GEMÜ®

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

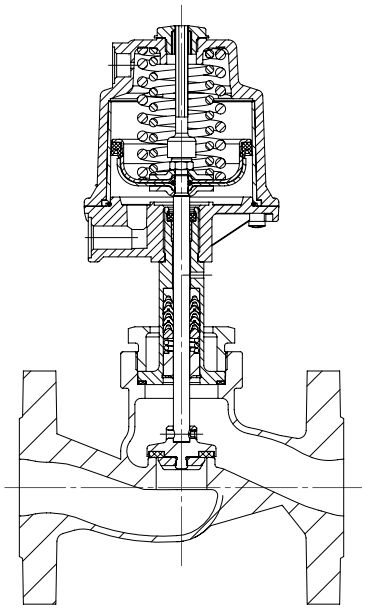
- Suitable for inert and corrosive* liquid and gaseous media
- Valve bodies available in SG iron and stainless steel
- Flanged versions
- Customized control valve versions available

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 20 mbar (abs.)

*see information on working medium on page 2

Sectional drawing



GEMÜ® 532

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	-10° to 180 °C
Max. permissible viscosity	600 mm^2/s (cSt)

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

Control medium

Inert gases

Max. perm. temperature of control medium:	60 °C

Filling volume:

Actuator size 0 and 3:	0.05 dm^3
Actuator size 1 and 4:	0.125 dm^3
Actuator size 2:	0.625 dm^3

Ambient conditions

Max. ambient temperature	60 °C

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 [bar] C. f. 1 Normally closed (NC)					Control pressure [bar] C. f. 1 Normally closed (NC)					Kv values
	Actuator size 0 piston ø 50 mm	Actuator size 3 piston ø 50 mm	Actuator size 1 piston ø 70 mm	Actuator size 4 piston ø 70 mm	Actuator size 2 piston ø 120 mm	Actuator size 0	Actuator size 3	Actuator size 1	Actuator size 4	Actuator size 2	$[m^3/h]$
15	12.0	10.0	40.0	10.0	-	4.7 - 10	min. control pressure see diagram max. control pressure 7 bar	5.5 - 10	min. control pressure see diagram max. control pressure 8 bar	-	4.6
20	6.0	10.0	20.0	10.0	40.0	4.7 - 10		5.5 - 10		4.0 - 8	8.0
25	2.5	10.0	10.0	10.0	40.0	4.7 - 10		5.5 - 10		4.0 - 8	13.0
32	-	-	7.0	10.0	22.0*	-		5.5 - 10		4.0 - 8	22.0
40	-	-	4.5	10.0	12.0*	-		5.5 - 10		4.0 - 8	35.0
50	-	-	3.0	10.0	10.0	-		5.5 - 10		5.5 - 8	50.0
65	-	-	-	-	7.0	-		-		5.5 - 8	90.0
80	-	-	-	-	5.0	-		-		5.5 - 8	127.0
100	-	-	-	-	2.5	-		-		5.5 - 8	200.0

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.

Kv values determined acc. to DIN EN 60534, flanges EN 1092. The Kv value data refers to control function 1 (NC) and the largest actuator for each nominal size. The Kv values for other product configurations (e.g. other connections or body materials) may differ.

Nominal size	Max. operating pressure [bar] C. f. 2 Normally open (NO) / C. f. 3 Double acting (DA)		Control pressure [bar] C. f. 2 Normally open (NO) / C. f. 3 Double acting (DA)	
	Actuator size 1 piston ø 70 mm	Actuator size 2 piston ø 120 mm	Actuator size 1	Actuator size 2
15	40.0	-	max. 5 bar	max. 7 bar for values see diagram
20	40.0	40.0	max. 7 bar for values see diagram	
25	32.0	40.0		
32	20.0	40.0		
40	12.0	40.0		
50	8.0	30.0		
65	-	16.0		
80	-	10.0		
100	-	6.0		

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

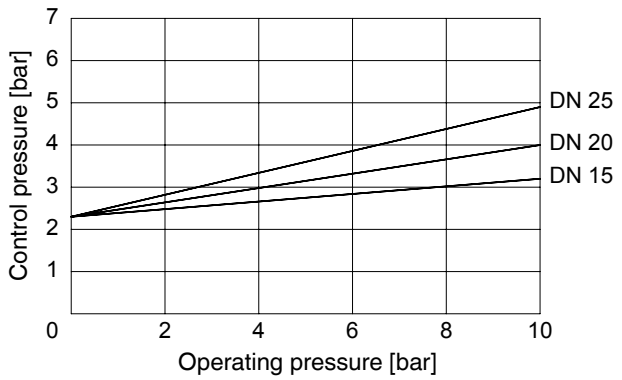
Connection code	Material code	Max. allowable operating pressures in bar at temperature °C*					
		RT	100	150	200	250	300
8	37	16.0	16.0	14.5	13.4	12.7	11.8
10	37	25.0	25.0	22.7	21.0	19.8	18.5
11	37	40.0	40.0	36.3	33.7	31.8	29,7
39	37	19.0	16.0	14.8	13.6	12.0	10.2
8	90	16.0	16.0	15.5	14.7	13.9	11.2
39	90	17.0	16.0	14.8	13.9	12.1	10.2

* The valves can be used down to -10°C 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

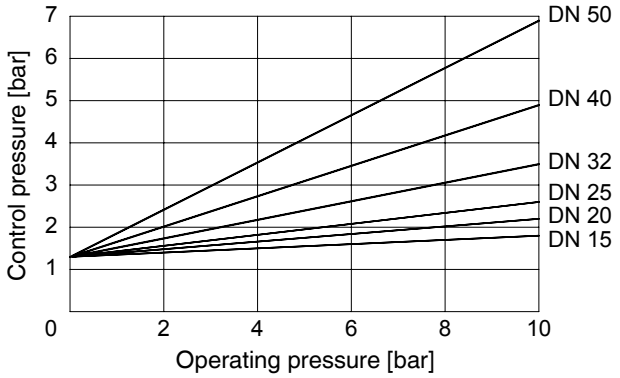
Actuator size 3

min. control pressure dependent on operating pressure



Actuator size 4

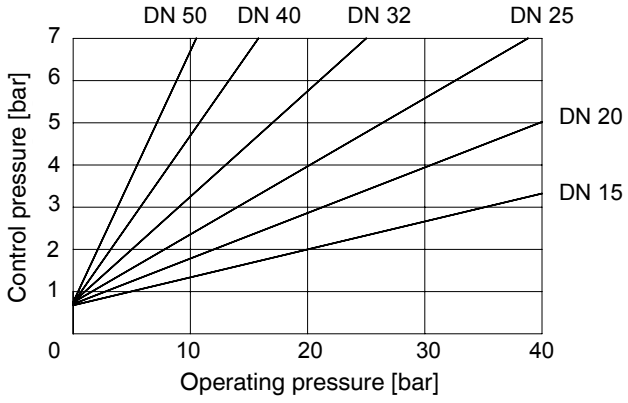
min. control pressure dependent on operating pressure



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

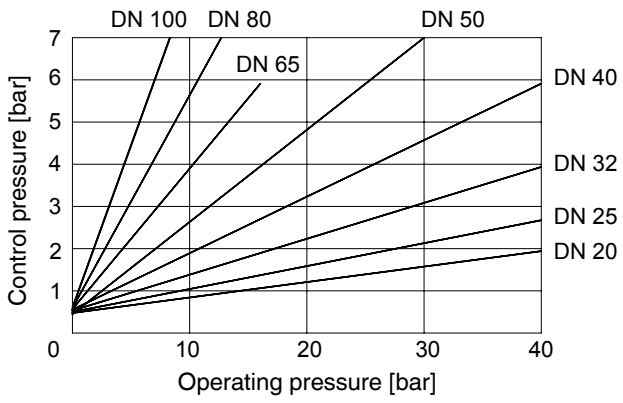
Actuator size 1

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

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
Flanges ANSI Class 125/150 RF, length 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

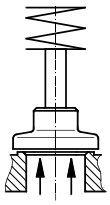
Valve body material	Code
1.4408, Investment casting	37
EN-GJS-400-18-LT (GGG 40.3) SG iron	90

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 50 mm		

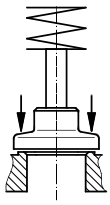
Actuator size		Flow	Code
Actuator 0	piston ø 50 mm	Flow under the seat	0*
Actuator 1	piston ø 70 mm	Flow under the seat	1*
Actuator 2	piston ø 120 mm	Flow under the seat	2*
Actuator 3	piston ø 50 mm	Flow over the seat	3**
Actuator 4	piston ø 70 mm	Flow over the seat	4**
* Preferred flow direction with incompressible liquid media to avoid “water hammer“			
** only control function NC			

GEMÜ 532
Actuators 0, 1, 2



Flow
under the seat

GEMÜ 532
Actuator 3, 4



Flow
over the seat

Special versions	Code
Media temperature -10 to 210 °C (only with seat seal Code 5G and 10)	K-Nr. 2023

Note
Overview available valve bodies see table on page 7

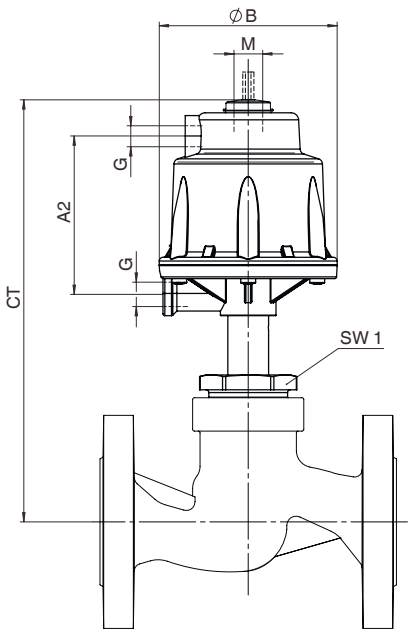
Order example	532	25	D	8	90	5	1	1	-
Type	532								
Nominal size		25							
Body configuration (code)			D						
Connection (code)				8					
Valve body material (code)					90				
Seat seal (code)						5			
Control function (code)							1		
Actuator size (code)								1	
Special versions (code)						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

Dimensions [mm]

Actuator dimensions				
Actuator size	**øB**	**M**	**A2**	**G**
0 + 3	71	M16x1	-	G 1/4
1 + 4	96	M16x1	85.5	G 1/4
2	164	M22x1.5	123.0	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**	**CT**	**Weight [kg]**	**CT**	**Weight [kg]**	**CT**	**Weight [kg]**
15	36	197	3.25	207	4.1	-	-
20	41	204	4.25	214	5.1	291	-
25	46	215	5.15	225	6.0	302	-
32	55	-	-	230	8.2	307	-
40	60	-	-	241	9.5	318	-
50	75	-	-	249	12.3	326	-
65	75	-	-	-	-	349	-
80	75	-	-	-	-	369	-
100	75	-	-	-	-	390	-

Installation dimensions / weight of valve, connection code 11							
		Actuator size 0 + 3		**Actuator size 1 + 4**		**Actuator size 2**	
DN	**SW1 metric**	**CT**	**Weight [kg]**	**CT**	**Weight [kg]**	**CT**	**Weight [kg]**
15	36	197	3.25	207	4.1	-	-
20	41	204	4.25	214	5.1	291	-
25	46	215	5.15	225	6.0	302	-
32	55	-	-	230	8.2	307	-
40	60	-	-	241	9.5	318	-
50	75	-	-	261	12.3	338	-

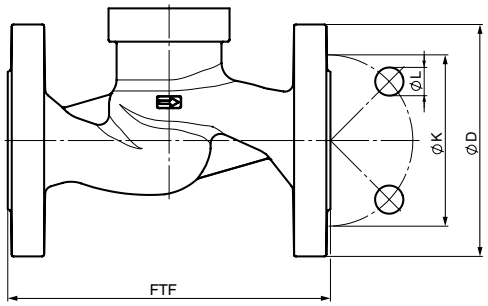


Dimensions [mm]

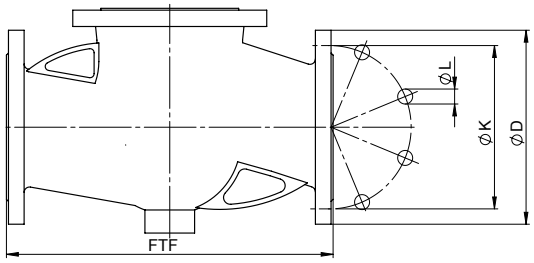
Flanges, connection code 8
Valve body material 1.4408 (code 37), EN-GJS-400-18-LT (code 90)

	Material code 37					Material code 90					Weight
DN	Number of bolts	FTF	ø D	ø K	ø L	Number of bolts	FTF	ø D	ø K	ø L	[kg]
15	-	-	-	-	-	4	130	95	65	14	2.2
20	-	-	-	-	-	4	150	105	75	14	3.0
25	-	-	-	-	-	4	160	115	85	14	3.7
32	-	-	-	-	-	4	180	140	100	18	5.3
40	-	-	-	-	-	4	200	150	110	18	6.3
50	4	230	165	125	18	4	230	165	125	18	8.4
65	4	290	185	145	18	4	290	185	145	18	12.7
80	8	310	200	160	18	8	310	200	160	18	15.4
100	8	350	220	180	18	8	350	220	180	18	23.0

For materials see overview on page 7



DN 15 - 50

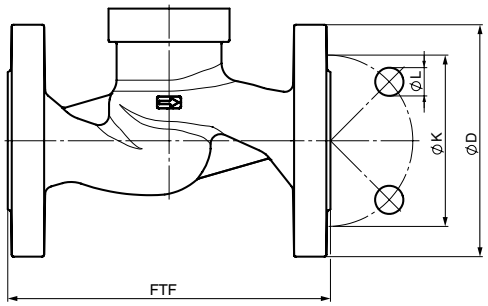


65 - 100

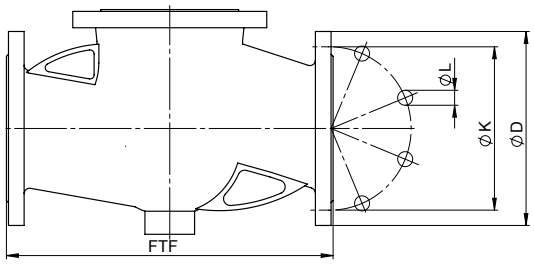
Flanges, connection code 10, 11, 48
Ventilkörperwerkstoff 1.4408 (code 37)

		Connection code 10				Connection code 11				Connection code 48				Weight
DN	Number of bolts	FTF	ø D	ø K	ø L	FTF	ø D	ø K	ø L	FTF	ø D	ø K	ø L	[kg]
15	4	-	-	-	-	130	95	65	14	108	95	70	15	2.2
20	4	-	-	-	-	150	105	75	14	117	100	75	15	3.0
25	4	-	-	-	-	160	115	85	14	127	125	90	19	3.7
32	4	180	140	100	18	180	140	100	18	-	-	-	-	5.3
40	4	200	150	110	18	200	150	110	18	165	140	105	19	6.3
50	4	-	-	-	-	230	165	125	18	203	155	120	19	8.4

For materials see overview on page 7



DN 15 - 50 code 10, 48
DN 15 - 40 code 11

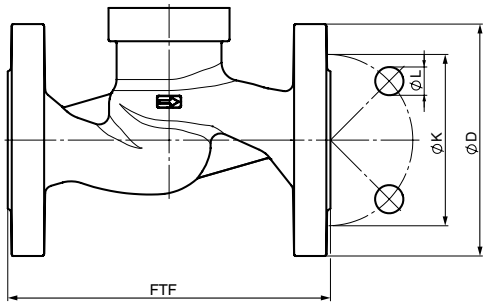


DN 50 code 11

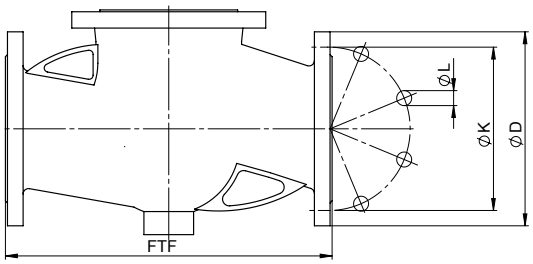
Dimensions [mm]

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 [kg]**
15	4	130	90	60.3	15.9	2.2
20	4	150	100	69.9	15.9	3.0
25	4	160	110	79.4	15.9	3.7
32	4	180	115	88.9	15.9	5.3
40	4	200	125	98.4	15.9	6.3
50	4	230	150	120.7	19.0	8.4
65	4	290	180	139.7	19.0	12.7
80	4	310	190	152.4	19.0	15.4
100	8	350	230	190.5	19.0	23.0

For materials see overview below



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	-

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

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