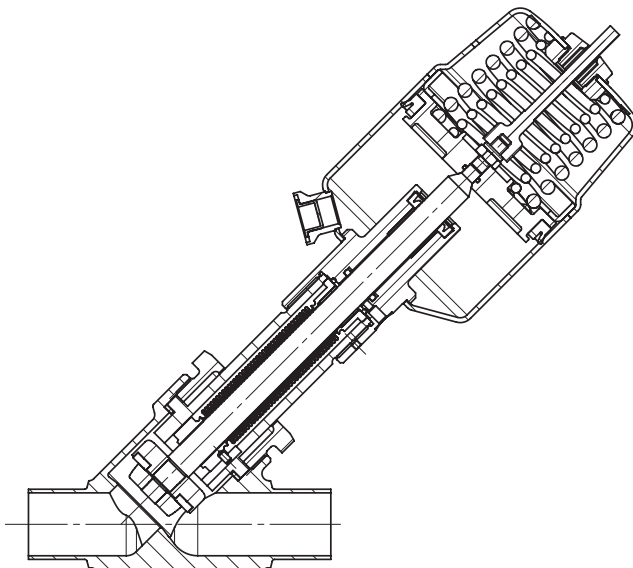
Features

- Suitable for pure steam and gaseous media
- For control functions, materials and connections see the following pages
- Internal surface of valve body down to Ra 15.75 µinch mechanically polished, optionally electropolished

Advantages

- Free from non-ferrous metals
- Stainless steel bellows seal
- Welded valve plug
- Fixed seat plug (without threads)
- Fast actuator change possible
- Optical position indicator integrated as standard
- Traceability of all wetted parts
- Suitable for contact with food according to Regulation (EC) No. 1935/2004
- Versions according to ATEX on request
- Suitable for vacuum up to 0.59 inHg (a) as standard

Sectional drawing



Technical data

Working medium

Pure steam and gaseous 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

Butt weld spigot connections 14 to 365 °F

Clamp connections 14 to 284 °F

Other versions for lower/higher temperatures on request

Control medium

Inert gases

Max. control pressure 116 psi

Max. perm. temperature of control medium: 140 °F

Filling volume	Actuator size 2:	5.13 cu in
	Actuator size 3:	14.95 cu in
	Actuator size 4:	26.67 cu in
	Actuator size 5:	48.7 cu in

Ambient conditions

Max. ambient temperature 14 to 140 °F

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

Actuator size	Nominal size	Max. operating pressure	Control pressure		Cv values
			Flow direction: under the seat	Flow direction: over the seat	
	DN	[psi]	[psi]	[psi]	[gpm]
2	8	150	58 - 116	73 - 116	2.1
	10				4.1
	15				4.7
	20				9.4
3	25	150	58 - 116	73 - 116	19.3
	32				25.7
4	40	150	58 - 116	73 - 116	32.8
5	50	150	73 - 116	73 - 116	37.4
	65				64.4
	80				77.2

Cv values determined with 1 psi pressure drop across valve, valve body connection 60.

The Cv values for other product configurations (e.g. other connections or body materials) may differ.

Order data

Body configuration	Code
2/2-way body	D

Nominal size		Code
DN 8	NPS 1/4"	8
DN 10	NPS 3/8"	10
DN 15	NPS 1/2"	15
DN 20	NPS 3/4"	20
DN 25	NPS 1"	25
DN 32	NPS 1 1/4"	32
DN 40	NPS 1 1/2"	40
DN 50	NPS 2"	50
DN 65	NPS 2 1/2"	65
DN 80	NPS 3"	80

Connection	Code
Butt weld spigots	
Spigots EN 10357 series A (formerly DIN 11850 series 2) / DIN 11866 series A	17
Spigots ASME BPE	59
Spigots ISO 1127 / EN 10357 series C / DIN 11866 series B	60
Clamp connections	
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

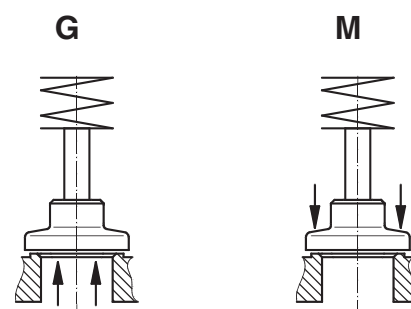
Valve body material	Code
1.4435 (316 L), block material	41
1.4435, investment casting	C2
Material equivalency 316 L	
A surface finish from the order code table "K number" must be specified for valve body.	

Seat seal	Code
PTFE	5P

Control function	Code
Normally closed	1

Actuator size		Code
Actuator 2	piston ø 2.36 in	2
Actuator 3	piston ø 3.15 in	3
Actuator 4	piston ø 3.94 in	4
Actuator 5	piston ø 5.12 in	5

Flow direction	Code
Under the seat	G
Over the seat (up to DN 50)	M



Spring set	Code
Standard	1

Order data

Version	Code
Surface finish	
Ra ≤ 0,60 µm (25 µinch) for process contact surfaces, in accordance with ASME BPE SF2 + SF3, mechanically polished internal	1903
Ra ≤ 0,80 µm (30 µinch) for process contact surfaces, in accordance with DIN 11866 H3, mechanically polished internal	1904
Ra ≤ 0,40 µm (15 µinch) for process contact surfaces, in accordance with DIN 11866 H4, ASME BPE SF1, mechanically polished internal	1909
Ra ≤ 0,60 µm for process contact surfaces, in accordance with ASME BPE SF6, electropolished internal/external	1953
Ra ≤ 0,80 µm for process contact surfaces, in accordance with DIN 11866 HE3, electropolished internal/external	1954
Ra ≤ 0,40 µm for process contact surfaces, in accordance with DIN 11866 HE4/ASME BPE SF5, electropolished internal/external	1959

Special version	Code
Stainless steel bellows seal	F

Order example	555	15	D	17	C2	5P	1	2	G	1	1903	F
Type	555											
Nominal size		15										
Body configuration (code)			D									
Connection (code)				17								
Valve body material (code)					C2							
Seat seal (code)						5P						
Control function (code)							1					
Actuator size (code)								2				
Flow direction (code)									G			
Spring set (code)										1		
Version (code)											1903	
Special version (code)												F

Version for food contact

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

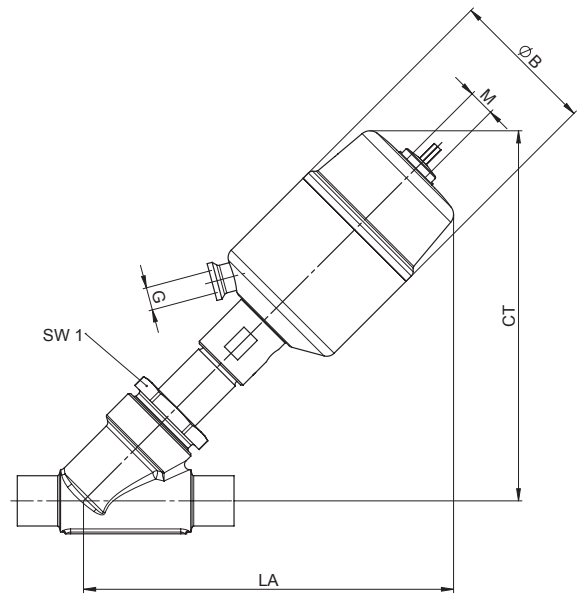
Seat seal code 5P

Valve body material code 41, C2

Dimensions

Actuator dimensions / Installation dimensions

Actuator size	DN	SW1 [mm]	CT/LA [in]	ø B [in]	M	G
2	8	36	7.20	2.48	M16x1	G 1/8
	10	36	7.20	2.48	M16x1	G 1/8
	15	36	7.20	2.48	M16x1	G 1/8
	20	41	7.24	2.48	M16x1	G 1/8
3	25	46	8.58	3.31	M16x1	G 1/4
	32	55	8.66	3.31	M16x1	G 1/4
4	40	60	11.02	4.09	M22x1.5	G 1/4
5	50	55	12.20	5.31	M22x1.5	G 1/4
	65	75	12.20	5.31	M22x1.5	G 1/4
	80	75	12.40	5.31	M22x1.5	G 1/4



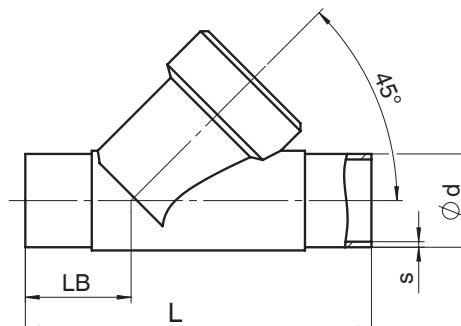
Body dimensions [inch]

Butt weld spigots, connection code 17, 59, 60 Valve body material: 1.4435 (code 41, C2)

			Connection code					
			17		60		59	
DN	L	LB	ø d	s	ø d	s	ø d	s
8	4.13*	1.40*	0.394	0.039	0.531	0.063	-	-
10	4.13	1.40	0.512	0.059	0.677	0.063	-	-
15	4.13	1.40	0.748	0.059	0.839	0.063	0.500	0.065
20	4.72	1.54	0.906	0.059	1.059	0.063	0.750	0.065
25	4.92	1.56	1.142	0.059	1.327	0.079	1.000	0.065
32	6.10	1.89	1.378	0.059	1.669	0.079	-	-
40	6.30	1.85	1.614	0.059	1.902	0.079	1.500	0.065
50	7.09	1.89	2.087	0.059	2.374	0.079	2.000	0.065
65	11.42	3.78	2.756	0.079	2.996	0.079	2.500	0.065
80	12.20	3.74	3.346	0.079	3.500	0.091	3.000	0.065

* Connection code 1A: L = 3.94, LB = 1.32

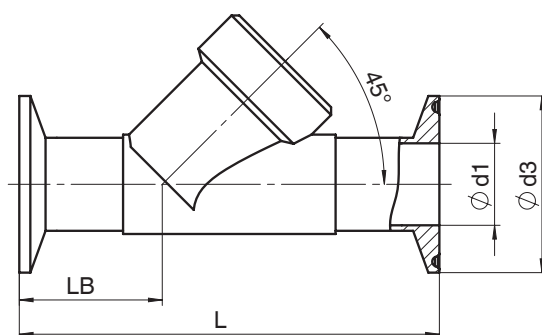
For materials see overview on page 5



Dimensions [inch]

Clamp connections, connection code 82, 86, 88 Valve body material: 1.4435 (code C2)

DN	NPS	Connection code							
		LB	L	82		86		88	
				ø d1	ø d3	ø d1	ø d3	ø d1	ø d3
8	1/4"	1.87	5.12	0.406	0.984	-	-	-	-
10	3/8"	1.87	5.12	0.551	0.984	-	-	-	-
15	1/2"	1.87	5.12	0.713	1.988	0.630	1.339	0.370	0.984
20	3/4"	2.13	5.91	0.933	1.988	0.787	1.339	0.620	0.984
25	1"	2.20	6.30	1.169	1.988	1.024	1.988	0.870	1.988
32	1 1/4"	2.44	7.09	1.512	2.520	1.260	1.988	-	-
40	1 1/2"	2.64	7.87	1.744	2.520	1.496	1.988	1.370	1.988
50	2"	2.87	9.06	2.217	3.051	1.969	2.520	1.870	2.520
65	2 1/2"	4.72	11.42	2.839	3.583	2.598	3.583	2.370	3.051
80	3"	4.69	12.2	3.319	4.173	3.189	4.173	2.870	3.583



Overview of metal bodies for GEMÜ 505

Connection code	Spigots					Clamps		
	17		59		60	82	86	88
	C2	41	C2	41	C2	C2	C2	C2
DN 8	-	X	-	X	X	X	-	-
DN 10	X	-	-	X	X	X	-	-
DN 15	X	-	X	-	X	X	X	X
DN 20	X	-	X	-	X	X	X	X
DN 25	X	-	X	-	X	X	X	X
DN 32	X	-	-	-	X	X	X	-
DN 40	X	-	X	-	X	X	X	X
DN 50	X	-	X	-	X	X	X	X
DN 65	X	-	X	-	X	X	X	X
DN 80	X	-	X	-	X	X	X	X

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