

GEMÜ 532

Pneumatically operated globe valve



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 532 2/2-way globe valve has a robust aluminium 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:** -10 to 60 °C
- **Operating pressure :** 0 to 40 bar
- **Nominal sizes:** DN 15 to 100
- **Body configurations:** 2/2-way body
- **Connection types:** Flange
- **Connection standards:** ANSI | ASME | EN | ISO | JIS
- **Body materials:** 1.4408, investment casting material | EN-GJS-400-18-LT, SG iron material
- **Seat seal materials:** 1.4404 | PTFE | PTFE, reinforced
- **Conformities:** CRN | EAC | FDA | FMEDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | TA Luft (German Clean Air Act)

Technical data depends on the respective configuration



Product description

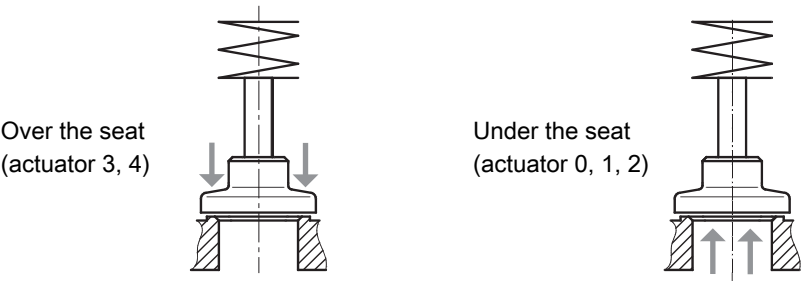
Construction



Item	Name	Materials
1	Optical position indicator	
2	Piston actuator	Aluminium
3	Valve body	1.4408, investment casting EN-GJS-400-18-LT (GGG 40.3), SG iron

Flow direction

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



Under the seat is the preferred flow direction with incompressible liquid media to avoid water hammers
Over the seat only with control function – normally closed (NC)

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:

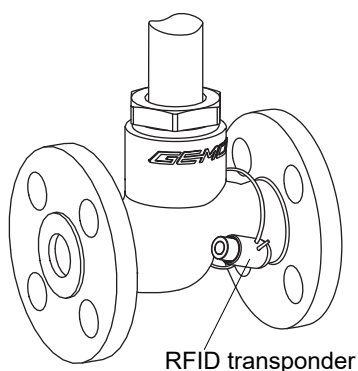
www.gemu-group.com/conexo

Ordering

GEMÜ Conexo must be ordered separately with the ordering option "CONEXO".

In the corresponding design with CONEXO, this product has an RFID chip for electronic identification purposes. The position of the RFID chip can be seen below.

Installing the RFID chip



Availability

Actuator assignment

DN	Normally closed					Normally open/double acting	
	Piston dia. [mm]						
	50	50	70	70	120	70	120
	Actuator size						
	0	3	1	4	2	1	2
15	X	X	X	X	-	X	-
20	X	X	X	X	X	X	X
25	X	X	X	X	X	X	X
32	-	-	X	X	X	X	X
40	-	-	X	X	X	X	X
50	-	-	X	X	X	X	X
65	-	-	-	-	X	-	X
80	-	-	-	-	X	-	X
100	-	-	-	-	X	-	X

Flange

DN	Connection type code ¹⁾						
	8		10	11	39		48
	Material code ²⁾						
	37	90	37	37	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	X
65	X	X	-	X	X	X	-
80	X	X	-	X	X	X	-
100	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 125/150 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)

Design

Design	
Media temperature -10 to 210 °C (code 2023)	Seat seal (code 5G and 10)
For contact with foodstuffs, the product must be ordered with the following ordering options (code 2013)	Seat seal (code 5, 5G and 10) Valve body material (code 37)

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
DN 65	65
DN 80	80
DN 100	100

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 125/150 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
Normally open (NO)	2
Double acting (DA)	3
Note: Piston, dia. 50 mm, not for control function code 2 and 3	

8 Actuator version	Code
Actuator size 0	0
Actuator size 1	1
Actuator size 2	2
Actuator size 3	3
Actuator size 4	4

9 Type of design	Code
Standard	
Spindle seal PTFE-PTFE	2013
For higher operating temperatures	2023

10 Special version	Code
Standard	
Rigid plug fixing Special version for oxygen, (max. temperature 60 °C; max. operating pressure 10 bar), flow direction only possible under the seat! Media-wetted seal materials and auxiliary materials with BAM testing	B
Rigid plug fixing	C
Special version for oxygen, (max. temperature 60 °C; max. operating pressure 10 bar), flow direction only possible under the seat! Media-wetted seal materials and auxiliary materials with BAM testing	S

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	1	Actuator size 1
9 Type of design		Standard
10 Special version		Standard
11 CONEXO		Without

Technical data

Medium

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.

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 – 180 °C
Special version: -10 – 210 °C only with the design ordering option (code 2023)
-10 – 60 °C only with the special function ordering option (code S)

Ambient temperature: -10 – 60 °C

Control medium temperature: 0 – 60 °C

Storage temperature: 0 – 40 °C

Pressure

Operating pressure:

DN	Normally closed					Normally open/double acting	
	Piston dia. [mm]						
	50	50	70	70	120	70	120
	Actuator size						
	0	3	1	4	2	1	2
15	12.0	10.0	40.0	10.0	-	40,0	-
20	6.0	10.0	20.0	10.0	40.0	40,0	40,0
25	2.5	10.0	10.0	10.0	40.0	32,0	40,0
32	-	-	7.0	10.0	22.0	20,0	40,0
40	-	-	4.5	10.0	15.0	12,0	40,0
50	-	-	3.0	10.0	10.0	8,0	30,0
65	-	-	-	-	7.0	-	16,0
80	-	-	-	-	5.0	-	12,0
100	-	-	-	-	2,5	-	8,0

Operating pressure for seal material PTFE (code 5), for seal material steel (code 10) only 60% of the values stated above.

Pressures in bar

All pressures are gauge pressures.

For max. operating pressures the pressure / temperature correlation must be observed.

Control pressure:

DN	Normally closed					Normally open/double acting	
	Piston dia. [mm]						
	50 mm	50 mm	70 mm	70 mm	120 mm	70 mm	120 mm
	Actuator size						
	0	3	1	4	2	1	2
15	4,7 - 10,0	Max. 7	5,5 - 10,0	Max. 8		max. 5 bar	max. 7 bar
20	4,7 - 10,0		5,5 - 10,0		4,0 - 8,0	max. 7 bar	max. 7 bar
25	4,7 - 10,0		5,5 - 10,0		4,0 - 8,0	max. 7 bar	max. 7 bar
32			5,5 - 10,0		4,0 - 8,0	max. 7 bar	max. 7 bar
40			5,5 - 10,0		4,0 - 8,0	max. 7 bar	max. 7 bar
50			5,5 - 10,0		5,5 - 8,0	max. 7 bar	max. 7 bar
65			-		5,5 - 8,0	max. 7 bar	max. 7 bar
80			-		5,5 - 8,0	max. 7 bar	max. 7 bar
100	-		-		5,5-8,0	Max. 7	Max. 7

Pressures in bar

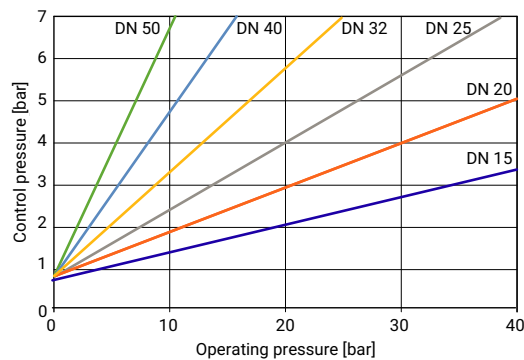
All pressures are gauge pressures.

Observe control pressure / operating pressure diagram

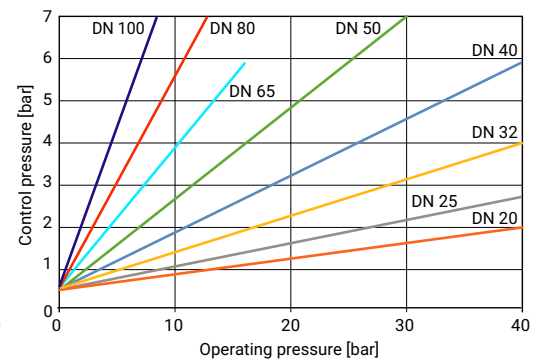
Control pressure/operating pressure diagram:
Control function
**Normally open (NO) (code 2),
double acting (DA) (code 3)**

Flow direction: Under the seat

Actuator size 1

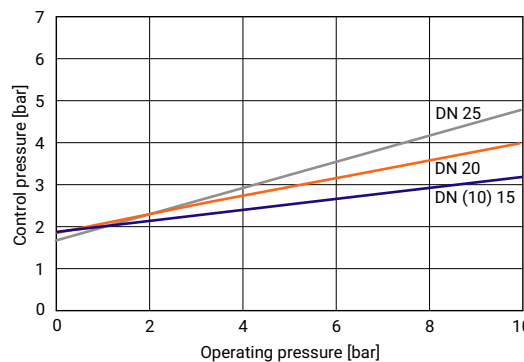


Actuator size 2

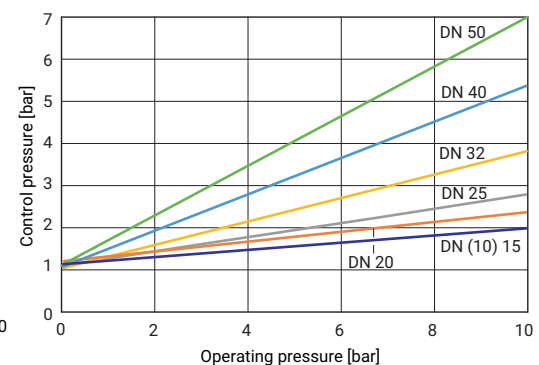

Normally closed (NC) (code 1)

Flow direction: Over the seat

Actuator size 3



Actuator size 4



Min. control pressure dependent on operating pressure

Pressure/temperature correlation:

Connection type code	Material code	Permissible 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	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	17.0	16.0	14.8	13.9	12.1	10.2

All pressures are gauge pressures.

The valves are suitable for temperatures as low as -10 °C

RT = room temperature

Pressure/temperature correlation for connection code 48: DN 15–40 see connection code 10, DN 50 see connection code 8.

Pressure rating:

PN 16

PN 25

PN 40

Kv values:

DN	Kv values
15	4.6
20	8.0
25	13.0
32	22.0
40	35.0
50	50.0
65	90.0
80	127.0
100	200.0

Kv values in m³/h

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

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

Filling volume:

Actuator 0, 3: 0.05 dm³

Actuator 1, 4: 0.125 dm³

Actuator 2: 0.625 dm³

Product conformity

Food:	Regulation (EC) No. 1935/2004* Regulation (EC) No. 10/2011*										
TA Luft (German Clean Air Act)*:	The product complies with the equivalence requirements of section 5.2.6.4 of the German Clean Air Act (TA Luft / VDI 2440 according to section 3.3.1.3)										
Pressure Equipment Directive:	2014/68/EU										
Machinery Directive:	2006/42/EC										
Approvals:	FDA* CRN * depending on version and/or operating parameters										
FMEDA:	<table><tr><td>Product description:</td><td>GEMÜ globe valve 532</td></tr><tr><td>Device type:</td><td>A</td></tr><tr><td>Fail safe function:</td><td>Due to the fail safe function, the straight seat or angle seat globe valve is placed in the closed position (with control function 1) or open position (with control function 2), or it seals tightly (with control function 1).</td></tr><tr><td>HFT (Hardware Fault Tolerance):</td><td>0</td></tr><tr><td colspan="2">There is no proof of systematic suitability in accordance with IEC 61508.</td></tr></table>	Product description:	GEMÜ globe valve 532	Device type:	A	Fail safe function:	Due to the fail safe function, the straight seat or angle seat globe valve is placed in the closed position (with control function 1) or open position (with control function 2), or it seals tightly (with control function 1).	HFT (Hardware Fault Tolerance):	0	There is no proof of systematic suitability in accordance with IEC 61508.	
Product description:	GEMÜ globe valve 532										
Device type:	A										
Fail safe function:	Due to the fail safe function, the straight seat or angle seat globe valve is placed in the closed position (with control function 1) or open position (with control function 2), or it seals tightly (with control function 1).										
HFT (Hardware Fault Tolerance):	0										
There is no proof of systematic suitability in accordance with IEC 61508.											

Mechanical data**Weight:****Total weight without controller**

DN	Actuator size		
	0, 3	1, 4	2
15	3.3	4.1	-
20	4.3	5.1	-
25	5.2	6.0	-
32	-	8.2	10.9
40	-	9.5	12.2
50	-	12.3	14.7
65	-	-	21.2
80	-	-	25.0
100	-	-	33.1

Weights in kg

Valve body

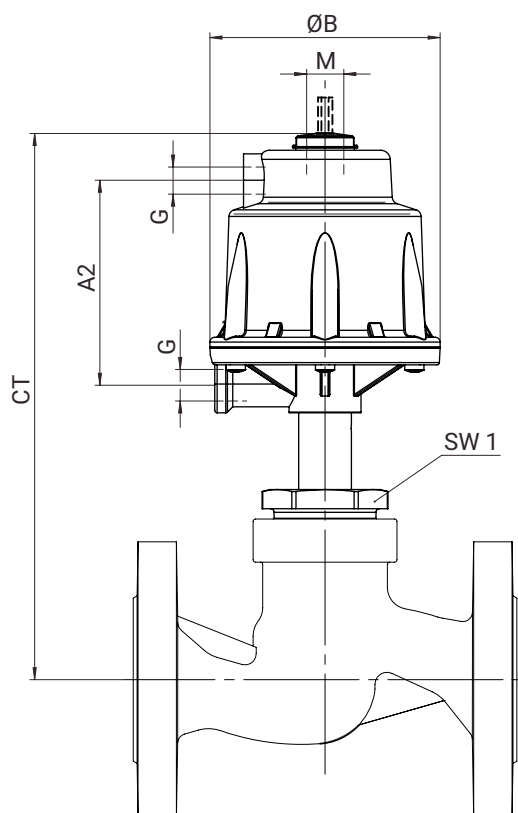
DN	Weight
15	2.2
20	3.0
25	3.7
32	5.3
40	6.3
50	11.5
65	12.7
80	15.4
100	23.0

Weights in kg

Dimensions

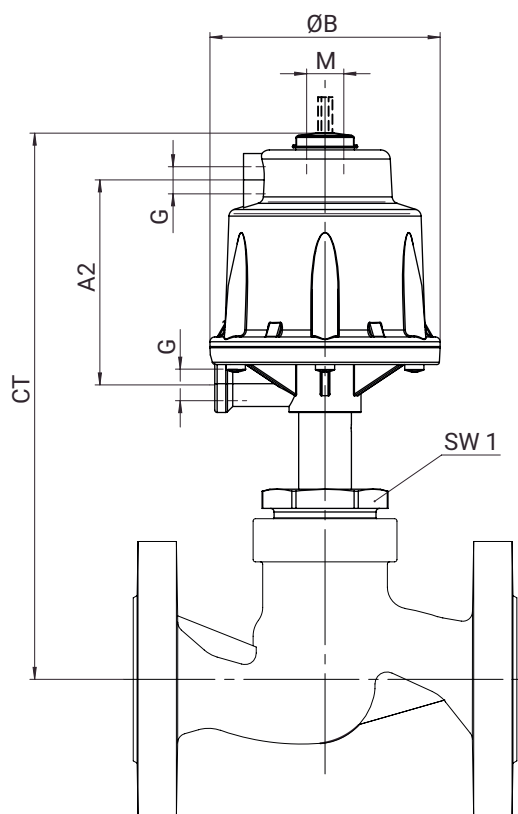
Installation dimensions

Connection type code 8, 10, 39, 48



DN	WAF1 metric	G	Actuator size											
			0, 3				1, 4				2			
			A2	ØB	CT	M	A2	ØB	CT	M	A2	ØB	CT	M
15	36.0	G 1/4	-	71.0	191.0	M16x1	85.5	96.0	201.0	M16x1	-	-	-	-
20	41.0	G 1/4	-	71.0	198.0	M16x1	85.5	96.0	208.0	M16x1	123.0	164.0	283.0	M22x1.5
25	46.0	G 1/4	-	71.0	209.0	M16x1	85.5	96.0	219.0	M16x1	123.0	164.0	294.0	M22x1.5
32	55.0	G 1/4	-	-	-	-	85.5	96.0	224.0	M16x1	123.0	164.0	299.0	M22x1.5
40	60.0	G 1/4	-	-	-	-	85.5	96.0	235.0	M16x1	123.0	164.0	310.0	M22x1.5
50	75.0	G 1/4	-	-	-	-	85.5	96.0	243.0	M16x1	123.0	164.0	318.0	M22x1.5
65	75.0	G 1/4	-	-	-	-	-	-	-	-	123.0	164.0	346.0	M22x1.5
80	75.0	G 1/4	-	-	-	-	-	-	-	-	123.0	164.0	361.0	M22x1.5
100	75.0	G 1/4	-	-	-	-	-	-	-	-	123.0	164.0	382.0	M22x1.5

Dimensions in mm

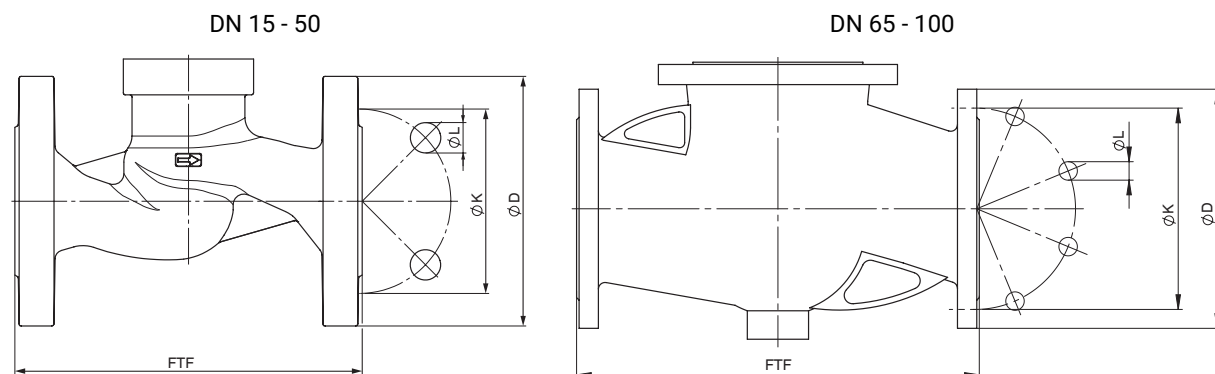
Connection type code 11

DN	WAF1 metric	G	Actuator size											
			0, 3				1, 4				2			
			A2	ØB	CT	M	A2	ØB	CT	M	A2	ØB	CT	M
15	36.0	G 1/4	-	71.0	197.0	M16x1	85.5	96.0	207.0	M16x1	-	-	-	-
20	41.0	G 1/4	-	71.0	204.0	M16x1	85.5	96.0	214.0	M16x1	123.0	164.0	291.0	M22x1.5
25	46.0	G 1/4	-	71.0	215.0	M16x1	85.5	96.0	225.0	M16x1	123.0	164.0	302.0	M22x1.5
32	55.0	G 1/4	-	-	-	-	85.5	96.0	230.0	M16x1	123.0	164.0	307.0	M22x1.5
40	60.0	G 1/4	-	-	-	-	85.5	96.0	241.0	M16x1	123.0	164.0	318.0	M22x1.5
50	75.0	G 1/4	-	-	-	-	85.5	96.0	261.0	M16x1	123.0	164.0	338.0	M22x1.5

Dimensions in mm

Body dimensions

Flange EN (code 8)



Connection type flange, length EN 558 (code 8)¹⁾, SG iron material (code 90)²⁾

DN	NPS	ø D	FTF	ø k	ø L	n
15	1/2"	95.0	130.0	65.0	14.0	4
20	3/4"	105.0	150.0	75.0	14.0	4
25	1"	115.0	160.0	85.0	14.0	4
32	1 1/4"	140.0	180.0	100.0	18.0	4
40	1 1/2"	150.0	200.0	110.0	18.0	4
50	2"	165.0	230.0	125.0	18.0	4
65	2 1/2"	185.0	290.0	145.0	18.0	4
80	3"	200.0	310.0	160.0	18.0	8
100	4"	220.0	350.0	180.0	18.0	8

Connection type flange, length EN 558 (code 8)¹⁾, investment casting material (code 37)²⁾

DN	NPS	ø D	FTF	ø k	ø L	n
50	2"	165.0	230.0	125.0	18.0	4
65	2 1/2"	185.0	290.0	145.0	18.0	4
80	3"	200.0	310.0	160.0	18.0	8
100	4"	220.0	350.0	180.0	18.0	8

Dimensions in mm

n = number of bolts

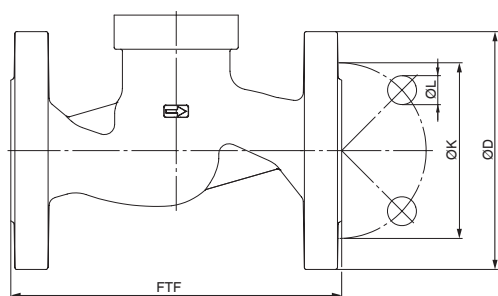
1) Connection type

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

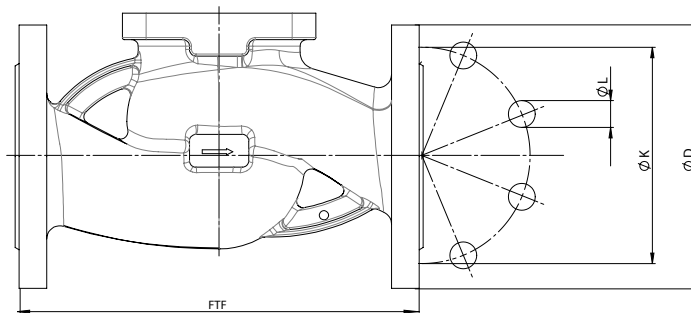
2) Valve body material

Code 37: 1.4408, investment casting

Code 90: EN-GJS-400-18-LT (GGG 40.3)

Flange EN (code 10, 11, 48)

DN 15 - 50



DN 65 - 100

Connection type flange, length EN 558 (code 10)¹⁾, investment casting material (code 37)²⁾

DN	NPS	ø D	FTF	ø k	ø L	n
32	1¼"	140.0	180.0	100.0	18.0	4
40	1½"	150.0	200.0	110.0	18.0	4

Connection type flange, length EN 558 (code 11)¹⁾, investment casting material (code 37)²⁾

DN	NPS	ø D	FTF	ø k	ø L	n
15	1/2"	95.0	130.0	65.0	14.0	4
20	3/4"	105.0	150.0	75.0	14.0	4
25	1"	115.0	160.0	85.0	14.0	4
32	1¼"	140.0	180.0	100.0	18.0	4
40	1½"	150.0	200.0	110.0	18.0	4
50	2"	165.0	230.0	125.0	18.0	4
65	2½"	185.0	290.0	145.0	18.0	8
80	3"	200.0	310.0	160.0	18.0	8
100	4"	235.0	350.0	190.0	22.0	8

Connection type flange, length EN 558 (code 48)¹⁾, investment casting material (code 37)²⁾

DN	NPS	ø D	FTF	ø k	ø L	n
15	1/2"	95.0	108.0	70.0	15.0	4
20	3/4"	100.0	117.0	75.0	15.0	4
25	1"	125.0	127.0	90.0	19.0	4
40	1½"	140.0	160.0	105.0	19.0	4
50	2"	155.0	203.0	120.0	19.0	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

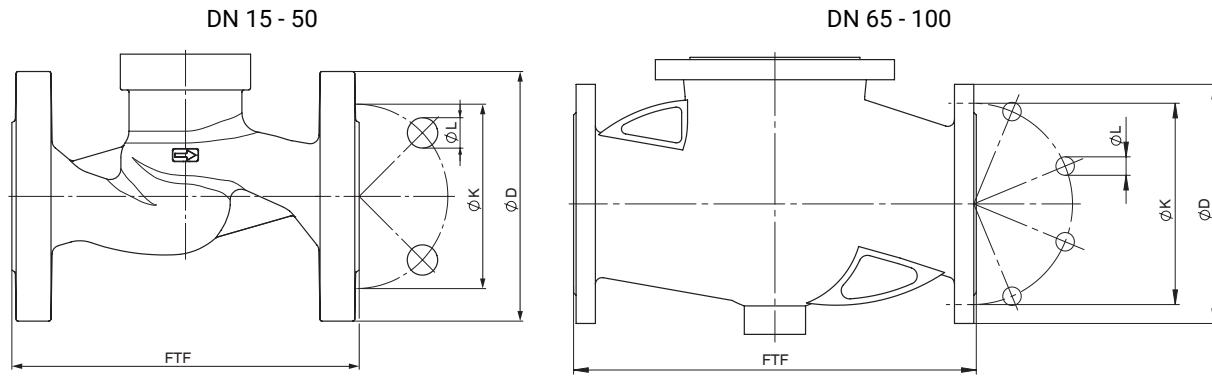
Code 11: Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

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 ANSI Class (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
65	2½"	180.0	290.0	139.7	19.0	4
80	3"	190.0	310.0	152.4	19.0	4
100	4"	230.0	350.0	190.5	19.0	8

Dimensions in mm

n = number of bolts

1) Connection type

Code 39: Flange ANSI Class 125/150 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)



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