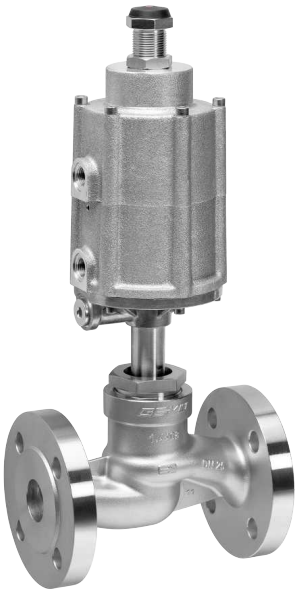
GEMÜ 532Z

Pneumatically operated globe valve with two-stage actuator



Features

- Available as shut-off or control valve
- Robust actuator housing made of aluminium
- Low frictional forces due to sleeve in the actuator head enable good control characteristics
- Faster actuator replacement and easily rotatable due to fixing via union nut
- Available with stainless steel bellows as spindle seal
- Suitable for vacuum up to 20 mbar (a)

Description

The GEMÜ 532Z 2/2-way globe valve has a low maintenance aluminium two-stage double piston actuator and is pneumatically operated. 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 the seal against contamination and damage.

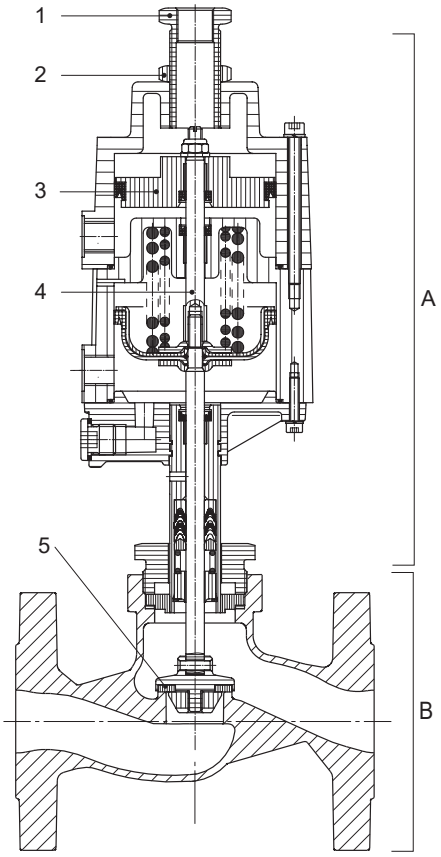
Technical specifications

- Media temperature: -10 to 210 °C
- Ambient temperature*: 0 to 130 °C
- Operating pressure*: 0 to 40 bar
- Nominal sizes*: DN 15 to 50
- Body configurations: META-Daten fehlen
- Connection types: Flange
- Connection standards: META-Daten fehlen
- Body materials: 1.4408, cast stainless steel material | EN-GJS-400-18-LT
- Seat seal materials: META-Daten fehlen
- Conformities: CRN | EAC | FDA | SIL

* depending on version and/or operating parameters

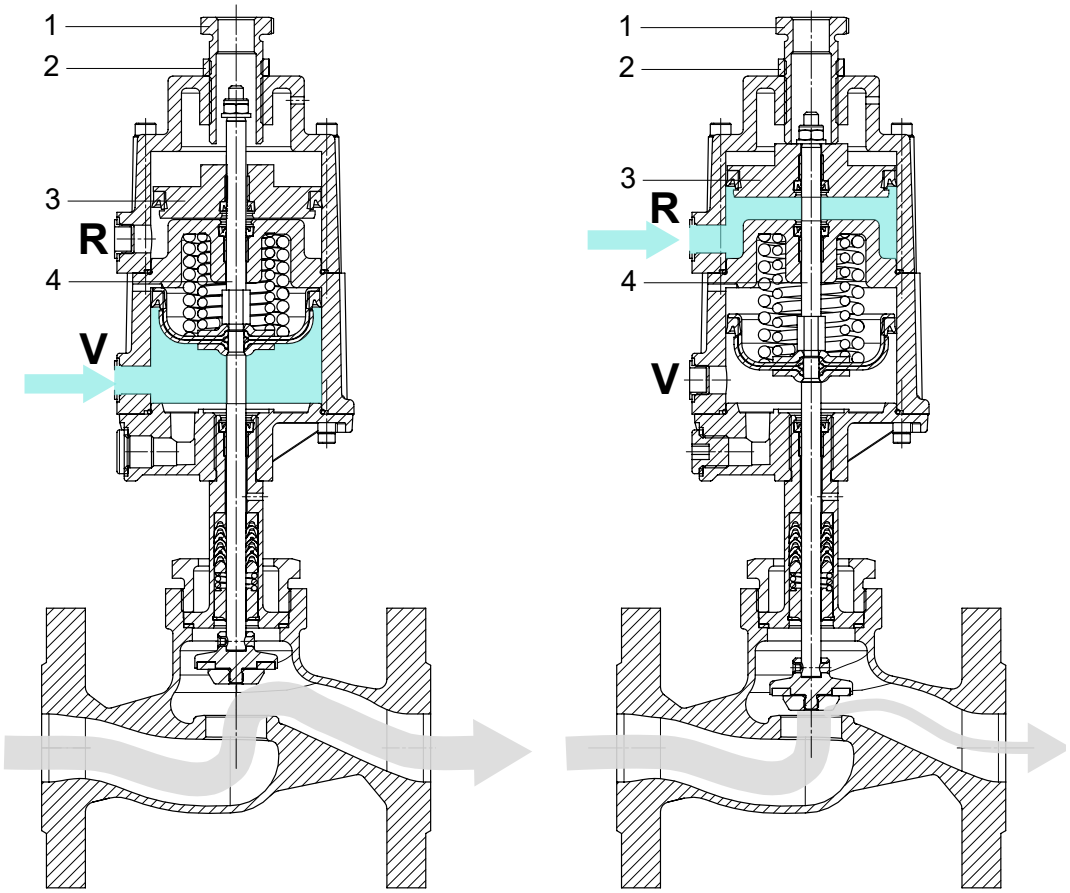
Product description

Construction



Item	Name	Materials
A	Actuator	-
B	Valve body	1.4408 investment casting, EN-GJS-400-18-LT (GGG 40.3)
1	Stroke limiter	1.4305
2	Lock nut	1.4305
3	Piston	Aluminium
4	Spindle	1.4305
5	Seat seal	PTFE

Functional description



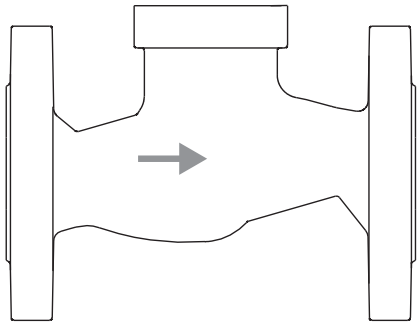
When control pressure (connection V) is applied, the lower actuator piston strokes 100%. The stroke of the upper part of the actuator (connection R), however, can be steplessly limited from 0% to 100% by means of the stroke limiter (item 1) and secured by the lock nut (item 2).

When a stroke limiter is used, the piston (item 3) moves against the stroke limiter (item 1) and flow restriction is possible (connection R).

If the lower part of the actuator (connection V) is under control pressure, the valve fully opens, pushing the spindle (item 4) upwards through the upper piston.

Flow direction

The flow direction is indicated by an arrow on the valve body.



2/2-way body
under the seat

GEMÜ CONEXO

The interaction of valve components that are equipped with RFID chips and an associated IT infrastructure actively increase process reliability.

Thanks to serialization, every valve and every relevant valve component such as the body, actuator or diaphragm, and even automation components, can be clearly traced and read using the CONEXO pen RFID reader. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves the "installation qualification" process, but also makes the maintenance process much more transparent and easier to document. The app actively guides the maintenance technician through the maintenance schedule and directly provides him with all the information assigned to the valve, such as test reports, testing documentation and maintenance histories. The CONEXO portal acts as a central element, helping to collect, manage and process all data.

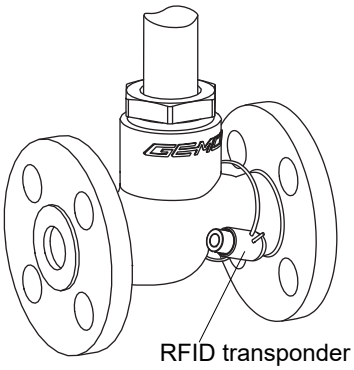
For further information on GEMÜ CONEXO please visit:
www.gemu-group.com/conexo

Ordering

GEMÜ Conexo must be ordered separately with the ordering option "CONEXO" (see order data).

In the corresponding design with CONEXO, this product has an RFID chip (1) for electronic recognition. The position of the RFID chip can be seen below.

Installing the RFID transponder



Availability

Flange

DN	Connection type code [1]						
	8		10	11	39		48
	Material code [2]						
	37	90	37			90	37
15	-	X	-	X	X	X	X
20	-	X	-	X	X	X	X
25	-	X	-	X	X	X	X
32	-	X	X	X	X	X	-
40	-	X	X	X	X	X	X
50	X	X	-	-	X	X	X

1) **Connection type**
Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
Code 10: Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
Code 11: Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
Code 39: Flange ANSI Class 150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
Code 48: Flange JIS 20K, face-to-face dimension FTF EN 558 series 10, ASME/ANSI B16.10 table 1, column 16, DN 50 drilled to JIS 10K

2) **Valve body material**
Code 37: 1.4408, investment casting
Code 90: EN-GJS-400-18-LT (GGG 40.3)

Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Order codes

1 Type	Code
Globe valve, pneumatically operated, aluminium piston actuator	532

2 DN	Code
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50

3 Body configuration	Code
2/2-way body	D

4 Connection type	Code
Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1	8
Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1	10
Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1	11
Flange ANSI Class 150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1	39
Flange JIS 20K, face-to-face dimension FTF EN 558 series 10, ASME/ANSI B16.10 table 1, column 16, DN 50 drilled to JIS 10K	48

5 Valve body material	Code
1.4408, investment casting	37
EN-GJS-400-18-LT (GGG 40.3)	90

6 Seat seal	Code
PTFE	5
PTFE, glass fibre reinforced	5G
1.4404	10

7 Control function	Code
Normally closed (NC)	1

8 Actuator version	Code
Two-stage actuator, actuator size 1	1Z
Two-stage actuator, actuator size 2	2Z

9 Type of design	Code
For higher operating temperatures	2023
Spindle seal FKM PTFE, actuator components suitable for high ambient temperatures	2017
Spindle seal PTFE-PTFE	2013
Without	

10 Special version	Code
Rigid plug fixing, special version for oxygen, maximum medium temperature: 60 °C, media wetted seal materials and auxiliary materials with BAM testing	B
Rigid plug fixing	C
Without	

11 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

Order example

Ordering option	Code	Description
1 Type	532	Globe valve, pneumatically operated, aluminium piston actuator
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	8	Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
5 Valve body material	90	EN-GJS-400-18-LT (GGG 40.3)
6 Seat seal	5	PTFE
7 Control function	1	Normally closed (NC)
8 Actuator version	1Z	Two-stage actuator, actuator size 1
9 Type of design		Without
10 Special version		Without
11 CONEXO		Without

Technical data

Medium

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.

Control medium: Inert gases

Max. permissible viscosity: 600 mm²/s (cSt)
Other versions for lower/higher temperatures and higher viscosities on request.

Temperature

Media temperature:
Standard: -10 to 180 °C
Special version: -10* to 210 °C
only with ordering option Seat seal code 5G or 10 and Design 2023

Control medium temperature: max. 60 °C

Ambient temperature:
Standard: 0 to 60 °C
Special version: 0 to 130 °C
only with ordering option Type of design 2017

Storage temperature: 0 — 40 °C

Pressure

Operating pressure:

DN	Actuator version 1Z	Actuator version 2Z
	piston ø 70 mm	piston ø 120 mm
15	25.0	-
20	20.0	25.0
25	10.0	25.0
32	7.0	16.0
40	4.5	15.0
50	-	10.0

Pressures in bar

Pressure rating: PN 16
PN 25
PN 40

Pressure/temperature correlation:

Connection types Code [1]	Materials Code [2]	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
10		25.0	25.0	22.7	21.0	19.8	18.5
11		40.0	40.0	36.3	33.7	31.8	29.7
39		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		17.2	16.0	14.8	13.9	12.1	10.2

All pressures are gauge pressures.
The valves may be used to -10 °C
RT = room temperature

1) **Connection type**
Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
Code 10: Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
Code 11: Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
Code 39: Flange ANSI Class 150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

2) **Valve body material**
Code 37: 1.4408, investment casting
Code 90: EN-GJS-400-18-LT (GGG 40.3)

Control pressure:

DN	Actuator version 1Z	Actuator version 2Z
	piston ø 70 mm	pistonø 120 mm
15	5.5 - 10.0	-
20	5.5 - 10.0	4.5 - 8.0
25	5.5 - 10.0	4.5 - 8.0
32	5.5 - 10.0	4.5 - 8.0
40	5.5 - 10.0	4.5 - 8.0
50	-	5.5 - 8.0

Pressures in bar

Kv values:

DN	Kv values
15	4.6
20	8.0
25	13.0
32	22.0
40	35.0
50	50.0

Kv values in m³/h

Filling volume:

Actuator version	Piston	Filling volume
1Z	Top	0.07 dm³
	Bottom	0.10 dm³
2Z	Top	0.51 dm³
	Bottom	0.60 dm³

Leakage rate:

Seat seal	Standard	Test procedure	Leakage rate	Test medium
Metal	DIN EN 12266-1	P12	F	Air
PTFE	DIN EN 12266-1	P12	A	Air

Piston diameter:

Actuator version	Piston diameter
1Z	70 mm
2Z	120 mm

Product compliance

Pressure Equipment Directive: 2014/68/EU

Machinery Directive: 2006/42/EC

Food: FDA*
1935*
* For contact with food, the following ordering options must be selected:
- Valve body material code 37
- Design code 2013

Environment: RoHS

Mechanical data

Weight:

Actuator

DN	Actuator version 1Z	Actuator version 2Z
15	2.4	-
20	2.6	4.7
25	2.8	5.0
32	3.4	5.6
40	3.7	6.5
50	4.4	7.4

Weights in kg

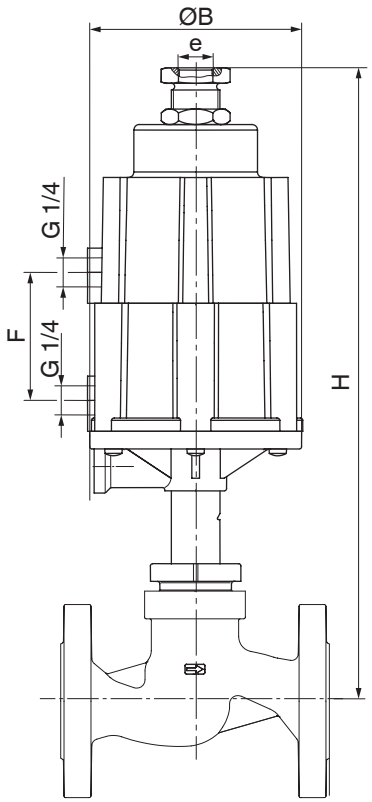
Valve body

DN	Weight
15	2.2
20	3.0
25	3.7
32	5.3
40	6.3
50	8.4

Weights in kg

Dimensions

Actuator/Installation dimensions



Actuator version 1Z

DN	SW 1	H	ø B	e	F
15	36	294	100	M 16 x 1	58
20	41	301			
25	46	312			
32	55	317			
40	40	328			
50	75	336			

Dimensions in mm

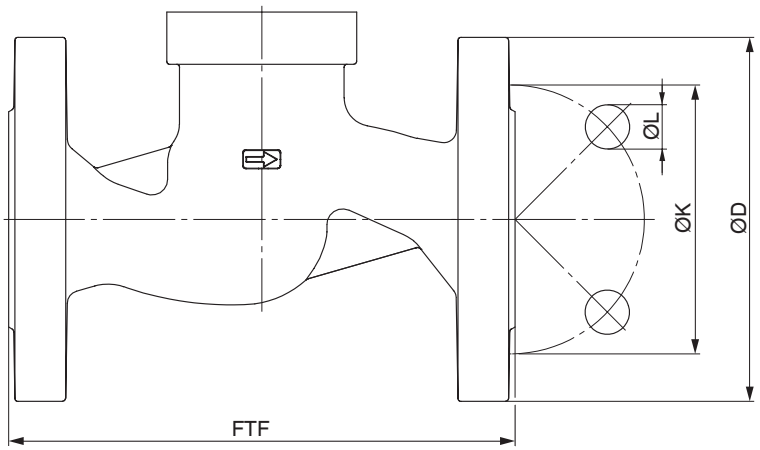
Actuator version 2Z

DN	SW 1	H	ø B	e	F
20	41	434	168	M 22 x 1.5	121
25	46	445			
32	55	450			
40	60	461			
50	75	469			

Dimensions in mm

Body dimensions

Flange connection code 8



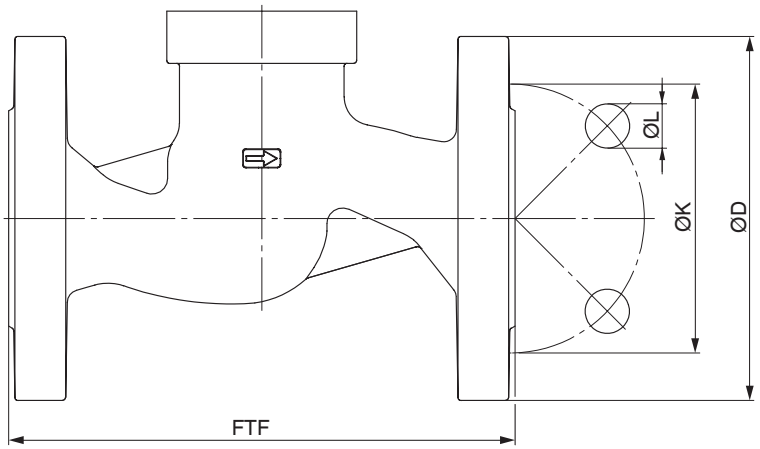
DN	Connection type code 8 [1]									
	Material code [2]									
	37					90				
	FTF	ø D	ø L	ø K	n	FTF	ø D	ø L	ø K	n
15	-	-	-	-	-	130.0	95.0	14.0	65.0	4
20	-	-	-	-	-	150.0	105.0	14.0	75.0	4
25	-	-	-	-	-	160.0	115.0	14.0	85.0	4
32	-	-	-	-	-	180.0	140.0	18.0	100.0	4
40	-	-	-	-	-	200.0	150.0	18.0	110.0	4
50	230.0	165.0	18.0	125.0	4	230.0	165.0	18.0	125.0	4

Dimensions in mm
n = number of bolts

1) **Connection type**
Code 8: Flange EN 1092, PN 16, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

2) **Valve body material**
Code 37: 1.4408, investment casting
Code 90: EN-GJS-400-18-LT (GGG 40.3)

Flange connection code 10, 11, 48



DN	Connection types code [1]														
	10					11					48				
	Material code 37 [2]														
	FTF	ø D	ø L	ø k	n	FTF	ø D	ø L	ø K	n	FTF	ø D	ø L	ø K	n
15	130.0	95.0	14.0	65.0	4	130.0	95.0	14.0	65.0	4	108.0	95.0	15.0	70.0	4
20	150.0	105.0	14.0	75.0	4	150.0	105.0	14.0	75.0	4	117.0	100.0	15.0	75.0	4
25	160.0	115.0	14.0	85.0	4	160.0	115.0	14.0	85.0	4	127.0	125.0	19.0	90.0	4
32	180.0	140.0	18.0	100.0	4	180.0	140.0	18.0	100.0	4	-	-	-	-	-
40	200.0	150.0	18.0	110.0	4	200.0	150.0	18.0	110.0	4	16..0	140.0	19.0	105.0	4
50	230.0	165.0	18.0	125.0	4	-	-	-	-	-	203.0	155.0	19.0	120.0	4

Dimensions in mm
n = number of bolts

1) **Connection type**
Code 10: Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
Code 11: Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
Code 48: Flange JIS 20K, face-to-face dimension FTF EN 558 series 10, ASME/ANSI B16.10 table 1, column 16, DN 50 drilled to JIS 10K

2) **Valve body material**
Code 37: 1.4408, investment casting

Flange connection code 39

Connection type flange, length EN 558 (code 39) [1], investment casting material (code 37), SG iron material (code 90) [2]

DN	NPS	ø D	FTF	ø K	ø L	n
15	**1/2"**	90.0	130.0	60.3	15.9	4
20	**3/4"**	100.0	150.0	69.9	15.9	4
25	**1"**	110.0	160.0	79.4	15.9	4
32	**1¼"**	115.0	180.0	88.9	15.9	4
40	**1½"**	125.0	200.0	98.4	15.9	4
50	**2"**	150.0	230.0	120.7	19.0	4

Dimensions in mm
n = number of bolts

1) **Connection type**
Code 39: Flange ANSI Class 150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

2) **Valve body material**
Code 37: 1.4408, investment casting
Code 90: EN-GJS-400-18-LT (GGG 40.3)

Subject to alteration | 09.2021 | 88685939