GEMÜ®

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

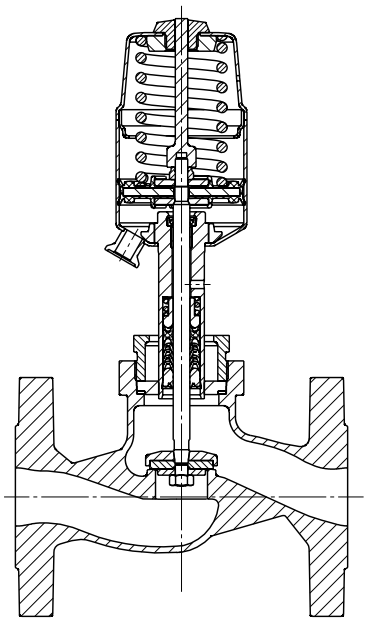
- Suitable for inert and corrosive* liquid and gaseous media
- Valve bodies available in SG iron and stainless steel
- Flanged versions
- Customized control valve versions available
- Free from non-ferrous metals
- Versions according to ATEX on request

Advantages

- Stainless steel actuator for simple cleanability, corrosive atmospheres
- 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
- Standard gland packing suitable for vacuum up to 20 mbar (abs.)

*see information on working medium on page 2

Sectional drawing



GEMÜ® 530

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^2/s (cSt)
Other versions for lower/higher temperatures on request	

Leakage rate

Leakage rate A to P11/P12 EN 12266-1

Ambient conditions

Max. ambient temperature	60 °C

Control medium

Inert gases, filtered 50 µm	
Max. control pressure:	8 bar
Max. perm. temperature of control medium:	60 °C

Technical data / Actuator

Actuator size	Filling volume	Piston diameter
1G1, 1M1	0.025 dm^3	42 mm
2G1, 2M1	0.084 dm^3	60 mm
3G1, 3M1	0.245 dm^3	80 mm
4G1	0.437 dm^3	100 mm
5G1	0.798 dm^3	130 mm

Control pressure [bar]

C. f. 1 Normally closed (NC) / Flow direction: under the seat	
Actuator size	
1G1, 2G1, 3G1, 4G1	4 - 8
5G	5 - 8
C. f. 1 Normally closed (NC) / Flow direction: over the seat	
1M1, 2M1, 3M1	max. 7 bar
Higher control pressures on request.	
C. f. 2 Normally open (NO) / C. f. 3 Double acting (DA) / Flow direction: under the seat	
for values see diagram see page 5	

Max. operating pressure [bar]

Actuator size	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
C. f. 1 Normally closed (NC) / Flow direction: under the seat									
1G1	10.0	6.0	-	-	-	-	-	-	-
2G1	22.0	12.0	7.0	4.0	-	-	-	-	-
3G1	-	25.0	16.0	10.0	6.0	3.0	-	-	-
4G1	-	-	25.0	18.0	12.0	7.0	-	-	-
5G1	-	-	-	35.0	25.0	15.0	8.0	5.0	3.0
C. f. 1 Normally closed (NC) / Flow direction: over the seat									
1M1	10.0	10.0	-	-	-	-	-	-	-
2M1	10.0	10.0	10.0	-	-	-	-	-	-
3M1	-	10.0	10.0	10.0	10.0	10.0	-	-	-
C. f. 2 Normally open (NO) / C. f. 3 Double acting (DA) / Flow direction: under the seat									
1G	28.0	17.0	11.0	-	-	-	-	-	-
2G	40.0	40.0	25.0	16.0	9.0	-	-	-	-
3G	-	40.0	40.0	30.0	20.0	12.0	-	-	-
4G	-	-	-	40.0	30.0	20.0	-	-	-
5G	-	-	-	40.0	40.0	16.0	16.0	15.0	10.0

All pressures are gauge pressures. When the flow is over the plug (M), there may be the danger of water hammer with liquid media!

Technical data

Kv values [m^3/h]									
Nominal size	**DN 15**	**DN 20**	**DN 25**	**DN 32**	**DN 40**	**DN 50**	**DN 65**	**DN 80**	**DN 100**
	4.6	8.0	13.0	22.0	35.0	50.0	90.0	127.0	200.0

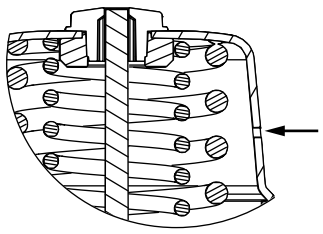
Kv values determined acc. to IEC 534. The Kv value data refers to control function 1 (NC) and the largest actuator for each nominal size.
Kv values may be different for other combinations. Consult GEMÜ.

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	17.2	16.0	14.8	13.9	12.1	10.2

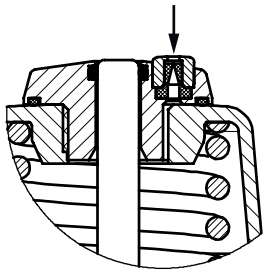
* The valves can be used down to -10°C RT = Room Temperature All pressures are gauge pressures.
Pressure/temperature correlation for connection code 48: DN 15 - 40 see connection code 10, DN 50 see connection code 8.

Bleed hole in the actuator

To bleed the control medium, the pneumatic actuator has a bleed hole that is located on the side of the actuator housing (control function normally closed). In certain areas of application (e.g. the foodstuff industry), dirty water or cleaning media could enter through this bleed hole and penetrate the actuator, thereby adversely affecting correct operation. A special bleed system with lip check valve is available for these applications, which prevents such functional impairment. The bleed hole at the side is then closed.



Standard bleed hole

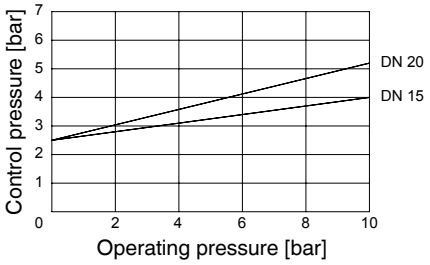


Special bleed system
K no. 6996

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

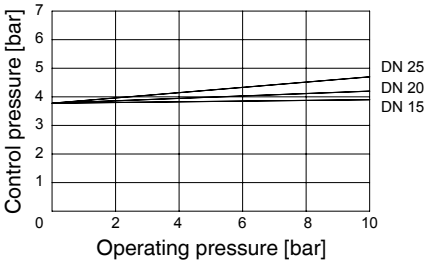
Actuator size 2M1

min. control pressure dependent on operating pressure



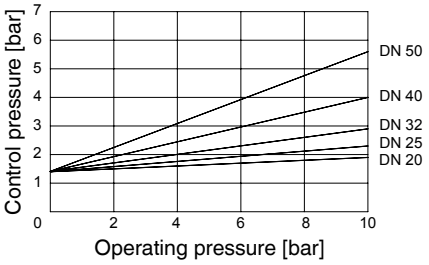
Actuator size 1M1

min. control pressure dependent on operating pressure



Actuator size 3M1

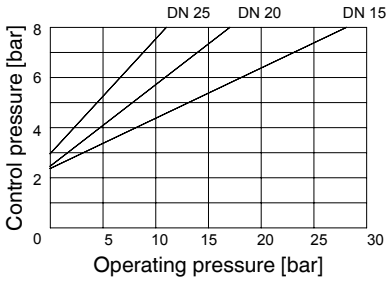
min. control pressure dependent on operating pressure



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

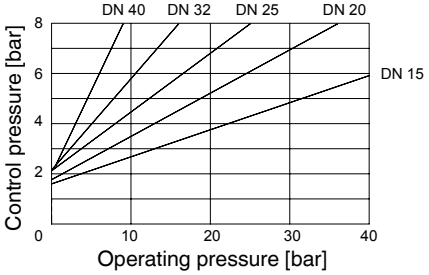
Actuator size 1G1

min. control pressure dependent on operating pressure



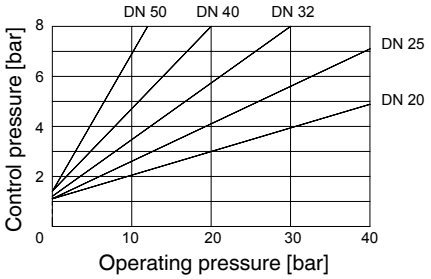
Actuator size 2G1

min. control pressure dependent on operating pressure



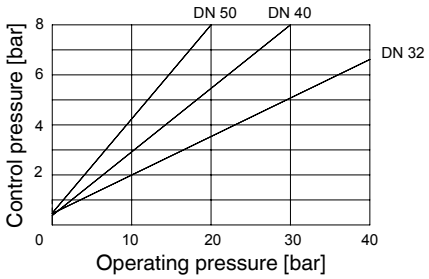
Actuator size 3G1

min. control pressure dependent on operating pressure



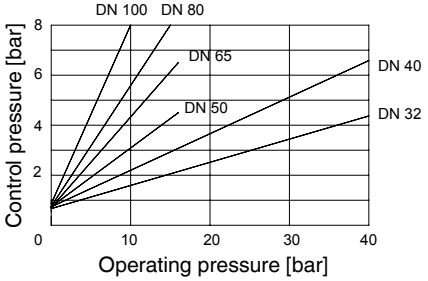
Actuator size 4G1

min. control pressure dependent on operating pressure



Actuator size 5G1

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

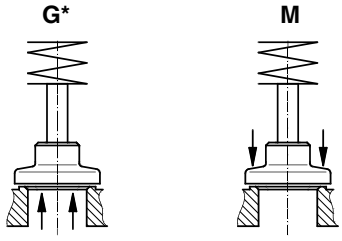
Valve body material	Code
1.4408, cast stainless steel	37
EN-GJS-400-18-LT (GGG 40.3) SG iron	90

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	Code
Media temperature -10 to 210 °C (only with seat seal Code 5G and 10)	K-Nr. 2023
Special bleed system in the actuator	K-Nr. 6996
All special versions only available ex works	

Note

For overview of available valve bodies see table on page 8

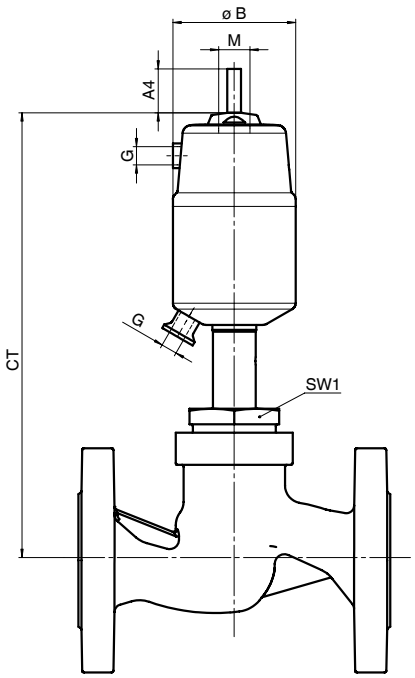
Order example	530	25	D	10	37	5	1	2	G	1	-
Type	530										
Nominal size		25									
Body configuration (code)			D								
Connection (code)				10							
Valve body material (code)					37						
Seat seal (code)						5					
Control function (code)							1				
Actuator size (code)								2			
Flow direction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

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

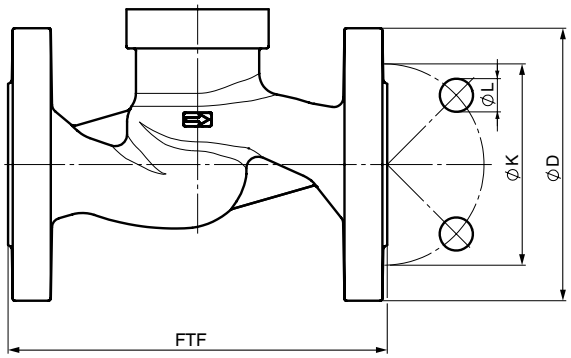
Installation dimensions [mm] / weight of valve [kg]											
		Actuator size 1 ø42 mm		**Actuator size 2 ø60 mm**		**Actuator size 3 ø80 mm**		**Actuator size 4 ø100 mm**		**Actuator size 5 ø130 mm**	
DN	**SW1 metric**	**CT**	**Weight**	**CT**	**Weight**	**CT**	**Weight**	**CT**	**Weight**	**CT**	**Weight**
15	36	167	3.1	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
65	75	-	-	-	-	-	-	-	-	364	20.4
80	75	-	-	-	-	-	-	-	-	379	23.1
100	75	-	-	-	-	-	-	-	-	400	29.0



Body dimensions [mm]

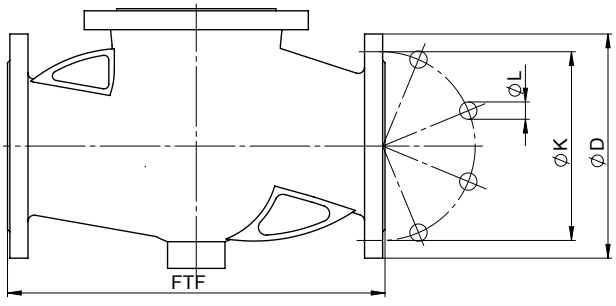
Flanges. connection code 8, 10, 11, 39, 48 Valve body material 1.4408 (code 37), EN-GJS-400-18-LT (code 90)														
		Connection code 8, 10, 11				Connection code 39				Connection code 48				Weight [kg]
DN	Number of bolts	FTF	ø D	ø K	ø L	FTF	ø D	ø K	ø L	FTF	ø D	ø K	ø L	
15	4	130	95	65	14	130	90	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 on page 8



Flanges. connection code 8, 39 Valve body material 1.4408 (code 37), EN-GJS-400-18-LT (code 90)										
		Connection code 8				Connection code 39				Weight [kg]
DN	FTF	ø D	ø K	ø L	Number of bolts	ø D	ø K	ø L	Number of bolts	
65	290	185	145	18	4	180	139.7	19	4	12.7
80	310	200	160	18	8	190	152.4	19	4	15.4
100	350	220	180	18	8	230	190.5	19	8	23.0

For materials see overview on page 8



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

GEMÜ Gebr.Müller · Apparatebau GmbH & Co.KG · Fritz-Müller-Str.6-8 · D-74653 Ingelfingen-Criesbach · Telefon +49(0)7940/123-0 · Telefax +49(0)7940/123-192
info@gemue.de · www.gemu-group.com