

## Globe Valve, Metal

### Construction

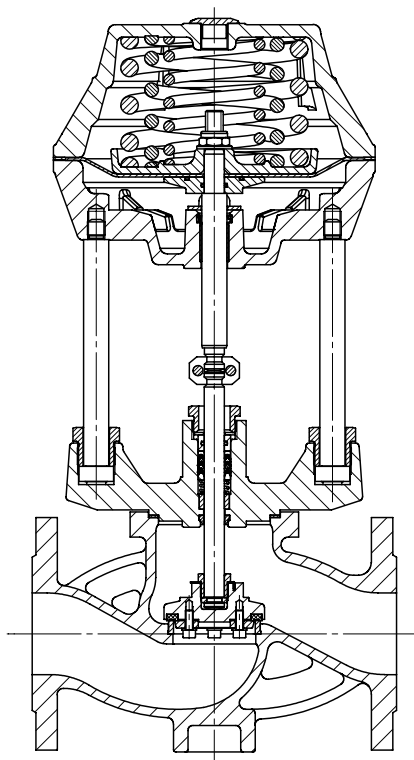
The GEMÜ 520 pneumatically operated 2/2-way globe valve has a low maintenance membrane actuator which can be controlled by inert gaseous media. The valve plug is fixed to the spindle in such a way as to allow flexing during closure in order to ensure tight shut off.

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.

### Advantages

- Good flow capability
- Broad range of operating temperatures and pressures
- Accessories:  
Stroke limiter / optical position indicator / manual override / pilot valve with manual override / electrical position indicators / electro-pneumatic positioner
- Versions according to ATEX on request

Sectional drawing



## 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

Media temperature -10 °C to 180 °C

Max. permissible viscosity 600 mm<sup>2</sup>/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

Max. control pressure 7 bar

Filling volume

Actuator size 3, 5, 7 2.5 dm<sup>3</sup>

Actuator size 4, 6, 8 6.8 dm<sup>3</sup>

### Leakage rate

Leakage rate A to P11/P12 EN 12266-1

### Ambient conditions

Max. ambient temperature 60 °C

DN	Control function 1				Control function 2				Control function 3				Kv values [m <sup>3</sup> /h]
	Operating pressure [bar]	Control pressure [bar]	Actuator size Code	Weight [kg]	Operating pressure [bar]	Control pressure [bar]	Actuator size Code	Weight [kg]	Operating pressure [bar]	Control pressure [bar]	Actuator size Code	Weight [kg]	
32	30.0	3.0 - 7.0	3/1	26	40	max. 3.0	5	31	40	max. 2.5	7	30	15
	40.0	4.5 - 7.0	3/2	28									
40	20.0	3.0 - 7.0	3/1	27	40	max. 4.0	5	33	40	max. 3.5	7	32	23
	35.0	4.5 - 7.0	3/2	29									
	40.0	5.5 - 7.0	3/3	30									
50	12.0	3.0 - 7.0	3/1	30	40	max. 5.5	5	36	40	max. 5.0	7	35	36
	25.0	4.5 - 7.0	3/2	32									
	30.0	5.5 - 7.0	3/3	33									
	40.0	4.0 - 7.0	4/2	51									
65	6.0	3.0 - 7.0	3/1	37	35	max. 7.0	5	43	36	max. 7.0	7	42	75
	10.0	4.5 - 7.0	3/2	39									
	16.0	5.5 - 7.0	3/3	40									
	40.0	5.5 - 7.0	4/3	73									
80	3.0	3.0 - 7.0	3/1	40	24	max. 7.0	5	46	25	max. 7.0	7	45	113
	6.0	4.5 - 7.0	3/2	42									
	9.0	5.5 - 7.0	3/3	43	40	max. 4.5	6	63	40	max. 4.0	8	62	
	25.0	5.5 - 7.0	4/3	76									
100	4.0	4.5 - 7.0	3/2	53	16	max. 7.0	5	57	16	max. 7.0	7	56	175
	6.0	5.5 - 7.0	3/3	54									
	12.0	5.5 - 7.0	4/3	87									
125	3.5	5.5 - 7.0	3/3	66	10	max. 7.0	5	69	10	max. 7.0	7	68	275
	8.0	5.5 - 7.0	4/3	99									
150	4.5	5.5 - 7.0	4/3	118	6	max. 7.0	5	88	6.0	max. 7.0	7	87	400
					16				max. 7.0				

All pressures are given as gauge pressures, when applied upstream only. Higher pressures and temperatures on request.

Kv values determined acc. to IEC 534 standard, valve body material cast iron EN-GJL-250 and flanges EN 1092. The Kv value data refers to control function 1 (NC) and the largest actuator for each nominal size. Kv values may be different for other combinations.

### Pressure/temperature correlation for globe valve bodies

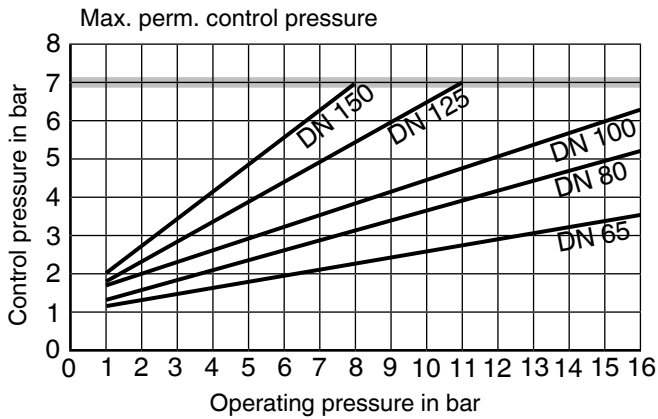
Connection code	Material code	Max. allowable operating pressures in bar at temperature °C*						
		RT	50	100	150	200	250	300
8	8	16.0	16.0	16.0	14.4	12.8	11.2	9.6
39	8	13.8	13.8	12.8	11.3	9.8	-	-
11	11	39.0	37.2	34.1	31.7	28.4	26.0	23.5
39	11	19.7	19.7	17.7	15.8	14.0	12.1	10.2
40	11	39.0	37.2	34.1	31.7	28.4	26.0	23.5
8	37	14.6	13.9	12.4	11.2	10.3	9.6	9.0
39	37	19.0	19.0	16.0	14.8	13.6	12.1	10.2
11	38	39.8	38.8	36.0	33.3	31.3	29.4	27.5
39	38	19.0	19.0	16.0	14.8	13.6	12.1	10.2
40	38	39.8	39.3	36.4	33.4	31.1	29.0	26.9

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

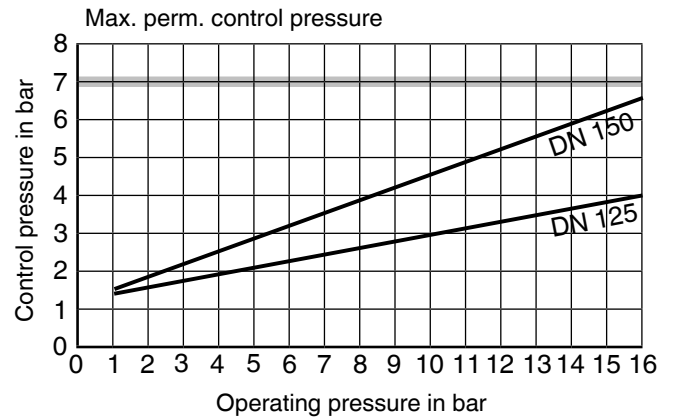
RT = Room Temperature

All pressures are gauge pressures.

**Operating pressure - Control pressure  
Actuator size code 5**



**Operating pressure - Control pressure  
Actuator size code 6**



**Note:** The above diagrams give the minimum control pressure for "normally open" actuators (control function 2) for different operating pressures. For "double acting" actuators (control function 3) the control pressure is 1 bar less than that given in the diagrams.

**Order data**

Body configuration	Code
2/2-way body	D

Connection	Code
Flanges EN 1092 / PN 16 / form B, length EN 558, series 1, ISO 5752, basic series 1	8
Flanges EN 1092 / PN 40 / 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 ANSI B 16.5, CLASS 300 RF, length EN 558, series 1, ISO 5752, basic series 1	40

Valve body material	Code
EN-GJL-250, GG 25, Cast iron	8
GP 240 H, GS-C 25, Cast steel	11
1.4408, Cast stainless steel	37
1.4581, Cast stainless steel	38

Seat seal	Code
PTFE	5
PTFE, glass reinforced	5G
Steel	10

Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	3

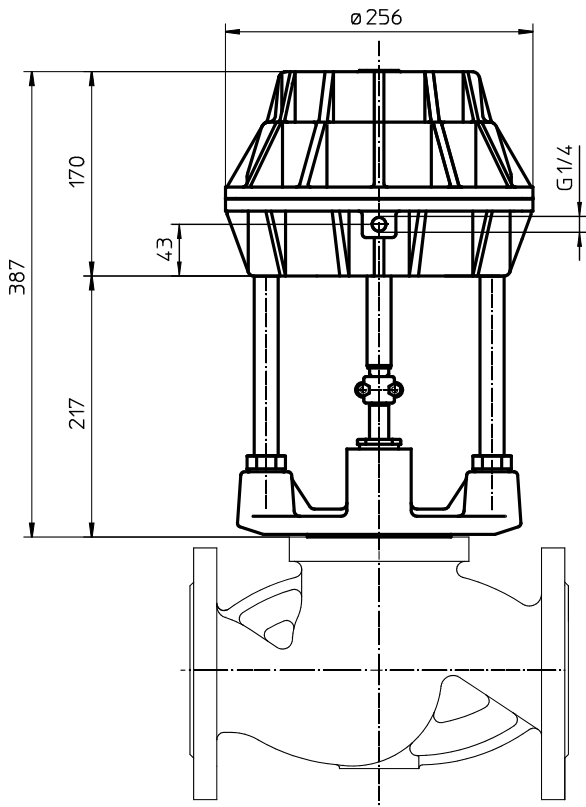
  

Actuator size	Code
Actuators 3 - 8 (see table page 2)	

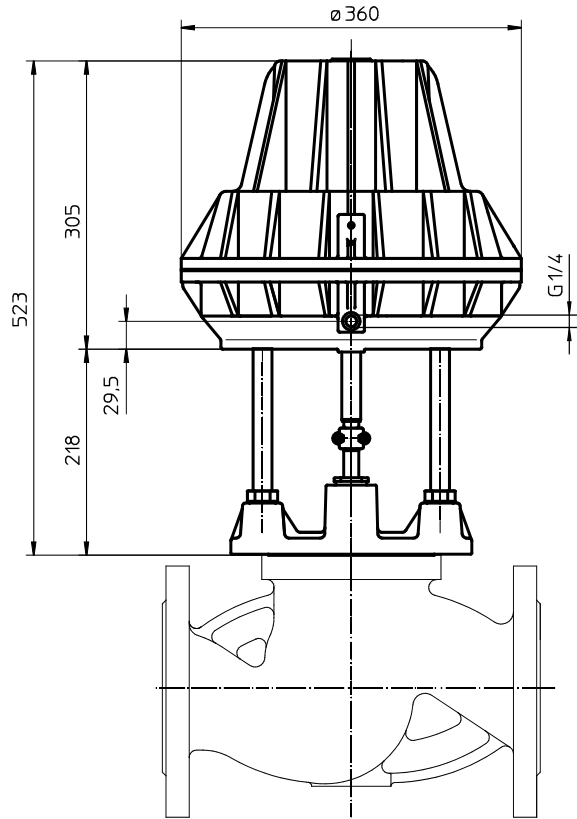
Order example	520	80	D	8	8	5	1	3/3
Type	520							
Nominal size		80						
Body configuration (code)			D					
Connection (code)				8				
Valve body material (code)					8			
Seat seal (code)						5		
Control function (code)							1	
Actuator size (code)								3/3

**Actuator dimensions [mm]**

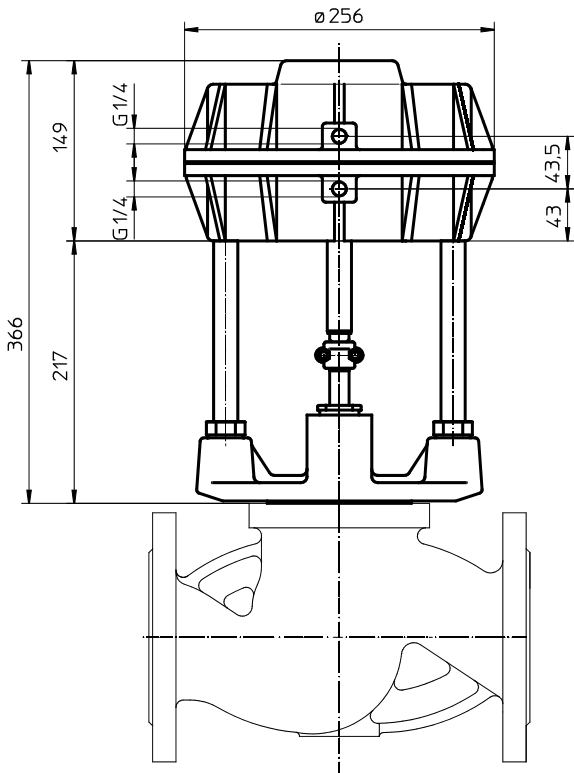
**Actuator code 3/1 - 3/3  
Control function code 1**



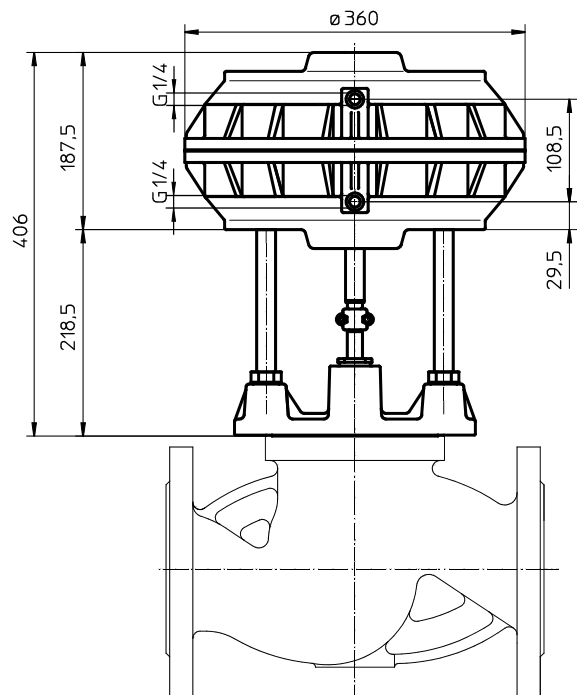
**Actuator code 4/3  
Control function code 1**



**Actuator code 5 + 7  
Control function code 2 + 3**



**Actuator code 6 + 8  
Control function code 2 + 3**



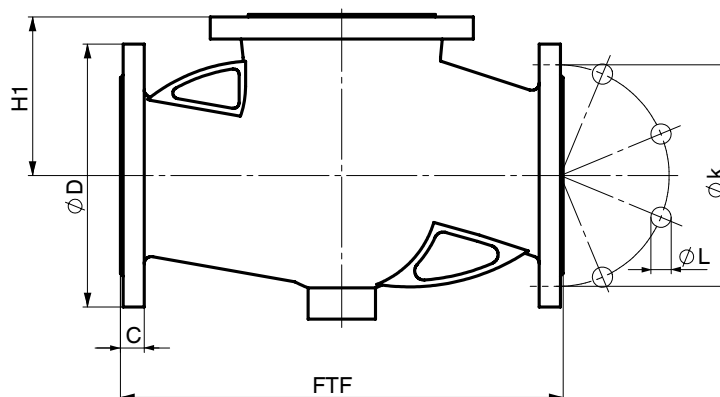
## Body dimensions [mm]

Flanges, connection code 8, 11														
Valve body material: GG 25 (code 8), GS-C (code 11), 1.4408 (code 37), 1.4581 (code 38)														
		Connection code 8							Connection code 11					
DN	FTF	ø D	ø L	ø k	Number of bolts	C	H1		ø D	ø L	ø k	Number of bolts	C	H1
							Material code 8	Material code 37						
32	180	140	18	100	4	18	-	-	140	18	100	4	18	72
40	200	150	18	110	4	18	-	-	150	18	110	4	18	72
50	230	165	18	125	4	20	-	-	165	18	125	4	20	83
65	290	185	18	145	4	20	97	120	185	18	145	8	20	120
80	310	200	18	160	8	22	109	146	200	18	160	8	22	146
100	350	220	18	180	8	24	130	164	235	22	190	8	24	164
125	400	250	18	210	8	26	151	-	270	26	220	8	26	155
150	480	285	22	240	8	26	172	-	300	26	250	8	28	165

For materials see overview on last page

Flanges, connection H1 code 39, 40														
Valve body material: GG 25 (code 8), GS-C (code 11), 1.4408 (code 37), 1.4581 (code 38)														
		Connection code 39							Connection code 40					
DN	FTF	ø D	ø L	ø k	Number of bolts	C	H1		ø D	ø L	ø k	Number of bolts	C	H1
							Material code 8	Material code 11, 37, 38						
32	180	115	15.9	88.9	4	15.7	-	-	133.4	19.05	98.6	4	19.1	72
40	200	125	15.9	98.4	4	17.5	-	-	155.4	22.35	114.3	4	20.6	72
50	230	150	19.0	120.7	4	19.1	-	83	165.1	19.05	127.0	8	22.4	83
65	290	180	19.0	139.7	4	22.4	97	120	-	-	-	-	-	-
80	310	190	19.0	152.4	4	23.9	109	146	-	-	-	-	-	-
100	350	230	19.0	190.5	8	23.9	130	164	-	-	-	-	-	-
125	400	255	22.2	215.9	8	23.9	151	201	-	-	-	-	-	-
150	480	280	22.2	241.3	8	25.4	172	231	-	-	-	-	-	-

For materials see overview on last page



## Overview of valve bodies for GEMÜ 520

Connection code	8		11		39				40	
Material code	8	37	11	38	8	11	37	38	11	38
DN 32	-	-	X	X	-	-	-	-	X	X
DN 40	-	-	X	X	-	-	-	-	X	X
DN 50	X	-	X	X	-	X	-	X	X	X
DN 65	X	X	X	-	X	X*	X*	-	-	-
DN 80	X	X	X	-	X	X*	X*	-	-	-
DN 100	X	X	X	-	X	X*	X*	-	-	-
DN 125	X	-	X	-	X	X*	-	-	-	-
DN 150	X	-	X	-	X	X*	-	-	-	-

\* DIN flange drilled to ANSI Class 150

## Accessories



**GEMÜ 1435 ePos**  
Electro-pneumatic  
positioner



**GEMÜ 1436 cPos**  
Electro-pneumatic positioner  
and process controller



**GEMÜ 1201**  
Electrical position indicator



**GEMÜ 1235**  
Electrical position indicator



**GEMÜ 0324**  
pilot valve  
plastic



**GEMÜ 1110**  
Stroke limiter  
with transparent cap

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

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AND CONTROL SYSTEMS

