

## Globe Valve, Metal

### Construction

The GEMÜ 536 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.

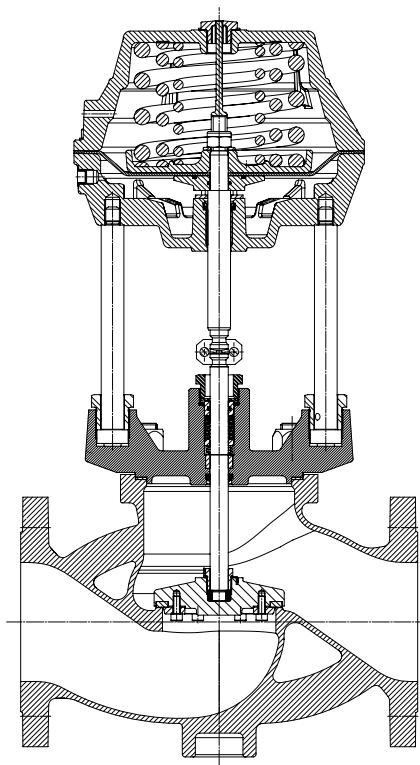
The valve spindle is sealed by a self-adjusting gland packing providing low maintenance and reliable valve spindle sealing even after a long service life.

A 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
- Regulating cage (in control version)

Sectional view



## 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      2.5 dm<sup>3</sup>

Actuator size 4      6.8 dm<sup>3</sup>

### Ambient conditions

Ambient temperature      max. 60 °C

### 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

### Maximum permissible seat leakage class / Control valve

Seat seal	Standard	Test procedure	Leakage rate	Test medium
PTFE	DIN EN 60534-4	1	VI	air

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]	
50*	12.0	3.0 - 7.0	3A1	35	40.0	max. 5.5	3AN	41	40.0	max. 5.0	3AN	40	50
	25.0	5.0 - 7.0	3A2	37									
	35.0	6.5 - 7.0	3A3	38									
	40.0	4.0 - 7.0	4A2	68									
65	6.0	3.0 - 7.0	3A1	37	16.0	max. 7.0	3AN	43	16.0	max. 7.0	3AN	42	85
	14.0	5.0 - 7.0	3A2	39									
	16.0	6.5 - 7.0	3A3	40									
80	3.0	3.0 - 7.0	3A1	40	16.0	max. 7.0	3AN	46	16.0	max. 7.0	3AN	45	120
	8.5	5.0 - 7.0	3A2	42									
	11.0	6.5 - 7.0	3A3	43									
	16.0	5.5 - 7.0	4A3	76									
100	5.5	5.0 - 7.0	3A2	53	14.0	max. 7.0	3AN	57	16.0	max. 7.0	3AN	56	200
	7.0	6.5 - 7.0	3A3	54									
	16.0	5.5 - 7.0	4A3	87									
125	4.5	6.5 - 7.0	3A3	66	9.0	max. 7.0	3AN	69	10.0	max. 7.0	3AN	68	290
	10.0	5.5 - 7.0	4A3	99	16.0	max. 7.0	4AN	89	16.0	max. 7.0	4AN	88	
150	4.0	4.0 - 7.0	4A2	117	6.0	max. 7.0	3AN	88	6.0	max. 7.0	3AN	87	380
	7.0	5.5 - 7.0	4A3	118	16.0	max. 7.0	4AN	108	16.0	max. 7.0	4AN	107	

\* DN 50 only with seat seal code 5G

All pressures are given as gauge pressures, when applied upstream only. Higher pressures and temperatures on request. For max. operating pressures the pressure / temperature correlation must be observed (see table below)

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

## Technical data

### Pressure / temperature correlation for globe valve bodies

Connection code	Material code	Max. allowable operating pressures in bar at temperature in °C *					
		RT	100	150	200	250	300
8	37	16.0	16.0	14.5	13.4	12.7	11.8
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

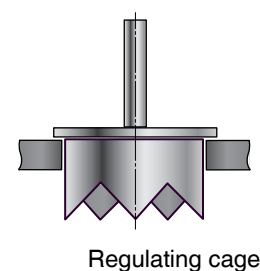
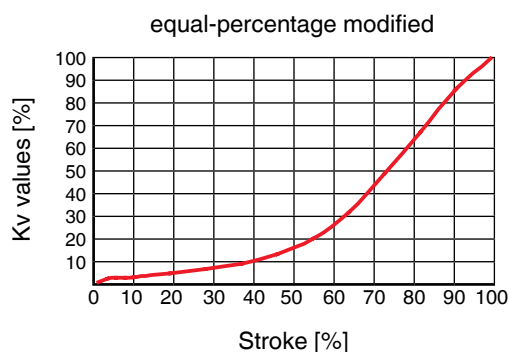
\* The valves can be used down to -10 °C      RT = room temperature      All pressures are gauge pressures.

### Correlation of Kv value, regulating cage number Valve body material 1.4408 (code 37), EN-GJS-400-18-LT (code 90)

Nominal size DN	Kv value [m <sup>3</sup> /h]	Actuator size	equal-percentage (mod.)
50	40	3	RS316
	40	4	RS315
65	70	3	RS300
80	100	3	RS301
	100	4	RS302
100	100	3	RS303
	100	4	RS304
	160	3	RS305
	160	4	RS306
125	160	3	RS307
	160	4	RS308
	225	3	RS309
	225	4	RS310
150	200	3*	RS317
	200	4	RS312
	290	3*	RS318
	290	4	RS314

\* only control function 2 and 3

### Example Kv value diagram

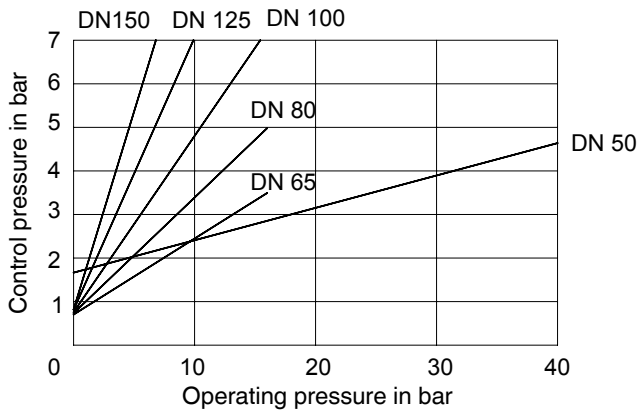


The diagram shows the approximative curve of the Kv value characteristic.

## Operating pressure / Control pressure characteristics

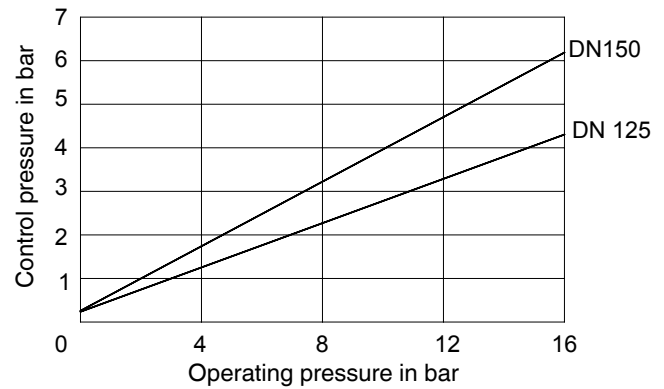
### Control function 2 and 3 / Actuator size code 3AN

Max. perm. control pressure



### Control function 2 and 3 / Actuator size code 4AN

Max. perm. control pressure



**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 150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1	39

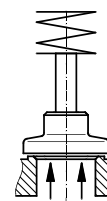
Valve body material	Code
1.4408, Investment casting	37
EN-GJS-400-18-LT (GGG 40.3), SG iron	90

Seat seal	Code
PTFE	5*
PTFE, glass fibre reinforced	5G

\* Code 5 only for DN 65 - 150

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

Actuator size	Flow	Code
Actuator size $\varnothing$ 256	Flow under the seat	3
Actuator size $\varnothing$ 360	Flow under the seat	4



Flow under the seat

Actuator version	Code
Metal	A

Spring set	Code
For control function 1	1, 2, 3
Control function 2 and 3	N

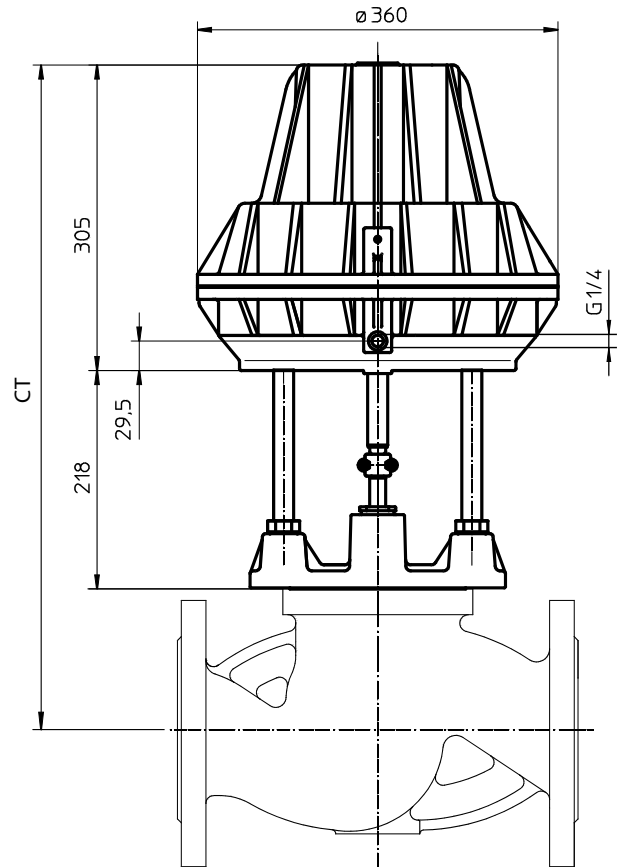
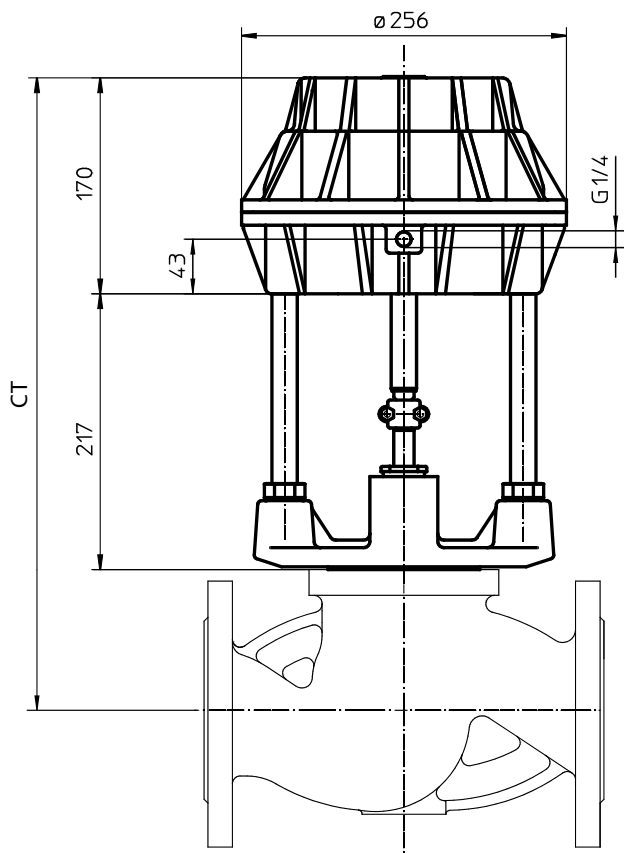
Special versions	Code
Media temperature -10 to 210 °C (only with seat seal Code 5G and 10)	K-Nr. 2023

Order example	536	80	D	8	37	5	1	3	A	3	-
Type	536										
Nominal size		80									
Body configuration (code)			D								
Connection (code)				8							
Valve body material (code)					37						
Seat seal (code)						5					
Control function (code)							1				
Actuator size (code)								3			
Actuator version (code)									A		
Spring set (code)											3
Special versions (code)											-

## Actuator dimensions [mm]

**Actuator code 3A1 - 3A2 - 3A3**  
Control function 1

**Actuator code 4A2 - 4A3**  
Control function 1



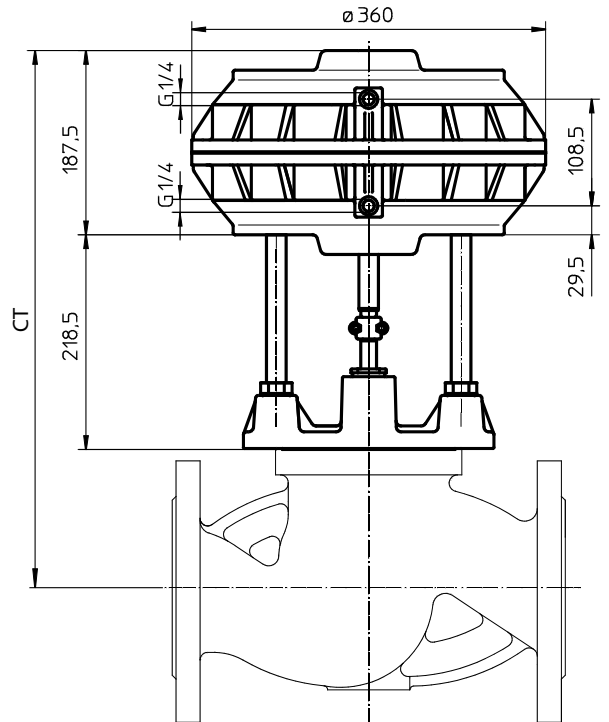
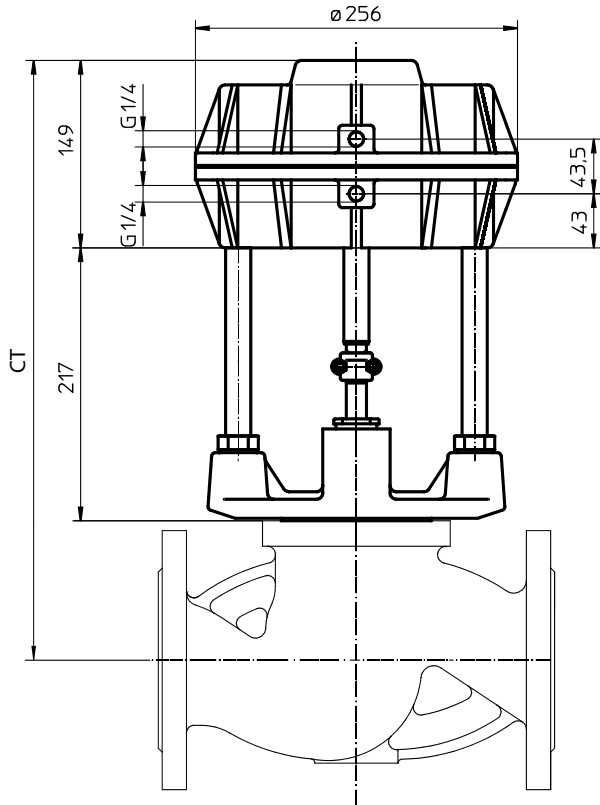
**Dimensions Control function 1**

DN	Actuator code 3A1 - 3A2 - 3A3	Actuator code 4A2 - 4A3
	CT	CT
50	467	603
65	484	620
80	496	632
100	517	653
125	539	675
150	559	695

**Actuator dimensions [mm]**

**Actuator code 3AN**  
Control function 2 + 3

**Actuator code 4AN**  
Control function 2 + 3



**Dimensions Control function 2 + 3**

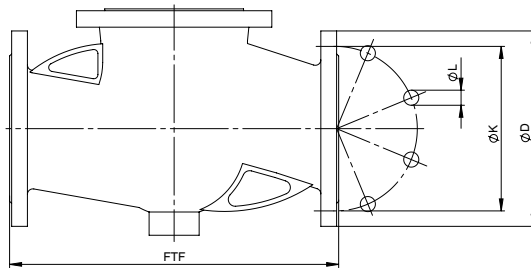
DN	Actuator code 3AN	Actuator code 4AN
	CT	CT
50	446	486
65	463	503
80	475	515
100	496	536
125	518	558
150	538	578

## Body dimensions [mm]

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

DN	Number of bolts	FTF	$\varnothing D$	$\varnothing K$	$\varnothing L$	Weight [kg]
65	4	290	185	145	18	12.7
80	8	310	200	160	18	15.4
100	8	350	220	180	18	23.0
125	8	400	250	210	18	33.5
150	8	480	285	240	22	42.5

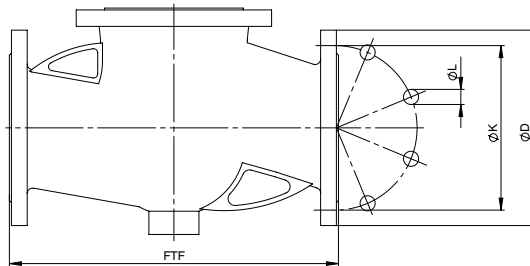
For materials see overview on page 9



### Flanges, connection code 11 Valve body material 1.4408 (code 37)

DN	Number of bolts	FTF	$\varnothing D$	$\varnothing K$	$\varnothing L$	Weight [kg]
50	4	230	165	125	18	11.5

For materials see overview on page 9



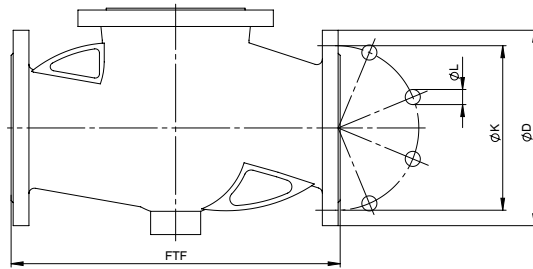


## Body dimensions [mm]

### 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]
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
125	8	400	255	215.9	22.2	33.5
150	8	480	280	241.3	22.2	42.5

For materials see below



### Overview of valve bodies for GEMÜ 536

Connection code	8		11	39	
	37	90	37	37	90
DN 50	-	-	X	-	-
DN 65	X	X	-	X	X
DN 80	X	X	-	X	X
DN 100	X	X	-	X	X
DN 125	X	X	-	X	X
DN 150	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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AND CONTROL SYSTEMS

