

Globe Valve, Metal

Construction

The GEMÜ 532 pneumatically operated 2/2-way valve has a robust 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 it against contamination and damage.

Features

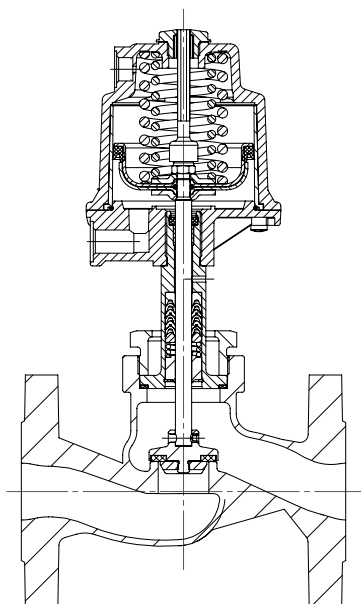
- Suitable for inert and corrosive* liquid and gaseous media
- Standard floating plug on spindle ensures excellent seat sealing
- Valve bodies available in SG iron and stainless steel
- Flanged versions
- Customized control valve versions available

Advantages

- Robust aluminium actuator
- Good flow capability and compact design
- Accessories:
 - Electrical position indicators
 - Combi switchboxes
 - Electro-pneumatic positioners/process controllers (see data sheet GEMÜ 532 control valve)
 - Stroke limiter
- Standard gland packing suitable for vacuum up to 0.59 inHg (abs.)

*see information on working medium on page 2

Sectional drawing



Technical data

Working medium

Corrosive, inert, gaseous and liquid media and steam 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 14° to 356 °F

Max. permissible viscosity 600 mm²/s (cSt)

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

Control medium

Inert gases

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

Filling volume:

Actuator size 0 and 3: 3.05 cu in

Actuator size 1 and 4: 7.63 cu in

Actuator size 2: 38.14 cu in

Ambient conditions

Max. ambient temperature 140 °F

Maximum permissible seat leakage rate

Seat seal	Standard	Test procedure	Leakage rate	Test medium
PTFE	DIN EN 12266-1	P12	A	air
Metal	DIN EN 12266-1	P12	F	air

Nominal size	Max. operating pressure [psi] C. f. 1 Normally closed (NC)					Control pressure [psi] C. f. 1 Normally closed (NC)					Cv values [gpm]
	Actuator size 0 piston ø 1.97 in	Actuator size 3 piston ø 1.97 in	Actuator size 1 piston ø 2.76 in	Actuator size 4 piston ø 2.76 in	Actuator size 2 piston ø 4.72 in	Actuator size 0	Actuator size 3	Actuator size 1	Actuator size 4	Actuator size 2	
15	174	150	580	150	-	68 - 145	min. control pressure see diagram max. control pressure 102 psi	80 - 145	min. control pressure see diagram max. control pressure 116 psi	-	5.4
20	90	150	290	150	580	68 - 145		80 - 145		58 - 116	9.4
25	36	150	150	150	580	68 - 145		80 - 145		58 - 116	15.2
32	-	-	105	150	319*	-		80 - 145		58 - 116	25.7
40	-	-	65	150	218*	-		80 - 145		58 - 116	40.9
50	-	-	45	150	150	-		80 - 145		80 - 116	58.5
65	-	-	-	-	105	-		-		80 - 116	105.3
80	-	-	-	-	75	-		-		80 - 116	148.6
100	-	-	-	-	36	-		-		80 - 116	234

Operating pressure for seal material PTFE (code 5), for seal material steel (code 10) only 60% of the values indicated above.

* Higher operating pressures on request.

Cv values determined in accordance with DIN EN 60534. The Cv value specifications refer to control function 1 (NC) and the largest actuator for the respective nominal size. The Cv values for other product configurations (e.g. other connection types or body materials) may differ.

Nominal size	Max. operating pressure [psi] C. f. 2 Normally open (NO) / C. f. 3 Double acting (DA)		Control pressure [psi] C. f. 2 Normally open (NO) / C. f. 3 Double acting (DA)	
	Actuator size 1 piston ø 2.76 inch	Actuator size 2 piston ø 4.72 inch	Actuator size 1	Actuator size 2
15	580	-	max. 73 psi	max. 102 psi for values see diagram
20	580	580	max. 102 psi for values see diagram	
25	464	580		
32	290	580		
40	174	580		
50	120	435		
65	-	232		
80	-	174		
100	-	120		

For max. operating pressures the pressure/temperature correlation must be observed (see table on page 3).
All pressures are gauge pressures.

Pressure / temperature correlation for globe valve bodies

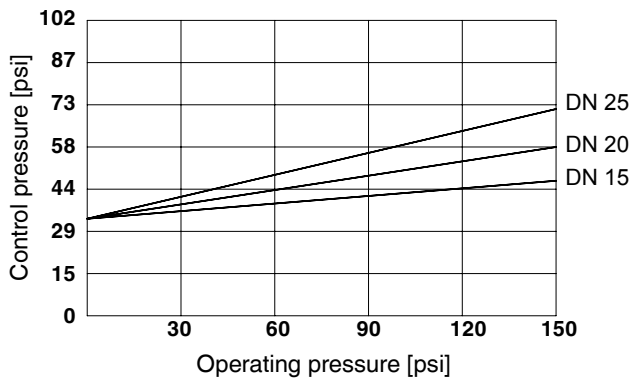
Connection code	Material code	Max. allowable operating pressures in psi at temperature °F*					
		RT	212	302	392	482	572
8	37	232	232	210	194	184	171
10	37	363	363	329	305	287	268
11	37	580	580	526	489	461	431
39	37	276	232	215	197	174	148
8	90	232	232	225	213	202	162
39	90	247	232	215	202	175	148

* The valves can be used down to 14 °F RT = Room Temperature All pressures are gauge pressures.
 Pressure-temperature correlation for connection code 48: DN 15 - 40 see connection code 10, DN 50 see connection code 8.

Operating pressure / Control pressure characteristics Control function 1: normally closed (NC) / Flow direction: over the seat

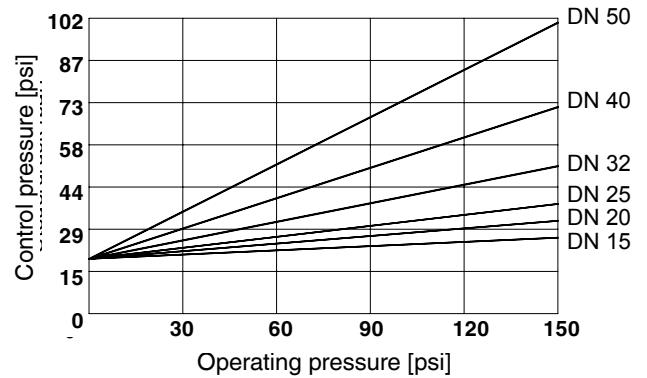
Actuator size 3

min. control pressure dependent on operating pressure



Actuator size 4

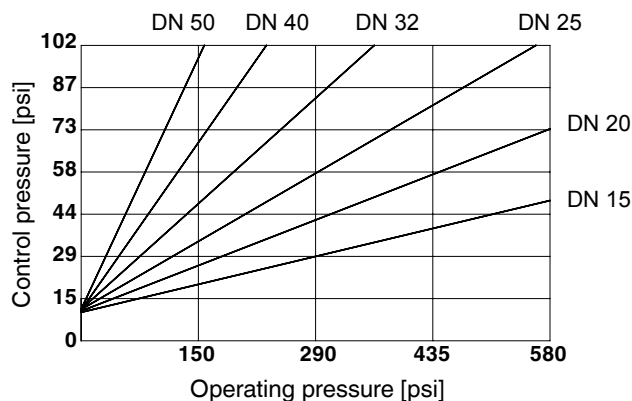
min. control pressure dependent on operating pressure



Operating pressure / Control pressure characteristics Control function 2: normally open (NO) / Control function 3: double acting (DA) Flow direction: under the seat

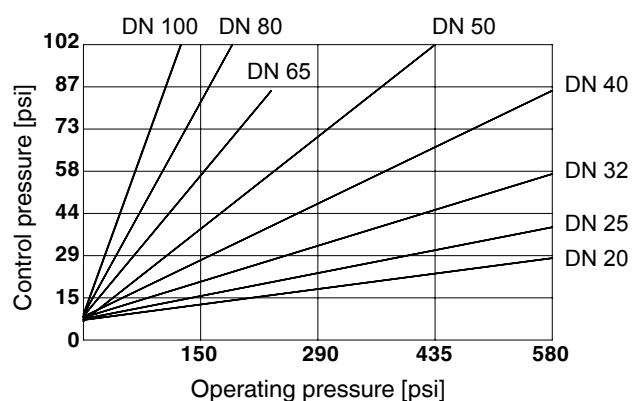
Actuator size 1

min. control pressure dependent on operating pressure



Actuator size 2

min. control pressure dependent on operating pressure



Order data

Body configuration	Code
2/2-way body	D

Nominal size		Code
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
DN 100	NPS 4"	100

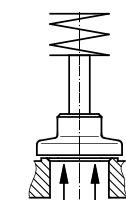
Connection	Code
Flanges Flanges EN 1092 / PN16 / form B, length EN 558, series 1, ISO 5752, basic series 1	8
Flanges EN 1092 / PN25 / form B, length EN 558, series 1, ISO 5752, basic series 1	10
Flanges EN 1092 / PN40 / form B, length EN 558, series 1, ISO 5752, basic series 1	11
Flange ANSI Class 150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1	39
Flanges drilled according to JIS 20K (DN 15 - 40), Flanges drilled according to JIS 10K (DN 50), length EN 558, series 10, ASME/ANSI B 16.10 table 1, column 16	48

Valve body material	Code
1.4408, Investment casting	37
EN-GJS-400-18-LT (GGG 40.3) SG iron	90

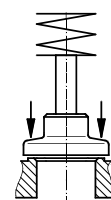
Seat seal	Code
PTFE	5
PTFE, glass fibre reinforced	5G
Steel	10
Other seat seals on request	

Control function		Code
Normally closed	(NC)	1
Normally open	(NO)	2*
Double acting	(DA)	3*
*not with piston ø 1.97 in		

Actuator size	Flow	Code
Actuator 0 piston ø 1.97 in	Flow under the seat	0*
Actuator 1 piston ø 2.76 in	Flow under the seat	1*
Actuator 2 piston ø 4.72 in	Flow under the seat	2*
Actuator 3 piston ø 1.97 in	Flow over the seat	3**
Actuator 4 piston ø 2.76 in	Flow over the seat	4**
* Preferred flow direction with incompressible liquid media to avoid "water hammer"		
** only control function NC		



Flow
under the seat



Flow
over the seat

GEMÜ 532
Actuator 3, 4

Order data

Version	Code
Gland packing PTFE / PTFE suitable for contact with food according to EU Regulation 1935/2004	2013
Media temperature 14 to 410 °F (only with seat seal Code 5G and 10)	2023

Special version	Code
Rigid plug fixing, special version for oxygen	B
Rigid plug fixing	C
Special version for oxygen (max. temperature 140 °F, max. operating pressure 150 psi), Flow direction: under the seat	S

Order example	532	25	D	8	90	5	1	1	-	B
Type	532									
Nominal size		25								
Body configuration (code)			D							
Connection (code)				8						
Valve body material (code)					90					
Seat seal (code)						5				
Control function (code)							1			
Actuator size (code)								1		
Version (code)									-	
Special version (code)										B

Version for food contact

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

Version code 2013

Seat seal code 5, 5G, 10

Valve body material code 37

Dimensions [inch]

Actuator dimensions

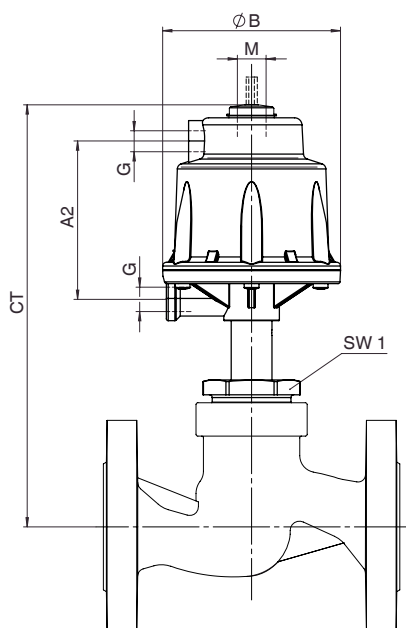
Actuator size	øB	M	A2	G
0 + 3	2.80	M16x1	-	G 1/4
1 + 4	3.78	M16x1	3.37	G 1/4
2	6.46	M22x1.5	4.84	G 1/4

Installation dimensions / weight of valve, connection code 8, 10, 39, 48

		Actuator size 0 + 3		Actuator size 1 + 4		Actuator size 2	
DN	SW1 metric [mm]	CT [in]	Weight [lbs]	CT [in]	Weight [lbs]	CT [in]	Weight [lbs]
15	36	7.76	7.2	8.15	9.0	-	-
20	41	8.03	9.4	8.43	11.2	11.46	-
25	46	8.46	11.3	8.86	13.2	11.89	-
32	55	-	-	9.06	18.1	12.09	-
40	60	-	-	9.49	20.9	12.52	-
50	75	-	-	9.80	27.1	12.83	-
65	75	-	-	-	-	13.74	-
80	75	-	-	-	-	14.53	-
100	75	-	-	-	-	15.35	-

Installation dimensions / weight of valve, connection code 11

		Actuator size 0 + 3		Actuator size 1 + 4		Actuator size 2	
DN	SW1 metric [mm]	CT [in]	Weight [lbs]	CT [in]	Weight [lbs]	CT [in]	Weight [lbs]
15	36	7.76	7.2	8.15	9.0	-	-
20	41	8.03	9.4	8.43	11.2	11.46	-
25	46	8.46	11.3	8.86	13.2	11.89	-
32	55	-	-	9.06	18.1	12.09	-
40	60	-	-	9.49	20.9	12.52	-
50	75	-	-	10.28	27.1	13.31	-

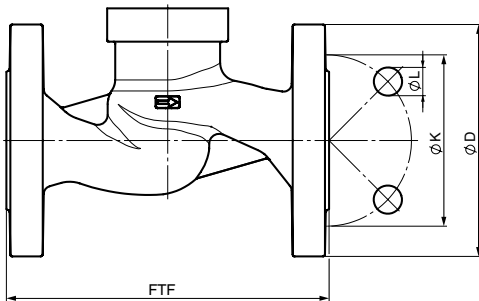


Dimensions [inch]

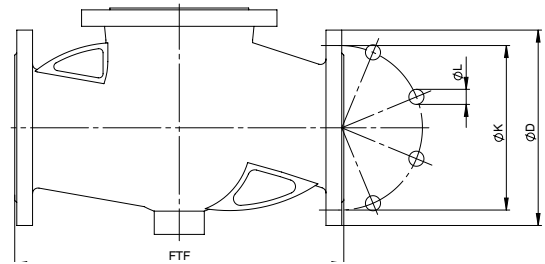
Flanges, connection code 8 Valve body material 1.4408 (code 37), EN-GJS-400-18-LT (code 90)

DN	Material code 37					Material code 90					Weight [lbs]
	Number of bolts	FTF	ø D	ø K	ø L	Number of bolts	FTF	ø D	ø K	ø L	
15	-	-	-	-	-	4	5.12	3.74	2.56	0.55	4.8
20	-	-	-	-	-	4	5.91	4.13	2.95	0.55	6.6
25	-	-	-	-	-	4	6.30	4.53	3.35	0.55	8.2
32	-	-	-	-	-	4	7.09	5.51	3.94	0.71	11.7
40	-	-	-	-	-	4	7.87	5.91	4.33	0.71	13.9
50	4	9.06	6.50	4.92	0.71	4	9.06	6.50	4.92	0.71	18.5
65	4	11.42	7.28	5.71	0.71	4	11.42	7.28	5.71	0.71	28.0
80	8	12.20	7.87	6.30	0.71	8	12.20	7.87	6.30	0.71	33.9
100	8	13.78	8.66	7.09	0.71	8	13.78	8.66	7.09	0.71	50.7

For materials see overview on page 8



DN 15 - 50

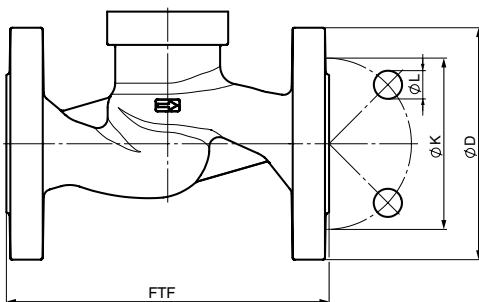


65 - 100

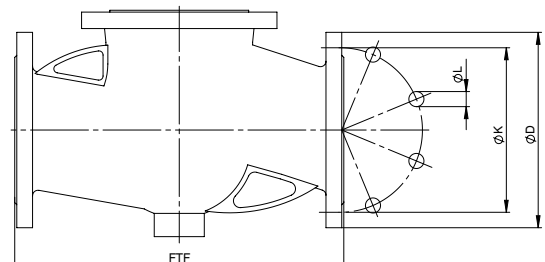
Flanges, connection code 10, 11, 48 Ventilkörperwerkstoff 1.4408 (code 37)

DN	Number of bolts	Connection code 10				Connection code 11				Connection code 48				Weight [lbs]
		FTF	ø D	ø K	ø L	FTF	ø D	ø K	ø L	FTF	ø D	ø K	ø L	
15	4	-	-	-	-	5.12	3.74	2.56	0.55	4.25	3.74	2.76	0.59	4.8
20	4	-	-	-	-	5.91	4.13	2.95	0.55	4.61	3.94	2.95	0.59	6.6
25	4	-	-	-	-	6.30	4.53	3.35	0.55	5.00	4.92	3.54	0.75	8.2
32	4	7.09	5.51	3.94	0.71	7.09	5.51	3.94	0.71	-	-	-	-	11.7
40	4	7.87	5.91	4.33	0.71	7.87	5.91	4.33	0.71	6.50	5.51	4.13	0.75	13.9
50	4	-	-	-	-	9.06	6.50	4.92	0.71	7.99	6.10	4.72	0.75	18.5

For materials see overview on page 8



DN 15 - 50 code 48
DN 15 - 40 code 11



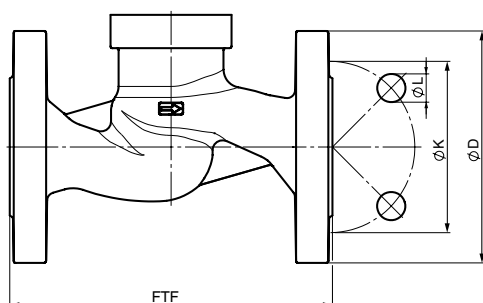
DN 50 code 11

Dimensions [inch]

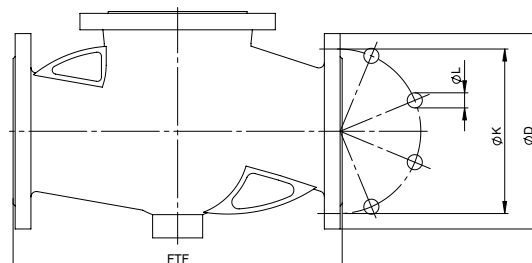
Flanges, connection code 39 Valve body material 1.4408 (code 37), EN-GJS-400-18-LT (code 90)

DN	Number of bolts	FTF	ø D	ø K	ø L	Weight [lbs]
15	4	5.12	3.54	2.37	0.63	4.8
20	4	5.91	3.94	2.75	0.63	6.6
25	4	6.30	4.33	3.13	0.63	8.2
32	4	7.09	4.53	3.50	0.63	11.7
40	4	7.87	4.92	3.87	0.63	13.9
50	4	9.06	5.91	4.75	0.75	18.5
65	4	11.42	7.09	5.50	0.75	28.0
80	4	12.20	7.48	6.00	0.75	33.9
100	8	13.78	9.06	7.50	0.75	50.7

For materials see overview on page 8



DN 15 - 50



65 - 100

Overview of metal bodies for GEMÜ 532

Connection code	8		10	11	39		48
Material code	37	90	37	37	37	90	37
DN 15	-	X	-	X	X	X	X
DN 20	-	X	-	X	X	X	X
DN 25	-	X	-	X	X	X	X
DN 32	-	X	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	-
DN 80	X	X	-	-	X	X	-
DN 100	X	X	-	-	X	X	-

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