

## Globe Valve Metal

### Construction

The GEMÜ 530 pneumatically operated 2/2-way globe valve has a robust low maintenance stainless steel 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
- Free from non-ferrous metals
- Versions according to ATEX on request

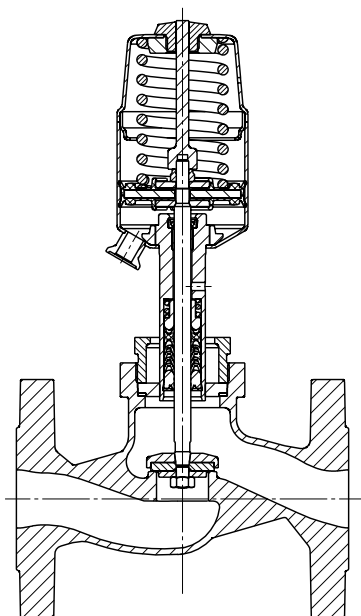
### Advantages

- Stainless steel actuator for simple cleanability, corrosive atmospheres
- Standard gland packing suitable for vacuum
- Good flow capability and compact design
- Optical position indicator is standard for NC control function (optional for NO and DA control functions).
- Accessories:
  - Electrical position indicators
  - Combi switchboxes
  - Electro-pneumatic positioners/process controllers (see data sheet GEMÜ 530 control valve)
  - Stroke limiter

\*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.

Medium temperature -10 °C to 180 °C

Operating pressure see table below

Max. permissible viscosity 600 mm<sup>2</sup>/s (cSt)

Other versions for lower/higher temperatures on request

### Control medium

Inert gases, filtered 50 µm

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

Control pressure range 4 - 8 bar  
(for details see below)

Filling volume:

Actuator size 1: 0.025 dm<sup>3</sup>

Actuator size 2: 0.084 dm<sup>3</sup>

Actuator size 3: 0.245 dm<sup>3</sup>

Actuator size 4: 0.437 dm<sup>3</sup>

Actuator size 5: 0.798 dm<sup>3</sup>

### Leakage rate

Leakage rate A to P11/P12 EN 12266-1

### Ambient conditions

Max. ambient temperature 60 °C

Nominal size	Max. operating pressure [bar] Normally closed (NC) Flow direction: under the seat					Max. operating pressure [bar] Normally closed (NC) Flow direction: over the seat			Kv value [m <sup>3</sup> /h]
	Actuator 1G piston ø 42 mm	Actuator 2G piston ø 60 mm	Actuator 3G piston ø 80 mm	Actuator 4G piston ø 100 mm	Actuator 5G piston ø 130 mm	Actuator 1M piston ø 42 mm	Actuator 2M piston ø 60 mm	Actuator 3M piston ø 80 mm	
15	10	22	-	-	-	10	10	-	4.6
20	6	12	25	-	-	10	10	10	8.0
25	-	7	16	25	-	-	10	10	13.0
32	-	4	10	18	25	-	-	10	22.0
40	-	-	6	12	20	-	-	10	35.0
50	-	-	3	7	15	-	-	10	50.0

All pressures are gauge pressures. Kv values determined acc. to IEC 534 standard, 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. Consult GEMÜ.  
For max. operating pressures the pressure/temperature correlation must be observed.

Nominal size	Control pressure [bar] Normally closed (NC) Flow direction: under the seat					Control pressure [bar] Normally closed (NC) Flow direction: over the seat		
	Actuator 1G piston ø 42 mm	Actuator 2G piston ø 60 mm	Actuator 3G piston ø 80 mm	Actuator 4G piston ø 100 mm	Actuator 5G piston ø 130 mm	Actuator 1M piston ø 42 mm	Actuator 2M piston ø 60 mm	Actuator 3M piston ø 80 mm
15	4 - 8	4 - 8	-	-	-	5 - 8	5 - 8	-
20	4 - 8	4 - 8	4 - 8	-	-	5 - 8	5 - 8	5 - 8
25	-	4 - 8	4 - 8	4 - 8	-	-	5 - 8	5 - 8
32	-	4 - 8	4 - 8	4 - 8	5 - 8	-	-	5 - 8
40	-	-	4 - 8	4 - 8	5 - 8	-	-	5 - 8
50	-	-	4 - 8	4 - 8	5 - 8	-	-	5 - 8

Higher control pressures on request.

### 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	37	14.6	13.9	12.4	11.2	10.3	9.6	9.0
10	37	25.0	23.7	21.3	19.2	17.7	16.4	15.4
11	37	36.4	34.7	31.1	28.1	25.8	24.0	22.6
39	37	19.0	19.0	16.0	14.8	13.6	12.1	10.2
8	90	16.0	16.0	16.0	15.5	14.7	13.9	11.2
39	90	17.2	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.

## Order data

Body configuration	Code
2/2-way body	D

Connection	Code
<b>Flanges</b> 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

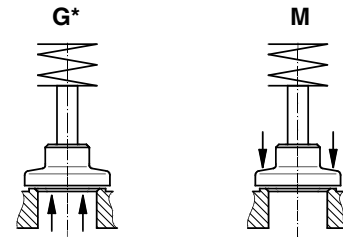
Valve body material	Code
1.4408, cast stainless steel	37
EN-GJS-400-18-LT (GGG 40.3) SG iron	90

Seat seal	Code
PTFE	5
PTFE, glass reinforced	5G

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

Actuator size	Code
Actuator 1 piston ø 42 mm	1
Actuator 2 piston ø 60 mm	2
Actuator 3 piston ø 80 mm	3
Actuator 4 piston ø 100 mm	4
Actuator 5 piston ø 130 mm	5

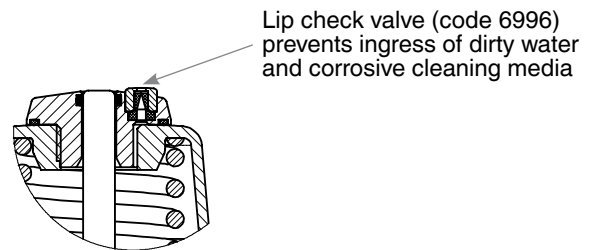
Flow direction	Code
Flow under the seat	G*
Flow over the seat	M**
** only control function NC	



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

Spring set	Code
Standard	1

Special versions (selection)	K-No.
External actuator surface electropolished Vibration ground finish - as standard	K-Nr. 1781
Special venting on the actuator for internal corrosion protection with particularly corrosive ambient external conditions	K-Nr. 6996
All special versions only available ex works	
Versions with metal bellows on request	



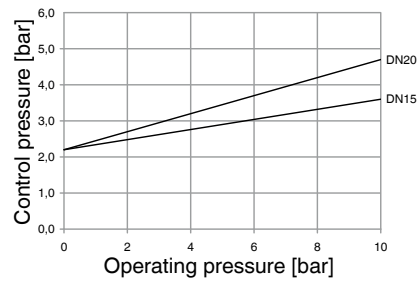
Note
For overview of available valve bodies see table on page 6

Order example	530	25	D	10	37	5	1	2	G	1	1781
Type	530										
Nominal size		25									
Body configuration (code)			D								
Connection (code)				10							
Valve body material (code)					37						
Seat seal (code)						5					
Control function (code)							1				
Actuator size (code)								2			
Flow direction (Code)									G		
Spring set (code)										1	
Special versions (code)											1781

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

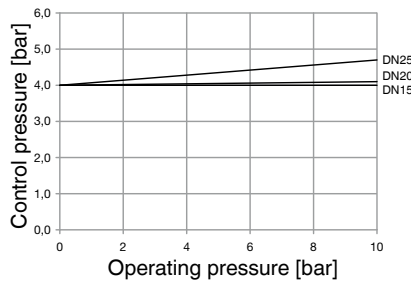
**Actuator size 1**

min. control pressure dependent on operating pressure



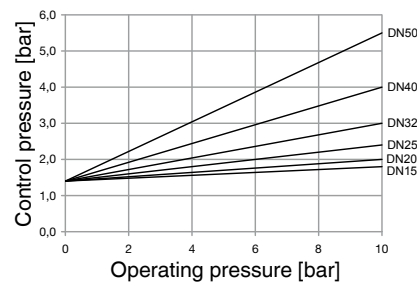
**Actuator size 2**

min. control pressure dependent on operating pressure



**Actuator size 3**

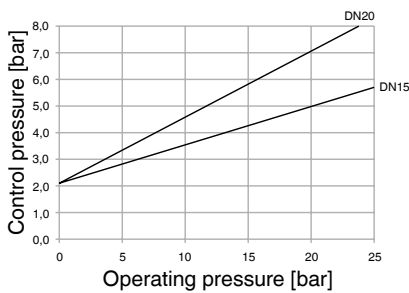
min. control pressure dependent on operating pressure



**Operating pressure / Control pressure characteristics**  
 Flow direction: under the seat / Control function: normally open (NO)

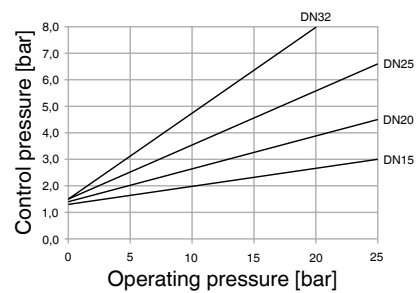
**Actuator size 1**

min. control pressure dependent on operating pressure



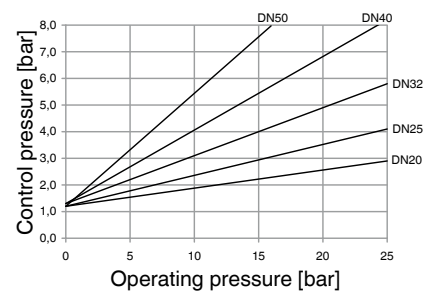
**Actuator size 2**

min. control pressure dependent on operating pressure



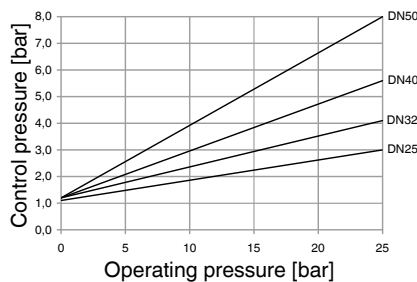
**Actuator size 3**

min. control pressure dependent on operating pressure



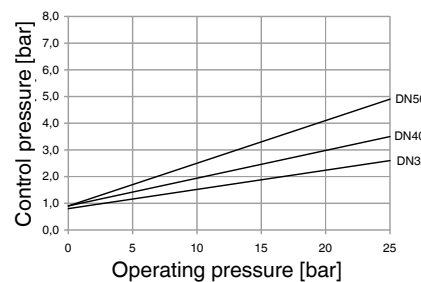
**Actuator size 4**

min. control pressure dependent on operating pressure



**Actuator size 5**

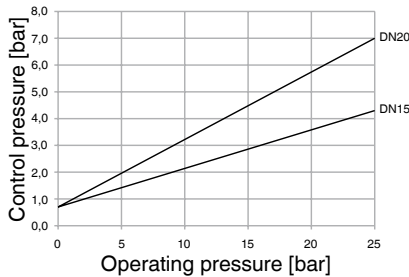
min. control pressure dependent on operating pressure



**Operating pressure / Control pressure characteristics**  
 Flow direction: under the seat / Control function: double acting (DA)

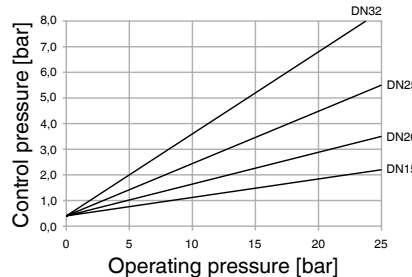
**Actuator size 1**

min. control pressure dependent on operating pressure



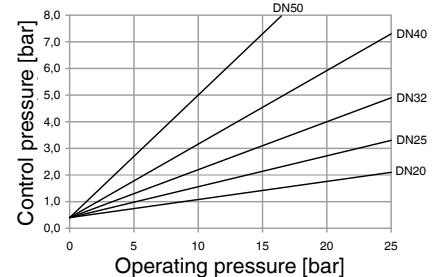
**Actuator size 2**

min. control pressure dependent on operating pressure



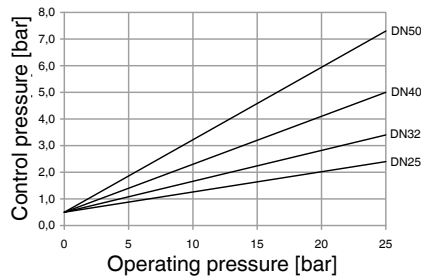
**Actuator size 3**

min. control pressure dependent on operating pressure



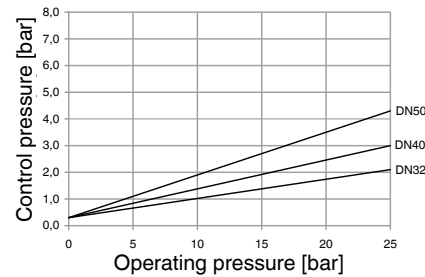
**Actuator size 4**

min. control pressure dependent on operating pressure



**Actuator size 5**

min. control pressure dependent on operating pressure



**Actuator dimensions / Installation dimensions [mm]**

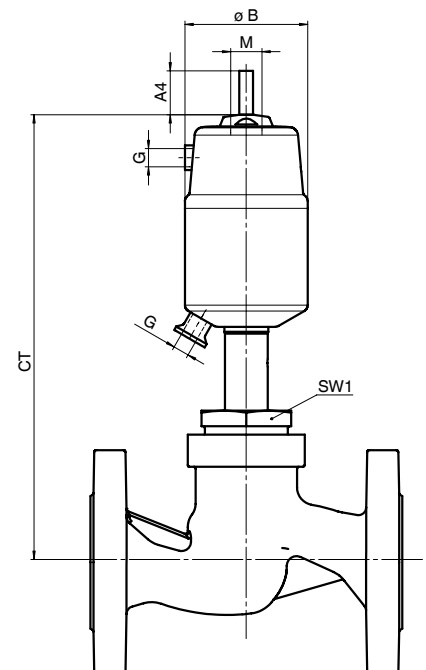
**Actuator dimensions**

Actuator size	øB	M	A4 max*	G
1	46	M16x1	12	G 1/8
2	63	M16x1	22	G 1/8
3	84	M16x1	28	G 1/4
4	104	M22x1.5	32	G 1/4
5	135	M22x1.5	41	G 1/4

\* dependent on nominal sizes

**Installation dimensions [mm] / weight of valve [kg]**

DN	SW1 metric	Actuator size 1 ø42 mm		Actuator size 2 ø60 mm		Actuator size 3 ø80 mm		Actuator size 4 ø100 mm		Actuator size 5 ø130 mm	
		CT	Weight	CT	Weight	CT	Weight	CT	Weight	CT	Weight
15	36	167	2.9	213	3.2	-	-	-	-	-	-
20	41	174	3.8	220	4.0	-	-	-	-	-	-
25	46	-	-	231	4.8	247	5.5	-	-	-	-
32	55	-	-	236	6.6	252	7.3	290	8.7	317	11.8
40	60	-	-	-	-	263	8.4	301	9.8	328	12.9
50	55	-	-	-	-	271	10.7	309	12.1	336	15.2

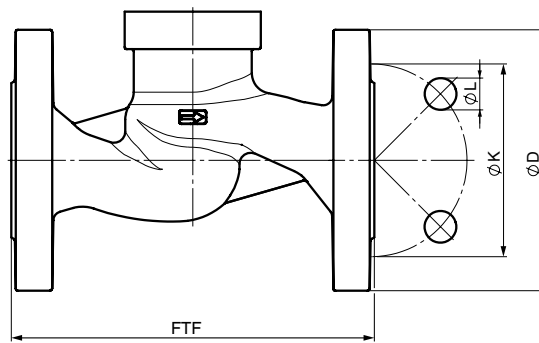


## Body dimensions [mm]

**Flanges. connection code 8, 10, 11, 39, 48**  
**Valve body material 1.4408 (code 37), EN-GJS-400-18-LT (code 90)**

DN	Number of bolts	Connection code 8, 10, 11				Connection code 39				Connection code 48				Weight [kg]
		FTF	ø D	ø K	ø L	FTF	ø D	ø K	ø L	FTF	ø D	ø K	ø L	
15	4	130	95	65	14	130	90	60.3	15.9	108	95	70	15	2.2
20	4	150	105	75	14	150	100	69.9	15.9	117	100	75	15	3.0
25	4	160	115	85	14	160	110	79.4	15.9	127	125	90	19	3.7
32	4	180	140	100	18	180	115	88.9	15.9	-	-	-	-	5.3
40	4	200	150	110	18	200	125	98.4	15.9	165	140	105	19	6.3
50	4	230	165	125	18	230	150	120.7	19.0	203	155	120	19	8.4

For materials see overview below



### Overview of metal bodies for GEMÜ 530

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	-
DN 40	-	X	X	-	X	X	X
DN 50	X	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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