

Angle Seat Globe Valve, Metal

Construction

The GEMÜ 514 pneumatically operated 2/2 way angle seat globe valve has a low maintenance aluminium piston actuator. 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 the seal against contamination and damage.

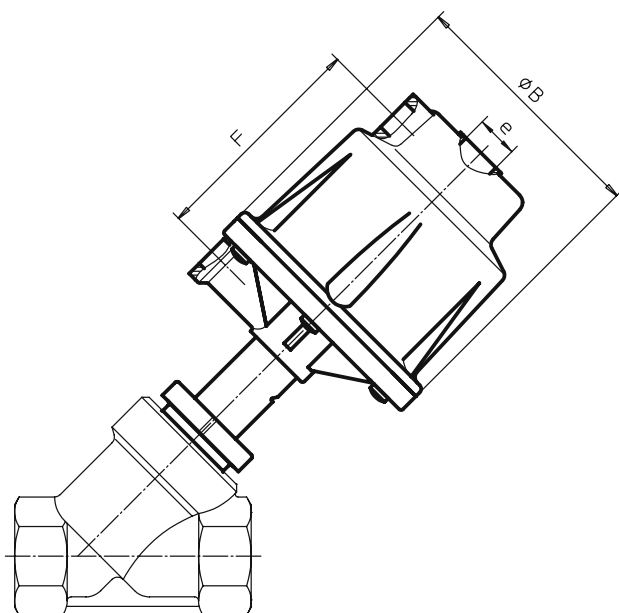
Features

- Substantially reduced installation dimensions when using the body with male threads which can be removed using union nuts
- Suitable for high working temperatures and pressures
- Control medium connection can be rotated through 360°

Advantages

- Various valve body connections: threaded sockets, threaded spigots, butt weld spigots
- Good flow capability due to angle seat design
- Extensive range of accessories
- Special versions for temperatures up to 280°C
- Versions with bellows available
- Special connections and materials upon request

Actuator dimensions [mm]			
Actuators	ø B	e	F
0 + 3	71	M 16x1	-
1 + 4	96	M 16x1	85.5
2	164	M 22x1.5	123.0
5	140	M 22x1.5	117.0



Installation dimensions see page 4.



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

Max. perm. temp. of working medium 180° C (standard)

Other versions for higher temperatures upon request

Control medium

Inert gases

Max. control pressure: Actuators 0, 1, 3, 4: 10 bar
Actuators 2 and 5: 8 bar

Max. perm. temperature of control medium: 80° C

Filling volume Actuators 0 and 3: 0.05 NI
Actuators 1 and 4: 0.125 NI
Actuator 5: 0.248 NI
Actuator 2: 0.625 NI

Flow direction and weight

See page 4

Ambient conditions

Max. ambient temperature 60° C

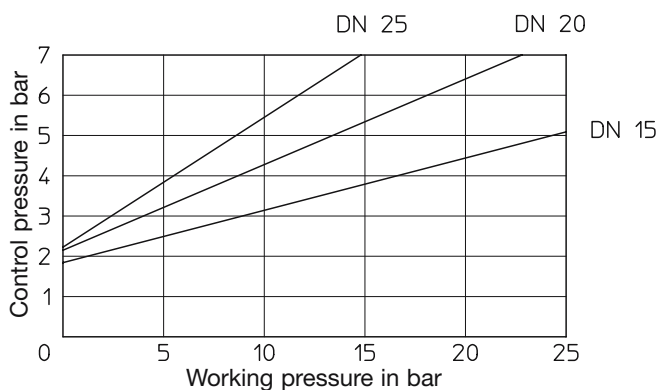
Nominal size [mm]	Max. working pressure [bar] control function 1*						Min. control pressure control function 1						K _v value [m³/h]
	Act. 0 piston ø 50 mm	Act. 3 piston ø 50 mm	Act. 1 piston ø 70 mm	Act. 4 piston ø 70 mm	Act. 5 piston ø 100 mm	Act. 2 piston ø 120 mm	Actuator 0	Actuator 3	Actuator 1	Actuator 4	Actuator 5	Actuator 2	
15	12.0	10	25.0	10	-	-	4.7 - 10	min. control pressure see diagram max. control pressure 10 bar	5.5 - 10	min. control pressure see diagram max. control pressure 10 bar	-	-	5.4
20	6.0	10	20.0	10	-	25	4.7 - 10		5.5 - 10		-	4.5 - 8	10.0
25	2.5	10	10.0	10	-	25	4.7 - 10		5.5 - 10		-	4.5 - 8	15.2
32	-	-	7.0	10	12	16	-		5.5 - 10		4.0 - 8	4.5 - 8	23.0
40	-	-	4.5	10	9	12	-		5.5 - 10		4.0 - 8	4.5 - 8	41.0
50	-	-	3.0	10	7	10	-		5.5 - 10		4.2 - 8	5.5 - 8	71.0
65	-	-	-	-	-	7	-		-		-	5.5 - 8	108.0
80	-	-	-	-	-	5	-		-		-	5.5 - 8	160.0

* It should be noted that cast bronze valve bodies, when in pipe systems according to DIN, are only suitable up to PN 16 max., stainless steel bodies up to PN 25. All pressures are given as gauge pressures.
Min. control pressure for actuators 3 and 4 depends on working pressure.

Working pressure/Control pressure characteristics

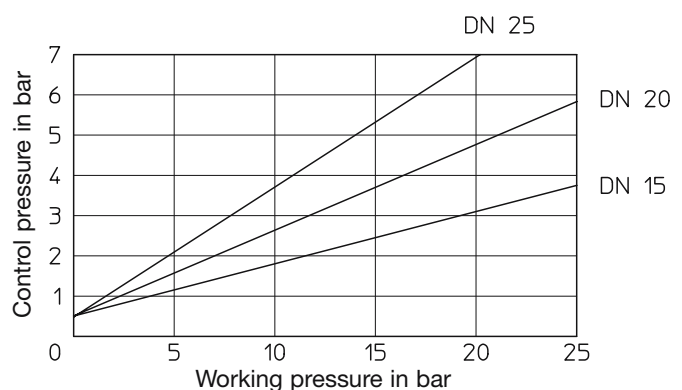
Actuator 0 / Control function 2

Min. control pressure depending on working pressure



Actuator 0 / Control function 3

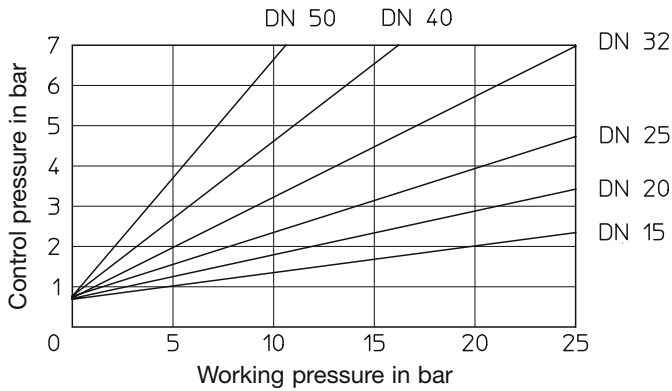
Min. control pressure depending on working pressure



Working pressure/Control pressure characteristics

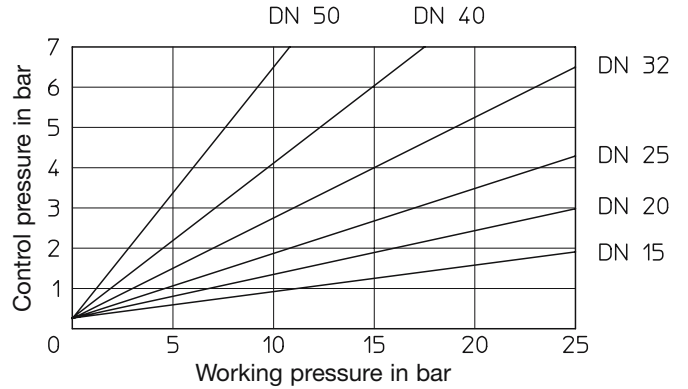
Actuator 1 / Control function 2

Min. control pressure depending on working pressure



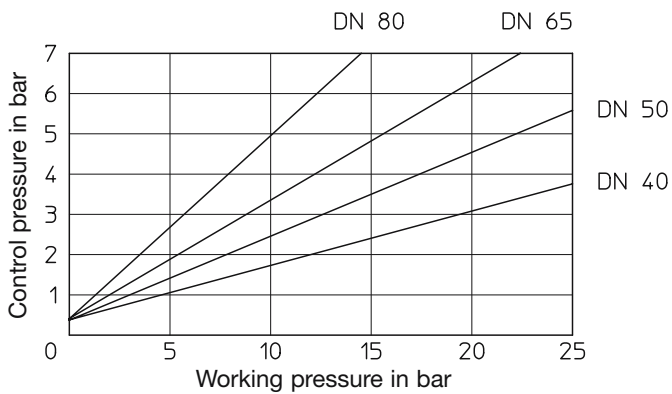
Actuator 1 / Control function 3

Min. control pressure depending on working pressure



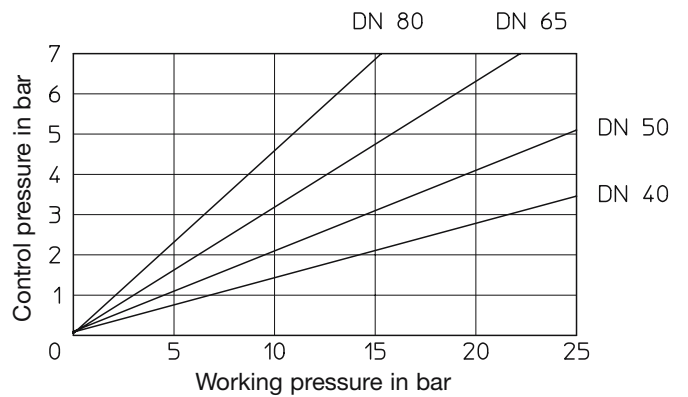
Actuator 2 / Control function 2

Min. control pressure depending on working pressure



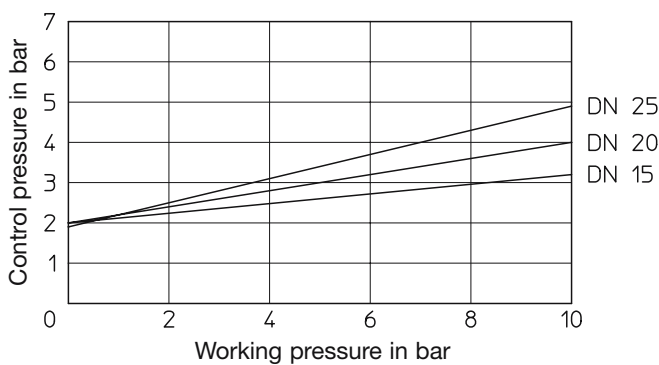
Actuator 2 / Control function 3

Min. control pressure depending on working pressure



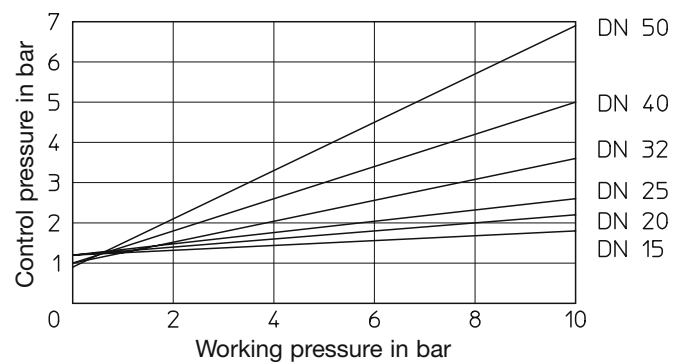
Actuator 3 / Control function 1

Min. control pressure depending on working pressure



Actuator 4 / Control function 1

Min. control pressure depending on working pressure



Order data

Body configuration	Code
2/2 way body	D

Seat seal	Code
PTFE	5

Connections	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 SMS 3008	37
Spigots ASME BPE	59
Spigots EN ISO 1127	60

Control function	Code
Normally closed	1
Normally open	2*
Double acting	3*

* not with piston ø 50 mm

Threaded connections	Code
Threaded sockets DIN ISO 228	1
Threaded spigots DIN ISO 228	9
Threaded sockets NPT	31

Actuator size	Flow	Code
Actuator 0 piston ø 50 mm	Flow under the plug	0*
Actuator 1 piston ø 70 mm	Flow under the plug	1*
Actuator 2 piston ø 120 mm	Flow under the plug	2*
Actuator 5 piston ø 100 mm	Flow under the plug	5*
Actuator 3 piston ø 50 mm	Flow over the plug	3
Actuator 4 piston ø 70 mm	Flow over the plug	4

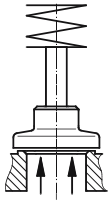
Valve body material	Code
Rg 5 Cast bronze	9
1.4435 (316 L) Investment casting	34
1.4408 Investment casting	37

* Preferred flow direction with incompressible liquid media to avoid "water hammer"

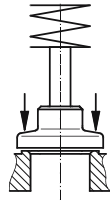
Order example	514	25	D	1	9	5	1	1
Type	514							
Nominal size		25						
Body configuration (code)			D					
Connection (code)				1				
Valve body material (code)					9			
Seat seal (code)						5		
Control function (code)							1	
Actuator size (code)								1

Flow direction

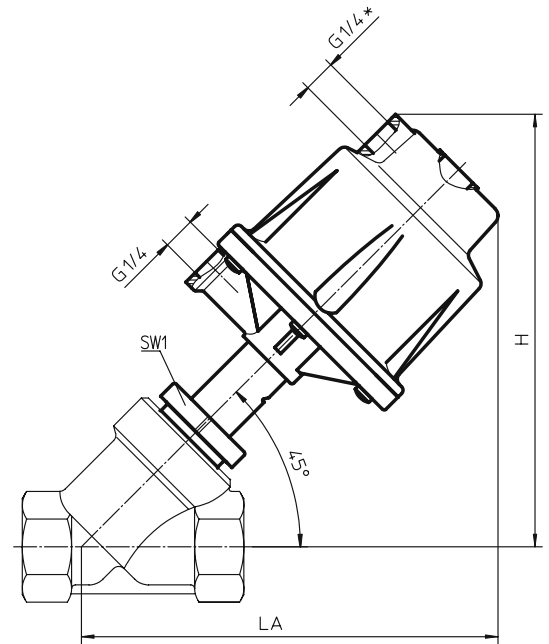
GEMÜ 514
Actuators
0, 1, 2, 5



GEMÜ 514
Actuators
3, 4



Installation dimensions (mm)



* Connection only for actuators 1, 2 and 5, c.f. 2 and 3

Actuator size	Wrench size SW1		Installation dimensions H/LA [mm]							
			0 und 3		1 und 4		2		5	
Material code	9	34, 37	9	34, 37	9	34, 37	9	34, 37	9	34, 37
DN										
15	36	36	151	149	162	160	-	-	-	-
20	41	41	161	154	172	165	239	232	-	-
25	46	46	161	159	172	170	239	237	-	-
32	55	55	-	-	180	177	247	244	237	234
40	60	60	-	-	186	184	253	251	243	241
50	75	75	-	-	194	194	261	261	251	251
65	100	60	-	-	-	-	273	273	-	-
80	110	60	-	-	-	-	290	290	-	-

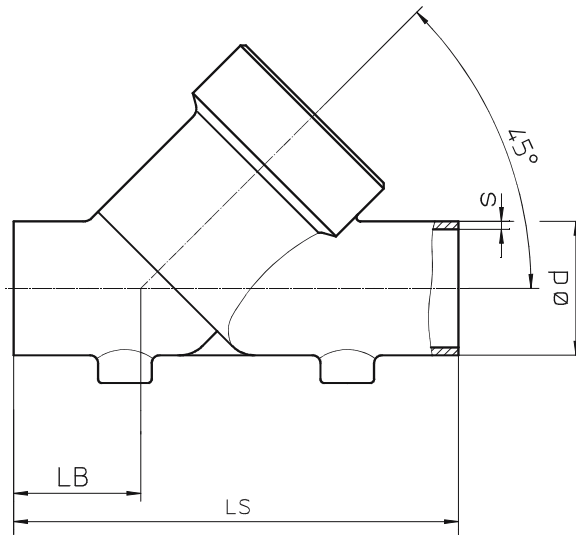
Nominal size [mm]	Weight [kg]			
	Actuators 0 + 3	Actuators 1 + 4	Actuators 5	Actuators 2
15	0.9	1.4	-	-
20	1.1	1.6	-	-
25	1.3	1.8	-	-
32	-	2.4	3.7	4.6
40	-	2.7	4.6	5.5
50	-	3.4	5.5	6.4
65	-	-	-	8.5
80	-	-	-	9.6

Body dimensions

Butt weld spigots [mm]																		
Valve body material: 1.4435 (Code 34), 1.4408 (Code 37)																		
Connection code			0*		16		17		18		37		60		59			
DN	LS	LB	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s	ø d	s	LS	LB
15	100	33	18	1.5	18	1.0	19	1.5	20	2.0	-	-	21.3	1.6	12.70	1.65	105	29.5
20	108	33	22	1.5	22	1.0	23	1.5	24	2.0	-	-	26.9	1.6	19.05	1.65	120	35.0
25	112	32	28	1.5	28	1.0	29	1.5	30	2.0	25.0	1.2	33.7	2.0	25.40	1.65	125	34.5
32	137	39	-	-	34	1.0	35	1.5	36	2.0	-	-	42.4	2.0	-	-	-	-
40	146	40	40	1.5	40	1.0	41	1.5	42	2.0	38.0	1.2	48.3	2.0	38.10	1.65	160	47.0
50	160	38	52	1.5	52	1.0	53	1.5	54	2.0	51.0	1.2	60.3	2.0	50.80	1.65	180	48.0
65	292	97	-	-	-	-	70	2.0	-	-	63.5	1.6	76.1	2.0	63.50	1.65	292	97.0
80	310	95	-	-	-	-	85	2.0	-	-	76.1	1.6	88.9	2.3	76,20	1.65	310	95.0

* Connection code 0 only possible with material code 34

For materials see overview on last page.



Threaded sockets DIN, connection code 1 [mm]
 Valve body material: Cast bronze (Code 9), 1.4408 (Code 37)

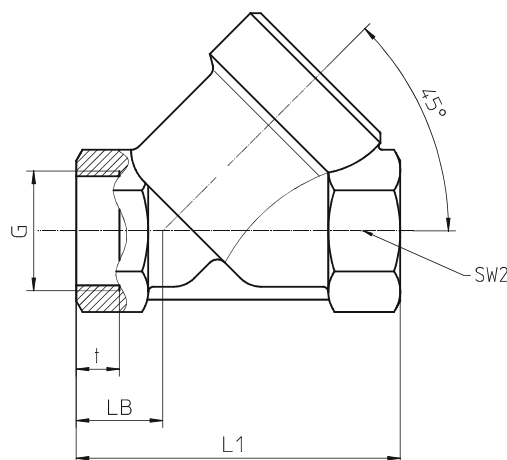
Material code				9			37		
DN	L1	LB	G	t	SW2		t	SW2	
15	65	17	G 1/2	15.0	27	hexagonal	9	25	hexagonal
20	75	18	G 3/4	16.3	32	hexagonal	11	31	hexagonal
25	90	24	G 1	19.0	41	hexagonal	12	39	hexagonal
32	110	33	G 1 1/4	21.4	50	octagonal	14	48	octagonal
40	120	30	G 1 1/2	21.4	55	octagonal	14	55	octagonal
50	150	40	G 2	25.7	70	octagonal	15	66	octagonal
65	190	46	G 2 1/2	24.0	85	octagonal	22	85	octagonal
80	220	50	G 3	27.0	100	octagonal	25	100	octagonal

For materials see overview on last page.

Threaded sockets NPT, connection code 31 [mm]
 Valve body material: Cast bronze (Code 9)

DN	G	L1	LB	t	SW2	
15	1/2" NPT	81	24.5	13.6	27	hexagonal
20	3/4" NPT	87	24.0	14.0	32	hexagonal
25	1" NPT	104	31.0	16.8	41	hexagonal
32	1 1/4" NPT	122	39.0	17.3	50	octagonal
40	1 1/2" NPT	136	38.0	17.3	55	octagonal
50	2" NPT	165	47.5	17.7	70	octagonal
65	2 1/2" NPT	212	57.0	23.7	85	octagonal
80	3" NPT	242	61.0	25.9	100	octagonal

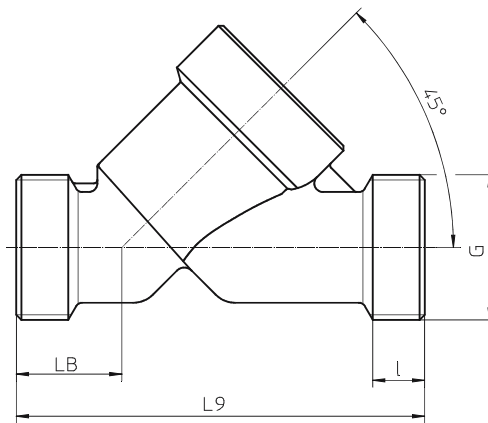
For materials see overview on last page.



Threaded spigots, connection code 9 [mm]
 Body material - cast bronze (code 9), investment casting (code 37)

DN	L9	LB	I	G
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

For materials see overview below.



Overview of metal angle seat bodies for GEMÜ 514

Material code Connection code	RG 5 (code 9)			1.4435 (code 34)							1.4408 (code 37)					
	1	9	31	0	16	17	18	37	59	60	1	9	17	37	59	60
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
DN 50	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

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