

GEMÜ 519 eSyLite

Motorized globe valve



Features

- Motorized linear actuator for Open/Close applications
- Self-locking spindle actuator
- Safety shut-down integrated
- Standard optical position indicator and manual override
- Integrated emergency power supply module (optional)
- Electrical position indicator GEMÜ 1215 (optional)

Description

The GEMÜ 519 eSyLite is a motorized 2/2-way globe valve. It is available as an Open/Close version. 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. An integrated optical position indicator is standard. The self-locking actuator holds its position in a stable manner in the event of power supply failure.

Technical specifications

- **Media temperature:** -10 to 180 °C
- **Ambient temperature:** -10 to 60 °C
- **Operating pressure :** 0 to 40 bar
- **Nominal sizes:** DN 15 to 50
- **Body configurations:** 2/2-way body
- **Connection types:** Flange
- **Connection standards:** ANSI | EN | JIS
- **Body materials:** 1.4408, investment casting material | EN-GJS-400-18-LT, SG iron material
- **Seat seal materials:** 1.4404 | PTFE | PTFE, reinforced
- **Supply voltage:** 24 V DC
- **Actuating speed:** max. 3 mm/s
- **Protection class:** IP65
- **Conformities:** FDA | Regulation (EC) No. 1935/2004 | TA Luft (German Clean Air Act)

Technical data depends on the respective configuration

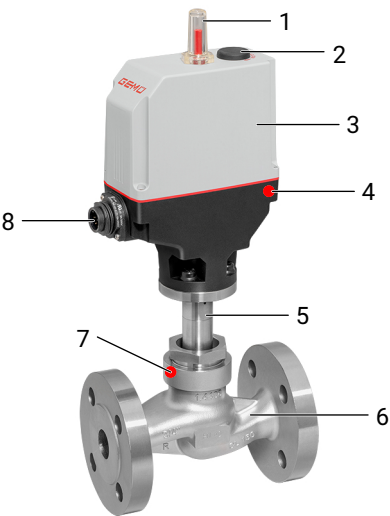


further information
webcode: GW-519



Product description

Construction



Item	Name	Materials
1	Optical position indicator	PA 12
2	Manual override	
3	Motorized actuator	Reinforced polyamide
4	CONEXO actuator RFID chip	
5	Distance piece with leak detection hole	1.4305 / 1.4408
6	Valve body	1.4408, EN-GJS-400-18-LT (GGG 40.3)
7	CONEXO body RFID chip	
8	Electrical connection	

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".

Availabilities

Availability of valve bodies

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	X

X = Standard

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, length only for body configuration D

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)

Product compliance

	Approved designs		
	Valve body material	Seat seal	Type of design
Food			
FDA Regulation (EC) 1935/2004 Regulation (EC) 10/2011	1.4408, investment casting (code 37)	PTFE (code 5) PTFE, glass fibre reinforced (code 5G) 1.4404 (code 10)	Spindle seal PTFE-PTFE (code 2013)

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, electrically operated eSyLite	519

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 125/150 RF, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1, length only for body configuration D	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 Voltage/frequency	Code
24 V DC	C1

8 Control module	Code
ON/OFF actuator (economy)	A0
ON/OFF actuator (economy) emergency power supply module (NC)	A1
ON/OFF actuator (economy) emergency power supply module (NO)	A2

8 Control module	Code
OPEN/CLOSE control with mounted GEMU 1215 position indicator	Z0
OPEN/CLOSE control with mounted GEMÜ 1215 position indicator emergency power supply module (NC)	Z1
OPEN/CLOSE control with mounted GEMÜ 1215 position indicator emergency power supply module (NO)	Z2

9 Actuator version	Code
Actuator size 1	1A
Actuator size 3	3A

10 Type of design	Code
Standard	
Spindle seal PTFE-PTFE	2013

11 Special version	Code
Standard	
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

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

Order example

Ordering option	Code	Description
1 Type	519	Globe valve, electrically operated eSyLite
2 DN	20	DN 20
3 Body configuration	D	2/2-way body
4 Connection type	10	Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
5 Valve body material	37	1.4408, investment casting
6 Seat seal	5	PTFE
7 Voltage/frequency	C1	24 V DC
8 Control module	A0	ON/OFF actuator (economy)
9 Actuator version	1A	Actuator size 1
10 Type of design		Standard
11 Special version		Standard
12 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.

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

Temperature

Media temperature: -10 – 180 °C

Ambient temperature: -10 – 60 °C
* depending on version and/or operating parameters (see chapter Duty cycle and service life)
If the emergency power module is used (control module code A1, A2, Z1, Z2), the maximum ambient temperature is reduced to 40 °C.

Storage temperature: -25 – 60 °C

Pressure

Operating pressure:

DN	Actuator version 1A	Actuator version 3A
15	40	-
20	40	-
25	40	-
32	22	40
40	13	25
50	8	17

All pressures are gauge pressures.

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

Leakage rate: Leakage rate A to P11/P12 EN 12266-1

Pressure/temperature correlation:

Connection type code ¹⁾	Material code ²⁾	Max. allowable operating pressures in bar at temperature in °C			
		RT	100	150	200
8	37	16.0	16.0	14.5	13.4
10	37	25.0	25.0	22.7	21.0
11	37	40.0	40.0	36.3	33.7
39	37	19.0	16.0	14.8	13.6
8	90	16.0	16.0	15.5	14.7
39	90	17.0	16.0	14.8	13.9

Pressure/temperature correlation:

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, length only for body configuration D

2) **Valve body material**

Code 37: 1.4408, investment casting

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

Kv values:

DN 15:	4.6 m³/h
DN 20:	8.0 m³/h
DN 25:	13.0 m³/h
DN 32:	22.0 m³/h
DN 40:	35.0 m³/h
DN 50:	50.0 m³/h

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

Product conformity

Machinery Directive: 2006/42/EC

Pressure Equipment Directive: 2014/68/EU

Food: Regulation (EC) No. 1935/2004*
 Regulation (EC) No. 10/2011*
 FDA*
 * depending on version and/or operating parameters

EMC Directive: 2014/30/EU

RoHS Directive: 2011/65/EU

Mechanical data

Protection class: IP 65 acc. to EN 60529

Actuating speed: Max. 3 mm/s

Installation position: Optional

Weight:

Actuator

DN	Actuator size	Weight without valve body
15	1A	1.20
20	1A	1.21
25	1A	1.22
32	1A	1.48
32	3A	2.10
40	1A	1.75
40	3A	2.25
50	1A	2.00
50	3A	2.50

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

Mechanical environmental conditions: Class 4M8 acc. to EN 60721-3-4:1998

Vibration: 5g acc. to IEC 60068-2-6 Test Fc

Shock: 25g acc. to 60068-2-27 Test Ea

Actuator duty cycle and service life

Service life: Class A acc. to EN 15714-2
Minimum 100,000 switching cycles at room temperature and permissible duty cycle.

Duty cycle: max. 30% duty

Electrical data

Supply voltage: 24 V DC
Tolerance $\pm 10\%$

Close tight current / rated current: Actuator size 1A: 1.1 A
Actuator size 3A: 2.3 A

Starting current / maximum current: Actuator size 0E: 0.7 A
Actuator size 1A: 2.4 A
Actuator size 3A: 4.5 A

Standby current consumption: approx. 10 mA

Digital input signals

Input voltage: max. 30 V DC
≥ 56 kΩ

High level: ≥ 18 V DC

Low level: ≤ 5 V DC

Minimum actuation duration: 600 ms

Input current: < 0.6 mA

Emergency power supply module

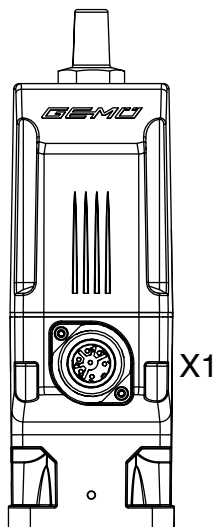
Charging current: Actuator size 0E: Max. 0.10 A
Actuator size 1A: Max. 0.16 A
Actuator size 3A: Not available

Charging time: approx. 13 min

Service life: Guide value at 25 °C ambient temperature, approx. 3 years

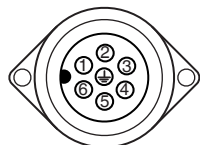
Electrical connection

Position of the connectors



Electrical connection

Connection X1



7-pin plug, Binder, type 693

Pin	Signal name
1	24 V supply voltage
2	GND
3	Digital input OPEN
4	Digital input CLOSED
5	n.c.
6	n.c.
7	n.c.

Preferred direction if both digital inputs are present
for device version 00
(see operating instructions – Product label)

Control module ordering option	Preferred direction
A0, Y0, Z0	OPEN
A1, Y1, Z1	CLOSED
A2, Y1, Z2	OPEN

Preferred direction if both digital inputs are present
for device version 01
(see operating instructions – Product label)

Control module ordering option	Preferred direction
A0, Y0, Z0	OPEN
A1, Y1, Z1	OPEN

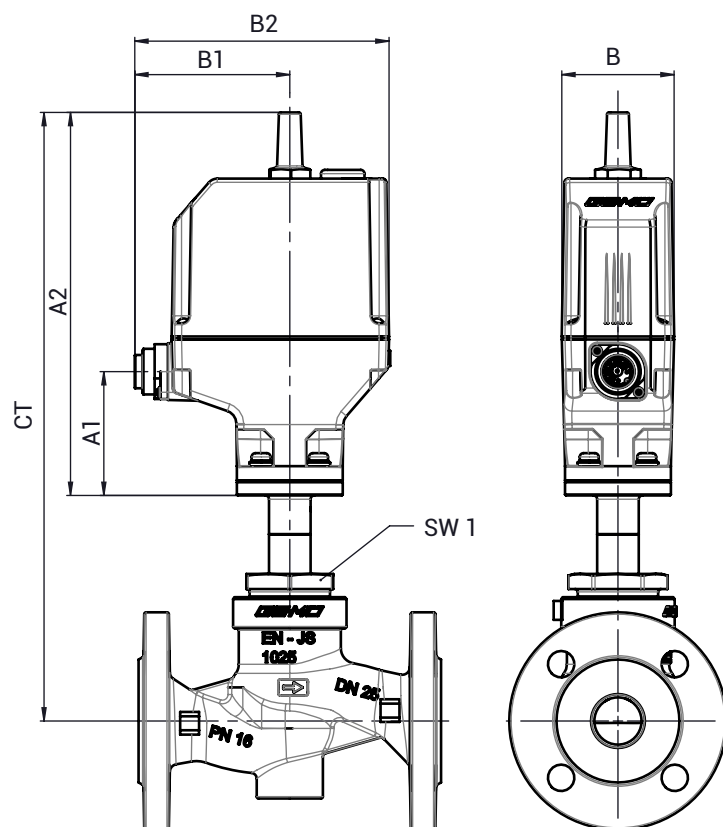
Preferred direction if both digital inputs are present
for device version 01
(see operating instructions – Product label)

A2, Y2, Z2

CLOSED

Dimensions

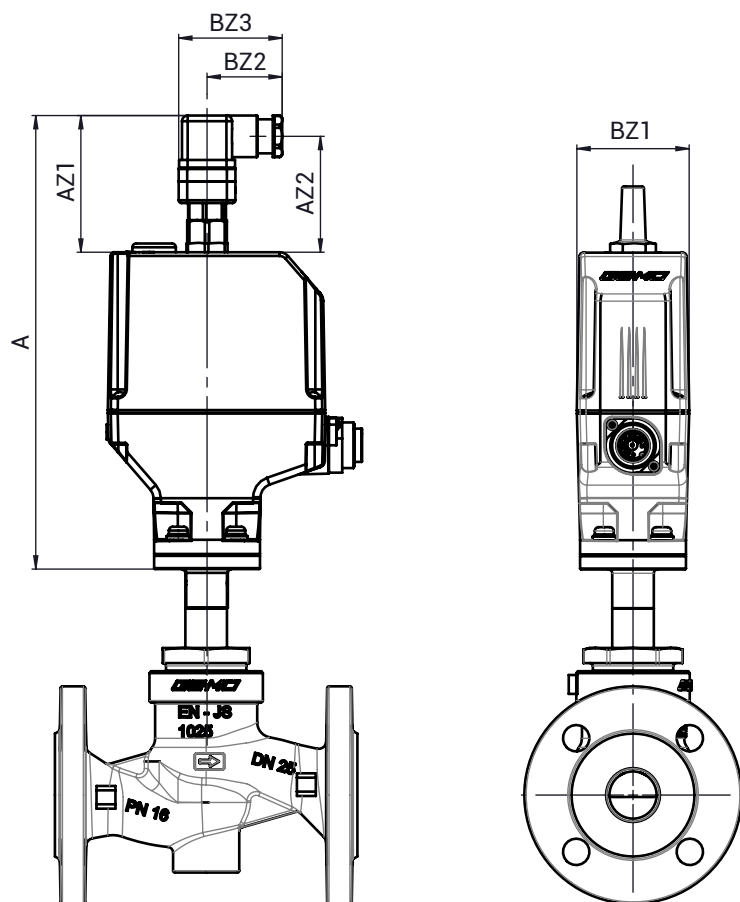
Installation and actuator dimensions without position indicator



DN	Actuator version	A1	A2	B	B1	B2	CT	SW1
15	1A	65.5	203.0	59.5	82.0	134.5	304.0	36
20	1A	65.5	203.0	59.5	82.0	134.5	311.0	41
25	1A	65.5	203.0	59.5	82.0	134.5	322.0	46
32	1A	65.5	203.0	59.5	82.0	134.5	326.0	55
32	3A	72.0	232.0	80.0	94.5	167.0	356.0	55
40	1A	65.5	203.0	59.5	82.0	134.5	346.0	60
40	3A	72.0	232.0	80.0	94.5	167.0	376.0	60
50	1A	65.5	203.0	59.5	82.0	134.5	352.0	75
50	3A	72.0	232.0	80.0	94.5	167.0	382.0	75

Dimensions in mm

Installation and actuator dimensions with position indicator

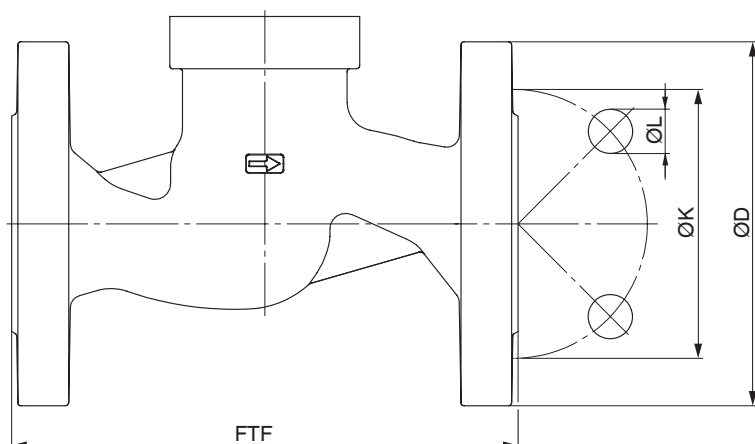


Actuator version	A	AZ1	AZ2	BZ1	BZ2	BZ3
1A	240.0	72.0	61.0	30.0	40.0	55.0
3A	269.0	72.0	61.0	30.0	40.0	55.0

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	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

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

Dimensions in mm

n = number of bolts

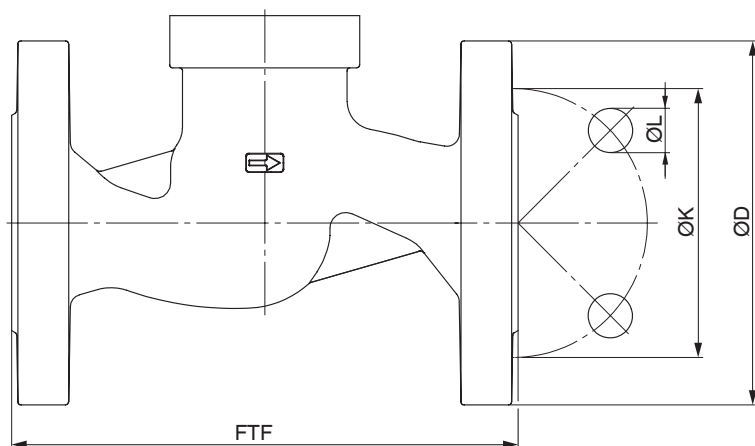
1) Connection type

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/JIS (code 10, 11, 48)**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

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	16.0	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

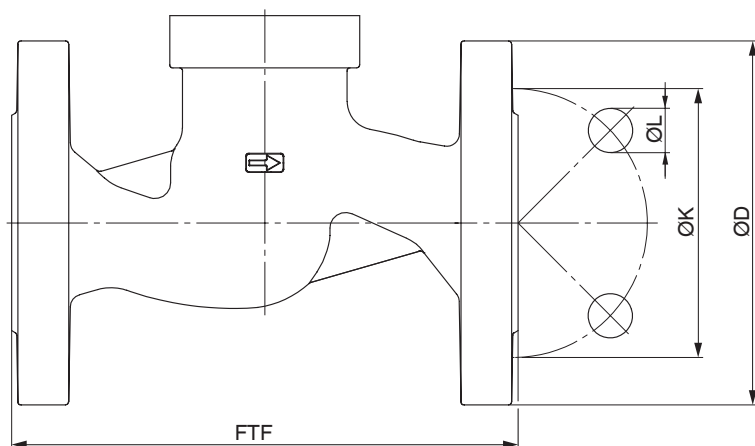
Code 11: Flange EN 1092, PN 40, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

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

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, length only for body configuration D

2) Valve body material

Code 37: 1.4408, investment casting

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

Accessories



GEMÜ 1215

Electrical position indicator

The GEMÜ 1215 electrical position indicator is suitable for mounting to pneumatically operated linear actuators. The position (end position open) of the valve spindle is reliably detected and fed back electronically by the operating bush with a microswitch.

The product cannot be ordered later. It must be selected as order option "Control module" (see order data) when ordering.



GEMÜ 1235

Electrical position indicator

The GEMÜ 1235 electrical position indicator is suitable for installation on pneumatically operated linear actuators and, with specific mounting parts, likewise suitable for pneumatically operated quarter turn actuators as well as further selected actuator versions. The position of the valve spindle is reliably electronically detected and evaluated using play-free and non-positive mounting. Intelligent microprocessor-controlled functions facilitate commissioning and support during operation. The current position of the valve is displayed via high-visibility LEDs and fed back via electrical signals.

The product cannot be ordered later. "Control module" must be selected as an ordering option when ordering (see order data).



GEMÜ 1218

Connector

The GEMÜ 1218 is a connector (cable socket / cable plug), 7-pin. Straight and/or 90° angled plug type.

GEMÜ 1218 Binder connector			
Connection X1 – supply voltage, relay outputs			
Binder plug	468/eSy series mating connector	Terminal compartment/ screws, 7-pin	88220649 ¹⁾
		Terminal compartment/ screws, 7-pin, 90°	88377714
		Terminal compartment/ screws, 7-pin, 90°, fitted with a 2 metre cable set	88770522

1) provided in the scope of delivery



GEMÜ 1573

Switching power supply unit

The GEMÜ 1573 switching power supply unit converts unstable input voltages from 100 to 240 V AC into a continuous DC voltage. It can be used as an accessory for valves with motorized actuators e. g. GEMÜ eSyLite, eSyStep und eSyDrive and for additional devices with a 24 V DC power supply. Different power levels, output currents and a 48 V DC version for servoDrive actuators are available.

GEMÜ 1573 switching power supply unit			
Input voltage	Output voltage	Output current	Item number

**GEMÜ 1573****Switching power supply unit**

The GEMÜ 1573 switching power supply unit converts unstable input voltages from 100 to 240 V AC into a continuous DC voltage. It can be used as an accessory for valves with motorized actuators e. g. GEMÜ eSyLite, eSyStep und eSyDrive and for additional devices with a 24 V DC power supply. Different power levels, output currents and a 48 V DC version for servoDrive actuators are available.

GEMÜ 1573 switching power supply unit			
100 - 240 V AC	24 V DC	5 A	88660400
		10 A	88660401



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