GEMÜ 514

Pneumatically operated angle seat globe valve

Features

- Robust actuator housing made of aluminium
- Option for increased operating temperatures
- Improved control characteristics thanks to POM piston sleeve
- Optional for food contact according to Regulation (EC) No. 1935/2004
- High flow rates due to angle seat design
- Suitable for vacuum up to 20 mbar (a)

Description

2/2-way angle seat globe valve GEMÜ 514 has a low-maintenance 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 also 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 25 bar
- **Nominal sizes:** DN 8 to 80
- **Body configurations:** Angle valve body I Straight through body
- **Connection types:** Flange I Spigot I thread
- **Connection standards :** ANSI I ASME I BS I DIN I EN I ISO I JIS I NPT I SMS
- **Body materials:** 1.4408, investment casting material I 1.4435, investment casting material
- **Seat seal materials:** 1.4404 I PTFE I PTFE, reinforced
- **Conformities:** CRN I EAC I FDA I FMEDA I Oxygen I Reg. (EU) No. 10/2011 I Regulation (EC) No. 1935/2004 I RoHS I TA Luft (German Clean Air Act)

Technical data depends on the respective configuration

further information
webcode: GW-514

Product description

Construction

Item	Name	Materials
1	Optical position indicator	
2	Piston actuator	Aluminium
3	Valve body	1.4435 investment casting; 1.4408 investment casting

GEMÜ CONEXO

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

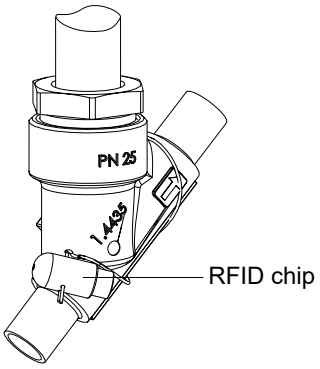
Thanks to serialization, every valve and every relevant valve component such as the body, actuator or diaphragm, and even automation components, can be clearly traced and read using the CONEXO pen RFID reader. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves 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 (1) for electronic identification purposes. The position of the RFID chip can be seen below. The CONEXO pen helps read out information stored in the RFID chips. The CONEXO app or CONEXO portal is required to display this information.



Range overview

Availability of valve bodies

Spigot

DN	Connection type code [1]												
	0	16	17			37		59			60		
	Material code [2]												
	34	34	34	37	C2	34	37	34	37	C2	34	37	C2
8	-	-	-	-	-	-	-	-	-	-	-	-	X
10	-	X	X	-	X	-	-	-	-	-	X	-	X
15	X	X	X	X	X	-	-	X	-	X	X	X	X
20	X	X	X	X	X	-	-	X	-	X	X	X	X
25	X	X	X	X	X	X	-	X	-	X	X	X	X
32	-	X	X	X	X	-	-	-	-	-	X	X	X
40	X	X	X	X	X	X	-	X	-	X	X	X	X
50	X	X	X	X	X	X	-	X	-	X	X	X	X
65	-	-	-	X	X	-	X	-	X	X	-	X	X
80	-	-	-	X	X	-	X	-	X	X	-	X	X

X = Standard

1) **Connection type**
Code 0: Spigot DIN
Code 16: Spigot DIN EN 10357 series B (2014 issue; formerly DIN 11850 series 1)
Code 17: Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2
Code 37: Spigot SMS 3008
Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 issue)/DIN 11866 series C
Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 issue)/DIN 11866 series B

2) **Valve body material**
Code 34: 1.4435, investment casting
Code 37: 1.4408, investment casting
Code C2: 1.4435, investment casting

Threaded connection

DN	Connection type code [1]			
	1	3C	3D	9
	Material code [2]			
	37			
	Body configuration code D [3]			
10	X	-	-	-
15	X	X	X	X
20	X	X	X	X
25	X	X	X	X
32	X	X	X	X
40	X	X	X	X
50	X	X	X	X
65	X	X	X	X
80	X	X	X	X

DN	Connection type code [1]	
	1	3D
	Material code 37 [2]	
	Body configuration code E [3]	
15	X	X
20	X	X
25	X	X
32	X	X
40	X	X
50	X	X

X = Standard

1) **Connection type**
Code 1: Threaded socket DIN ISO 228
Code 3C: Threaded socket Rc ISO 7-1, EN 10226-2, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8
Code 3D: Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8
Code 9: Threaded spigot DIN ISO 228

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

3) **Housing configuration**
Code D: 2/2-way body
Code E: Angle valve body

Flange

DN	Connection type code [1]	
	13	47
	Material code 34 [2]	
15	X	X
20	X	X
25	X	X
32	X	X
40	X	X
50	X	X

X = Standard

1) **Connection type**
Code 13: Flange EN 1092, PN 25, form B
Code 47: Flange ANSI Class 150 RF

2) **Valve body material**
Code 34: 1.4435, investment casting

Design availability

Design	
Grade of surface finish (code 1903, 1904, 1909) as per order data	Valve body material (code C2)
Media temperature -10 to 210 °C (code 2023)	Seat seal (code 5G, 10)
For contact with foodstuffs, the product must be ordered with the following ordering options (code 2013)	Seat seal (code 5, 5G, 10) Valve body material (code 34, 37, C2)

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
Angle seat globe valve, pneumatically operated, aluminium piston actuator	514

2 DN	Code
DN 8	8
DN 10	10
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50
DN 65	65
DN 80	80

3 Housing configuration	Code
2/2-way body	D
Angle valve body	E

4 Connection type	Code
Spigot	
Spigot DIN	0
Spigot DIN EN 10357 series B (2014 issue; formerly DIN 11850 series 1)	16
Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2	17
Spigot SMS 3008	37
Spigot ASME BPE/DIN EN 10357 series C (from 2022 issue)/DIN 11866 series C	59
Spigot ISO 1127/DIN EN 10357 series C (2014 issue)/ DIN 11866 series B	60
Threaded connection	
Threaded socket DIN ISO 228	1
Threaded socket Rc ISO 7-1, EN 10226-2, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8	3C
Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8	3D
Threaded spigot DIN ISO 228	9
Flange	
Flange EN 1092, PN 25, form B	13
Flange ANSI Class 150 RF	47

5 Valve body material	Code
Investment casting material	
1.4435, investment casting	34
1.4408, investment casting	37
1.4435, investment casting	C2

5 Valve body material	Code
Note: A surface finish from the order code table "Type of design"" must be specified for valve body material C2.	

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

7 Control function	Code
Normally closed (NC)	1
Normally open (NO)	2
Double acting (DA)	3
Note: Code 2 and 3 not for actuator size 0	
Double acting and normally open	8
Note: Only for control valves	

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 Regulating cone	Code
Please find the number of the optional regulating cone (R-No.) for the linear or equal-percentage modified regulating cone in the Kv value table.	R....

10 Type of design	Code
Standard	
Ra ≤ 0.6 µm (25 µinch) for media wetted surfaces, in accordance with ASME BPE SF2 and SF3, mechanically polished internal	1903
Ra ≤ 0.8 µm (30 µinch) for media wetted surfaces, in accordance with DIN 11866 H3, mechanically polished internal	1904
Ra ≤ 0.4 µm (15 µinch) for media wetted surfaces, in accordance with DIN 11866 H4, ASME BPE SF1, mechanically polished internal	1909
PTFE-PTFE spindle seal	2013
For higher operating temperatures	2023

11 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

11 Special version	Code
Rigid plug fixing	C
Special version for oxygen, (max. temperature 60 °C; max. operating pressure 10 bar), 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

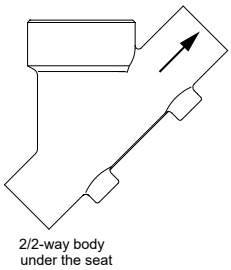
Ordering option	Code	Description
1 Type	514	Angle seat globe valve, pneumatically operated, aluminium piston actuator
2 DN	25	DN 25
3 Housing configuration	D	2/2-way body
4 Connection type	1	Threaded socket DIN ISO 228
5 Valve body material	37	1.4408, investment casting
6 Seat seal	5	PTFE
7 Control function	1	Normally closed (NC)
8 Actuator version	1	Actuator size 1
9 Regulating cone	RS617	60 m³/h – mod.EQ
10 Type of design		Standard
11 Special version		Standard
12 CONEXO		Without

Technical data

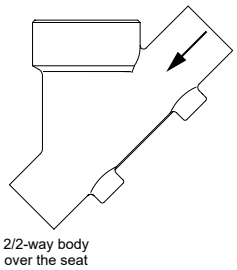
General

Flow direction

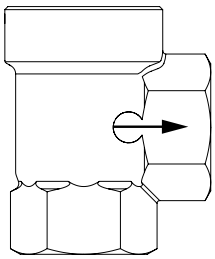
The flow direction is indicated by an arrow on the valve body.



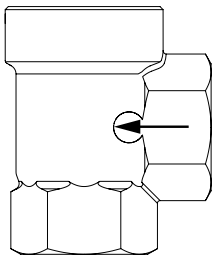
2/2-way body
under the seat



2/2-way body
over the seat

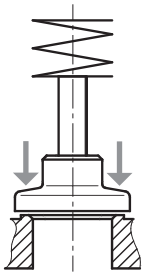


Angle valve body
under the seat

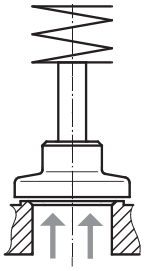


Angle valve body
over the seat

Over the seat
(actuator 3, 4)



Under the seat
(actuator 0, 1, 2)



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)

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 — 180 °C
Special version: -10 — 210 °C
Only with seat seal ordering option code 5G or 10 and design 2023

Ambient temperature: -10 — 60 °C

Control medium temperature: max. 60 °C

Storage temperature: 0 — 40 °C

Pressure/temperature

Pressure/temperature correlation:

Connection type code	Material code	Permissible operating pressures in bar at temperature in °C					
		RT	100	150	200	250	300
1, 9, 17, 37, 60, 3C, 3D	**37**	25.0	23.8	21.4	18.9	17.5	16.1
0, 16, 17, 37, 59, 60	**34**	25.0	24.5	22.4	20.3	18.2	16.1
13 (DN 15 - DN 50)	**34**	25.0	23.6	21.5	19.8	18.6	17.2
47 (DN 15 - DN 50)	**34**	15.9	13.3	12.0	11.1	10.2	9.7
17, 59, 60	**C2**	25.0	21.2	19.3	17.9	16.8	15.9

The valves are suitable for temperatures as low as -10 °C
RT = room temperature
All pressures are gauge pressures.

Pressure rating: PN 25

Control pressure

Control pressure:

DN	Normally closed (NC) (code 1)				
	Piston dia. [mm]				
	50 mm	50 mm	70 mm	70 mm	120 mm
	Actuator size				
	0	3	1	4	2
10	4,7 - 10,0	See diagram for min. control pressure Max. control pressure 7 bar	5,5 - 10,0	See diagram for min. control pressure Max. control pressure 7 bar	
15	4,7 - 10,0		5,5 - 10,0		
20	4,7 - 10,0		5,5 - 10,0		4,0 - 8,0
25	4,7 - 10,0		5,5 - 10,0		4,0 - 8,0
32			5,5 - 10,0		4,0 - 8,0
40			5,5 - 10,0		4,0 - 8,0
50			5,5 - 10,0		5,5 - 8,0
65			5,5 - 10,0		5,5 - 8,0
80			5,5 - 10,0		5,5 - 8,0

All pressures are gauge pressures.

Observe control pressure / operating pressure diagram

Control pressure:

DN	Normally open (NO) (code 2)/ double acting (DA) (code 3)/ double acting and normally open (DA+NO) (code 8)	
	Piston dia. [mm]	
	70 mm	120 mm
	Actuator size	
	1	2
10	max. 5 bar	max. 7 bar
15	max. 5 bar	max. 7 bar
20	max. 7 bar	max. 7 bar
25	max. 7 bar	max. 7 bar
32	max. 7 bar	max. 7 bar
40	max. 7 bar	max. 7 bar
50	max. 7 bar	max. 7 bar
65	max. 7 bar	max. 7 bar
80	max. 7 bar	max. 7 bar

All pressures are gauge pressures.

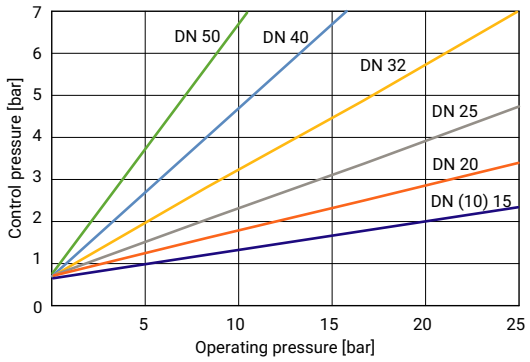
Control pressure/operating pressure diagram:

Control function

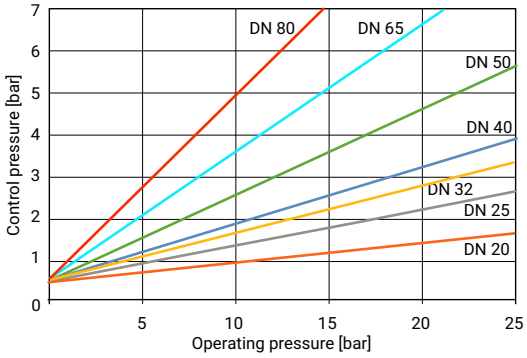
Normally open (NO) (code 2),
double acting (DA) (code 3),
double acting and normally open (DA+NO) (code 8)

Flow direction: Under the seat

Actuator size 1



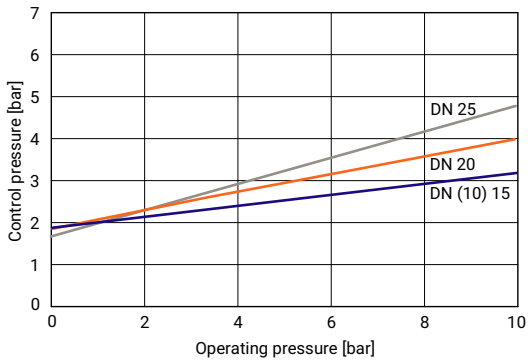
Actuator size 2



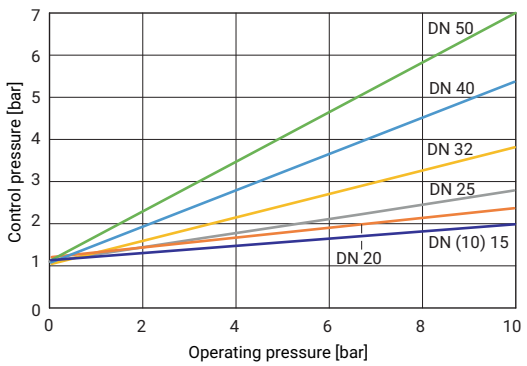
Normally closed (NC) (code 1)

Flow direction: Over the seat

Actuator size 3



Actuator size 4



Min. control pressure dependent on operating pressure

Product compliance

Pressure Equipment Directive: 2014/68/EU

Machinery Directive: 2006/42/EC

Food:

Regulation (EC) No. 1935/2004* **

Regulation (EC) No. 10/2011*

* For contact with food, the following ordering options must be selected:
- Valve body material code 34, 37, C2
- Design code 2013

** The Oxygen S/B special version comes with PTFE-PTFE packing as standard, so K-no. 2013 does not need to be used for FDA conformity and 1935/2004.

Oxygen: BAM compliant, the product is suitable for application with oxygen

TA Luft (German Clean Air Act):

The product meets the following requirements under the max. permissible operating conditions:

- Tightness or compliance with the specific leak rate within the sense of TA-Luft as well as VDI 2440
- Compliance with the requirements in accordance with DIN EN ISO 15848-1, Table C.2, Class BH

Approvals:

CRN

FDA

FMEDA:

Product description: GEMÜ 514 angle seat globe valve
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.

** The Oxygen S/B special version comes with PTFE-PTFE packing as standard, so K-no. 2013 does not need to be used for FDA conformity and 1935/2004.

Mechanical data

Weight:

Actuator

DN	Actuator size 0, 3	Actuator size 1, 4	Actuator size 2
8	-	-	-
10	0.9	1.4	-
15	0.9	1.4	-
20	1.1	1.6	-
25	1.3	1.8	-
32	-	2.4	4.6
40	-	2.7	5.5
50	-	3.4	6.4
65	-	-	8.5
80	-	-	9.6

Weights in kg

Weight:

Valve body

DN	Spigot	Threaded socket	Threaded spigot	Flange
	Connection type code			
	0, 16, 17, 37, 59, 60	1, 3C,3D	9	13, 47
15	0.24	0.35	0.31	1.80
20	0.50	0.35	0.50	2.50
25	0.50	0.35	0.65	3.10
32	0.90	0.75	1.00	4.60
40	1.10	0.98	1.30	5.10
50	1.80	1.70	1.80	7.20
65	3.40	3.20	3.40	-
80	4.20	4.10	4.40	-

Weights in kg

Open/Close valves

Operating 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
10	12.0	10.0	25.0	10.0	-	25.0	-
15	12.0	10.0	25.0	10.0	-	25.0	-
20	6.0	10.0	20.0	10.0	25.0	25.0	25.0
25	2.5	10.0	10.0	10.0	25.0	25.0	25.0
32	-	-	7.0	10.0	22.0	20.0	25.0
40	-	-	4.5	10.0	15.0	12.0	25.0
50	-	-	3.0	10.0	10.0	8.0	25.0
65	-	-	2.0	-	7.0	5.0	18.0
80	-	-	1.0	-	5.0	3.5	10.0

Operating pressure for seal material PTFE (code 5), for seal material steel (code 10) only 60% of the values stated above.
All pressures are gauge pressures.
For max. operating pressures the pressure / temperature correlation must be observed.

Control pressure:

DN	Normally closed (NC) (code 1)				
	Piston dia. [mm]				
	50 mm	50 mm	70 mm	70 mm	120 mm
	Actuator size				
	0	3	1	4	2
10	4,7 - 10,0	See diagram for min. control pressure Max. control pressure 7 bar	5,5 - 10,0	See diagram for min. control pressure Max. control pressure 7 bar	
15	4,7 - 10,0		5,5 - 10,0		
20	4,7 - 10,0		5,5 - 10,0		4,0 - 8,0
25	4,7 - 10,0		5,5 - 10,0		4,0 - 8,0
32			5,5 - 10,0		4,0 - 8,0
40			5,5 - 10,0		4,0 - 8,0
50			5,5 - 10,0		5,5 - 8,0
65			5,5 - 10,0		5,5 - 8,0
80			5,5 - 10,0		5,5 - 8,0

All pressures are gauge pressures.

Observe control pressure / operating pressure diagram

DN	Normally open (NO) (code 2)/ double acting (DA) (code 3)/ double acting and normally open (DA+NO) (code 8)	
	Piston dia. [mm]	
	70 mm	120 mm
	Actuator size	
	1	2
10	max. 5 bar	max. 7 bar
15	max. 5 bar	max. 7 bar
20	max. 7 bar	max. 7 bar
25	max. 7 bar	max. 7 bar
32	max. 7 bar	max. 7 bar
40	max. 7 bar	max. 7 bar
50	max. 7 bar	max. 7 bar
65	max. 7 bar	max. 7 bar
80	max. 7 bar	max. 7 bar

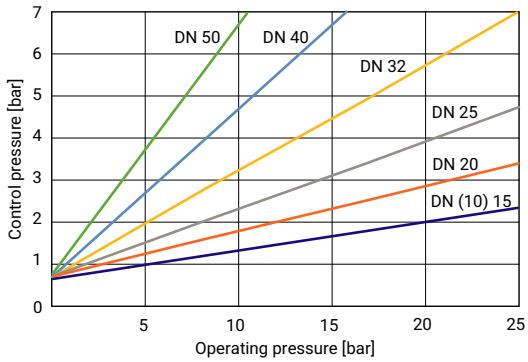
All pressures are gauge pressures.

Control pressure/operating pressure diagram:

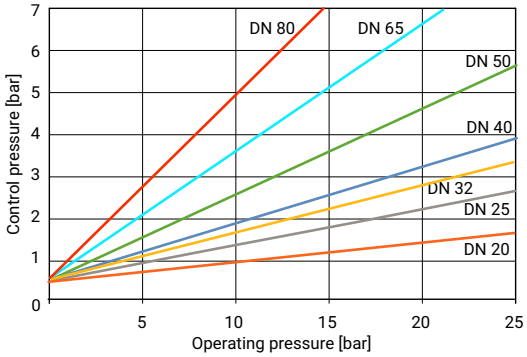
Control function

Normally open (NO) (code 2),
double acting (DA) (code 3),
double acting and normally open (DA+NO) (code 8)
Flow direction: Under the seat

Actuator size 1

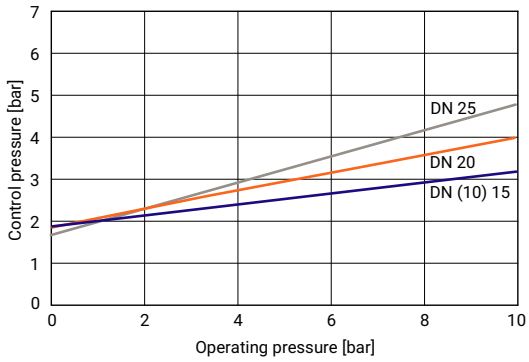


Actuator size 2

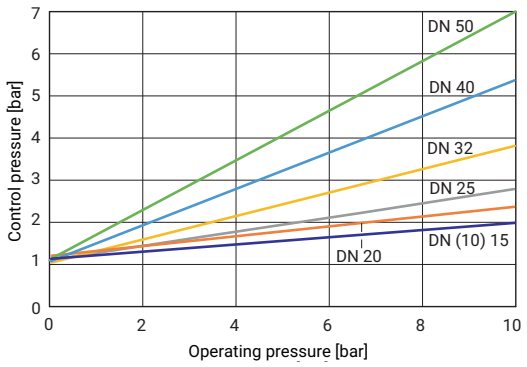


Normally closed (NC) (code 1)
Flow direction: Over the seat

Actuator size 3



Actuator size 4



Min. control pressure dependent on operating pressure

Kv values

Kv values:

DN	Butt weld spigot DIN 11866	Threaded socket DIN ISO 228
10	4.5	4.5
15	5.5	5.4
20	11.7	10.0
25	20.5	15.2
32	33.0	23.0
40	51.0	41.0
50	61.0	68.0
65	110.0	95.0
80	117.0	130.0

Kv values in m³/h
Kv values determined in accordance with DIN EN 60534. The Kv value specifications refer to control function 1 (NC) and the largest actuator for the respective nominal size.
The Kv values for other product configurations (e.g. other connections or body materials) may differ.
Kv values AG0 on request.

Leakage rate

Leakage rate:

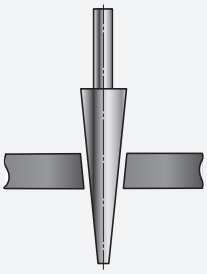
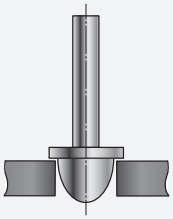
Seat seal	Standard	Test procedure	Leakage rate	Test medium
Metal	DIN EN 12266-1	P12	F	Air
PTFE	DIN EN 12266-1	P12	A	Air

Filling volume

Filling volume:

Actuator 0, 3: 0.05 dm³
Actuator 1, 4: 0.125 dm³
Actuator 2: 0.625 dm³

Control valves

Regulating needle	Regulating cone
	
Regulating needle: RAxxx – RCxxx (reduced valve seat)	Regulating cone: DN 15 - 50

The control valves shown are only possible with control function – normally closed (NC) and flow direction under the seat.

Operating pressure/Kv values

Control valve:

All connection types except connection codes 37, 59
Valve body material 1.4435 (codes 34, C2), 1.4408 (code 37)

DN	Kv value	Operating pressure	Actuator size	Regulating cone number	
	[m³/h]	[bar]		Linear	Equal-percentage (mod.)
15	5,0	12,0	0	RS601	RS611
		25,0	1	RS600	RS610
20	10,0	6,0	0	RS602	RS612
		20,0	1	RS603	RS613
25	15,0	10,0	1	RS604	RS614
32	24,0	7,0	1	RS660	RS670
		22,0	2	RS605	RS615
40	38,0	4,5	1	RS661	RS671
		12,0	2	RS606	RS616
50	50,0	3,0	1	RS662	RS672
	60,0	10,0	2	RS607	RS617

Connection code 37, 59
Valve body material 1.4435 (code 34, C2)

DN	Kv value	Operating pressure	Actuator size	Regulating cone number	
	[m³/h]	[bar]		Linear	Equal-percentage (mod.)
15	2,7	12,0	0	RS651	RS641
		25,0	1	RS650	RS640
20	6,3	6,0	0	RS652	RS642
		20,0	1	RS653	RS643
25	13,3	10,0	1	RS654	RS644
40	35,6	4,5	1	RS658	RS648
		12,0	2	RS656	RS646
50	50,0	3,0	1	RS659	RS649
	58,0	10,0	2	RS657	RS647

Control valve:

All connection types
Valve body material 1.4435 (code 34, C2), 1.4408 (code 37)

DN	Kv value	Operating pressure	Actuator size	Regulating cone number	
	[m³/h]	[bar]		Linear	Equal-percentage (mod.)
15	0,10*	25,0	1	RA203	RA405
	0,16*	25,0	1	RB207	RA406
	0,25*	25,0	1	RB208	RB405
	0,40*	25,0	1	RB209	RB406
	0,63*	25,0	1	RC205	RC405
	1,00*	25,0	1	RC206	RC406
	1,60	25,0	1	RD205	RD405
	2,50**	25,0	1	RE207	RE407
20	1,60	25,0	1	RD206	RD406
	2,50	25,0	1	RE208	RE408
	4,00	25,0	1	RF207	RF407
	6,30**	25,0	1	RG209	RG409
25	2,50	25,0	1	RE209	RE409
	4,00	25,0	1	RF208	RF408
	6,30	25,0	1	RG210	RG410
	10,00**	15,0	1	RH209	RH409
32	4,00	25,0	1	RF209	RF409
	6,30	25,0	1	RG211	RG411
	10,00	16,0	1	RH210	RH410
	16,00	11,0	1	RJ207	RJ407
40	6,30	25,0	1	RG212	RG412
	10,00	18,0	1	RH211	RH411
	16,00	11,0	1	RJ208	RJ408
	25,00	18,0	2	RK205	RK405
50	10,00	18,0	1	RH212	RH412
	16,00	12,0	1	RJ209	RJ409
	25,00	24,0	2	RK206	RK406
	40,00	15,0	2	RM203	RM403

Note: Angle seat globe valve body with valve body material code C2 and reduced seat have a surface area of Ra ≤ 1.2 µm due to the reduction in the seat area.

*metal seated

**not for connection code 37, 59

Leakage rate

Leakage rate:

Control valve

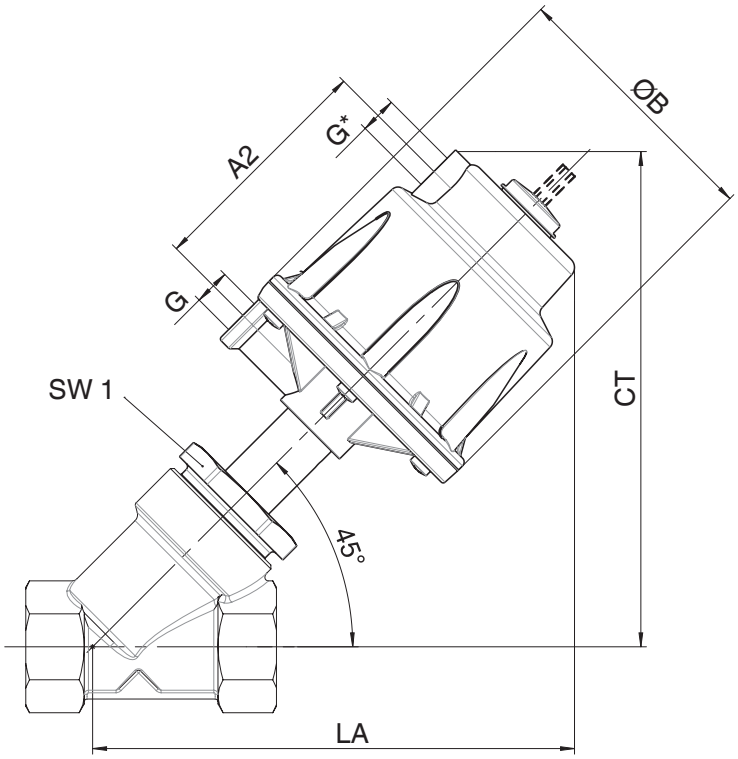
Seat seal	Standard	Test procedure	Leakage rate	Test medium
PTFE	DIN EN 60534-4	1	VI	Air

Seat seal	Standard	Test procedure	Leakage rate	Test medium
Metal	DIN EN 60534-4	1	IV	Air

Dimensions

Installation dimensions

Valve with 2/2-way body

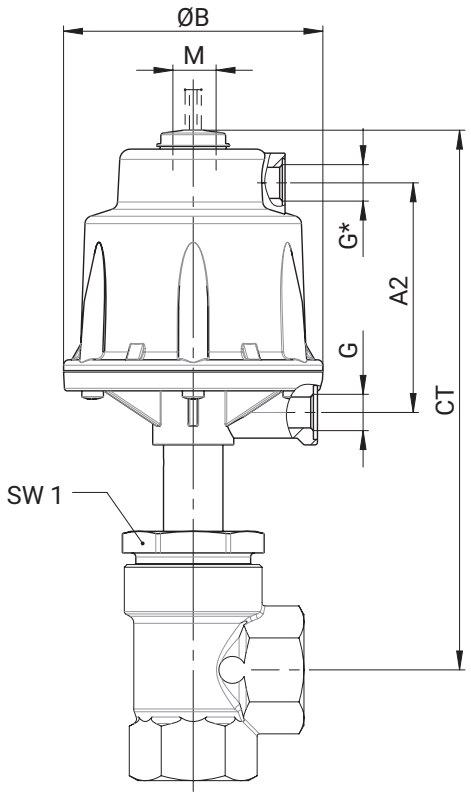


* Connection only for actuator sizes 1 and 2; C.f. 2 and 3

DN	G	SW1 [mm]	Actuator size 0, 3			Actuator size 1, 4				Actuator size 2			
			ØB	CT/LA	M	A2	ØB	CT/LA	M	A2	ØB	CT/LA	M
8	G 1/4	36.0	71.0	150.0	M16 x 1	85.5	96.0	161.0	M16 x 1	-	-	-	-
10	G 1/4	36.0	71.0	150.0	M16 x 1	85.5	96.0	161.0	M16 x 1	-	-	-	-
15	G 1/4	36.0	71.0	153.0	M16 x 1	85.5	96.0	164.0	M16 x 1	-	-	-	-
20	G 1/4	41.0	71.0	163.0	M16 x 1	85.5	96.0	174.0	M16 x 1	123.0	164.0	241.0	M22 x 1.5
25	G 1/4	46.0	71.0	163.0	M16 x 1	85.5	96.0	174.0	M16 x 1	123.0	164.0	241.0	M22 x 1.5
32	G 1/4	55.0	-	-	-	85.5	96.0	182.0	M16 x 1	123.0	164.0	249.0	M22 x 1.5
40	G 1/4	60.0	-	-	-	85.5	96.0	187.0	M16 x 1	123.0	164.0	254.0	M22 x 1.5
50	G 1/4	75.0	-	-	-	85.5	96.0	195.0	M16 x 1	123.0	164.0	262.0	M22 x 1.5
65	G 1/4	75.0	-	-	-	-	-	-	-	123.0	164.0	275.0	M22 x 1.5
80	G 1/4	75.0	-	-	-	-	-	-	-	123.0	164.0	292.0	M22 x 1.5

Dimensions in mm

Valve with angle valve body



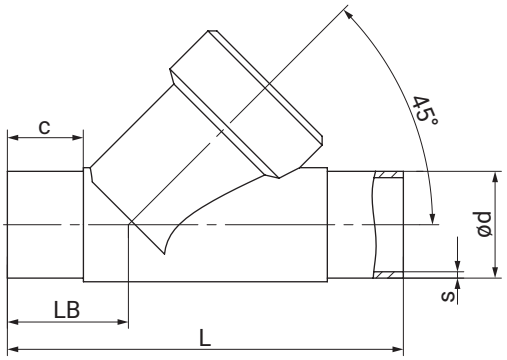
* Connection only for actuator sizes 1 and 2; C.f. 2 and 3

DN	G	SW1 [mm]	Actuator size 0, 3			Actuator size 1, 4				Actuator size 2			
			ØB	CT	M	A2	ØB	CT	M	A2	ØB	CT	M
15	G 1/4	36.0	71.0	179.0	M16 x 1	85.5	96.0	189.0	M16 x 1	123.0	164.0	-	-
20	G 1/4	41.0	71.0	182.0	M16 x 1	85.5	96.0	192.0	M16 x 1	123.0	164.0	269.0	M22 x 1.5
25	G 1/4	46.0	71.0	186.0	M16 x 1	85.5	96.0	196.0	M16 x 1	123.0	164.0	273.0	M22 x 1.5
32	G 1/4	55.0	-	-	-	85.5	96.0	199.0	M16 x 1	123.0	164.0	276.0	M22 x 1.5
40	G 1/4	60.0	-	-	-	85.5	96.0	204.0	M16 x 1	123.0	164.0	281.0	M22 x 1.5
50	G 1/4	75.0	-	-	-	85.5	96.0	211.0	M16 x 1	123.0	164.0	288.0	M22 x 1.5

Dimensions in mm

Body dimensions

Spigot DIN/EN/ISO/ASME/SMS (code 0, 16, 17, 37, 59, 60)



Connection type spigot DIN/EN/ISO (code 0, 16, 17, 60) [1], investment casting material (code 34) [2]

DN	NPS	c (min)				ød				L	LB	s			
		Connection type										Connection type			
		0	16	17	60	0	16	17	60			0	16	17	60
10	**3/8"**	-	20.0	20.0	20.0	-	12.0	13.0	17.2	105.0	35.5	-	1.0	1.5	1.6
15	**1/2"**	20.0	20.0	20.0	20.0	18.0	18.0	19.0	21.3	105.0	35.5	1.5	1.0	1.5	1.6
20	**3/4"**	25.0	25.0	25.0	25.0	22.0	22.0	23.0	26.9	120.0	39.0	1.5	1.0	1.5	1.6
25	**1"**	24.5	24.5	24.5	24.5	28.0	28.0	29.0	33.7	125.0	38.5	1.5	1.0	1.5	2.0
32	**1¼"**	-	26.0	27.0	29.0	-	34.0	35.0	42.4	155.0	48.0	-	1.0	1.5	2.0
40	**1½"**	24.0	24.0	24.0	43.7	40.0	40.0	41.0	48.3	160.0	47.0	1.5	1.0	1.5	2.0
50	**2"**	29.0	29.0	29.0	29.0	52.0	52.0	53.0	60.3	180.0	48.0	1.5	1.0	1.5	2.0

Connection type spigot ANSI/ASME/SMS (code 37, 59) [1], investment casting material (code 34) [2]

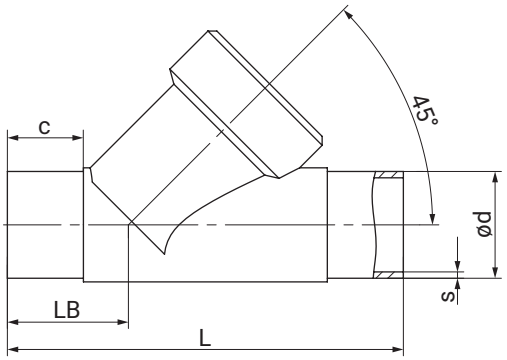
DN	NPS	c (min)		ød		L	LB	s	
		Connection type						Connection type	
		37	59	37	59			37	59
15	**1/2"**	-	20.0	-	12.70	105.0	35.5	-	1.65
20	**3/4"**	-	25.0	-	19.05	120.0	39.0	-	1.65
25	**1"**	24.5	24.5	25.0	25.40	125.0	38.5	1.2	1.65
32	**1¼"**	-	-	-	-	155.0	48.0	-	-
40	**1½"**	24.0	24.0	38.0	38.10	160.0	47.0	1.2	1.65
50	**2"**	29.0	29.0	51.0	50.80	180.0	48.0	1.2	1.65

Dimensions in mm

1) **Connection type**
Code 0: Spigot DIN
Code 16: Spigot DIN EN 10357 series B (2014 issue; formerly DIN 11850 series 1)
Code 17: Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2
Code 37: Spigot SMS 3008
Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 issue)/DIN 11866 series C
Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 issue)/DIN 11866 series B

2) **Valve body material**
Code 34: 1.4435, investment casting

Spigot EN/ISO/ASME/SMS (code 17, 37, 59, 60)



Connection type spigot EN/ISO/ASME (code 17, 60) [1], investment casting material (code 37) [2]

DN	NPS	c (min)		ød		L	LB	s	
		Connection type						Connection type	
		17	60	17	60			17	60
15	**1/2"**	18.0	18.0	19.0	21.3	100.0	33.0	1.5	1.6
20	**3/4"**	18.0	18.0	23.0	26.9	108.0	33.0	1.5	1.6
25	**1"**	18.0	18.0	29.0	33.7	112.0	32.0	1.5	2.0
32	**1¼"**	18.0	18.0	35.0	42.4	137.0	39.0	1.5	2.0
40	**1½"**	19.0	18.0	41.0	48.3	146.0	40.0	1.5	2.0
50	**2"**	20.0	20.0	53.0	60.3	160.0	38.0	1.5	2.0
65	**2½"**	52.5	47.0	70.0	76.1	290.0	96.0	2.0	2.0
80	**3"**	50.0	46.5	85.0	88.9	310.0	95.0	2.0	2.3

Connection type spigot ASME/SMS (code 37, 59), investment casting material (code 37) [2]

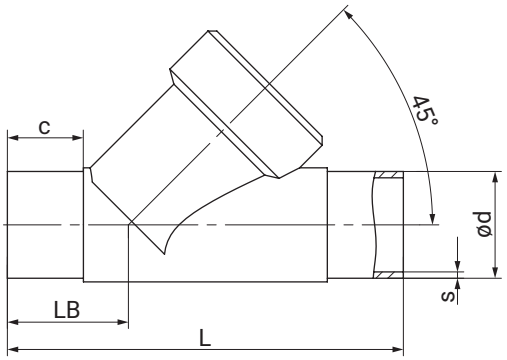
DN	NPS	c (min)		ød		L	LB	s	
		Connection type						Connection type	
		37	59	37	59			37	59
65	**2½"**	58	58	63.5	63.5	290.0	96.0	1.6	1.65
80	**3"**	58	58	76.1	76.0	310.0	95.0	1.6	1.65

Dimensions in mm

1) **Connection type**
Code 17: Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2
Code 37: Spigot SMS 3008
Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 issue)/DIN 11866 series C
Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 issue)/DIN 11866 series B

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

Spigot EN/ISO/ASME (code 17, 59, 60)



Connection type spigot EN/ISO/ASME (code 17, 59, 60) [1], investment casting material (code C2) [2]

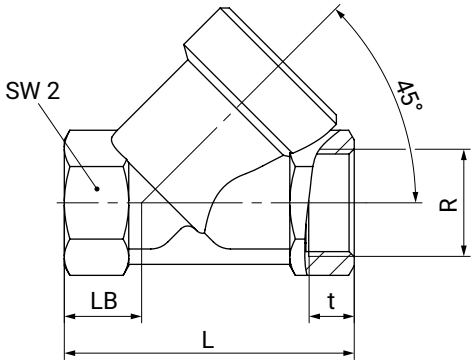
DN	NPS	c (min)			ød			L	LB	s		
		Connection type								Connection type		
		17	59	60	17	59	60			17	59	60
8	**1/4"**	-	-	20.0	-	-	13.5	80.0	35.5	-	-	1.6
10	**3/8"**	20.0	-	20.0	13.0	-	17.2	100.0	35.5	1.5	-	1.6
15	**1/2"**	20.0	15.0	20.0	19.0	12.70	21.3	105.0	35.5	1.5	1.65	1.6
20	**3/4"**	25.0	25.0	25.0	23.0	19.05	26.9	120.0	39.0	1.5	1.65	1.6
25	**1"**	24.0	24.0	24.0	29.0	25.40	33.7	125.0	39.5	1.5	1.65	2.0
32	**1¼"**	27.0	-	26.1	35.0	-	42.4	155.0	48.0	1.5	-	2.0
40	**1½"**	24.0	23.0	28.9	41.0	38.10	48.3	160.0	47.0	1.5	1.65	2.0
50	**2"**	28.23	28.23	29.0	53.0	50.80	60.3	180.0	48.0	1.5	1.65	2.0
65	**2½"**	52.5	58.0	52.5	70.0	63.50	76.1	290.0	96.0	2.0	1.65	2.0
80	**3"**	50.2	58.0	46.82	85.0	76.20	88.9	310.0	95.0	2.0	1.65	2.3

Dimensions in mm

1) **Connection type**
Code 17: Spigot EN 10357 series A/DIN 11866 series A, formerly DIN 11850 series 2
Code 59: Spigot ASME BPE/DIN EN 10357 series C (from 2022 issue)/DIN 11866 series C
Code 60: Spigot ISO 1127/DIN EN 10357 series C (2014 issue)/DIN 11866 series B

2) **Valve body material**
Code C2: 1.4435, investment casting

Threaded socket DIN/Rc/NPT body configuration D (code 1, 3C, 3D)



Connection type threaded socket DIN (code 1) [1], investment casting material (code 37) [2]

DN	NPS	L	LB	R	SW2	t
10	**3/8"**	65.0	16.5	G 3/8	27	11.4
15	**1/2"**	65.0	16.5	G 1/2	27	15.0
20	**3/4"**	75.0	17.5	G 3/4	32	16.3
25	**1"**	90.0	24.0	G 1	41	19.1
32	**1¼"**	110.0	33.0	G 1¼	50	21.4
40	**1½"**	120.0	30.0	G 1½	55	21.4
50	**2"**	150.0	40.0	G 2	70	25.7
65	**2½"**	190.0	46.0	G 2½	85	30.2
80	**3"**	220.0	50.0	G 3	100	33.3

Connection type threaded socket Rc/NPT (code 3C, 3D) [1], investment casting material (code 37) [2]

DN	NPS	L	LB	R		SW2	t	
				Connection type			Connection type	
				3C	3D		3C	3D
15	**1/2"**	65.0	16.5	Rc 1/2	1/2" NPT	27	15.0	13.6
20	**3/4"**	75.0	17.5	Rc 3/4	3/4" NPT	32	16.3	14.1
25	**1"**	90.0	24.0	Rc 1	1" NPT	41	19.1	17.0
32	**1¼"**	110.0	33.0	Rc 1¼	1¼" NPT	50	21.4	17.5
40	**1½"**	120.0	30.0	Rc 1½	1½" NPT	55	21.4	17.3
50	**2"**	150.0	40.0	Rc 2	2" NPT	70	25.7	17.8
65	**2½"**	190.0	46.0	Rc 2½	2½" NPT	85	30.2	23.7
80	**3"**	220.0	50.0	Rc 3	3" NPT	100	33.3	25.8

Dimensions in mm

1) **Connection type**
Code 1: Threaded socket DIN ISO 228
Code 3C: Threaded socket Rc ISO 7-1, EN 10226-2, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8
Code 3D: Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8

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

Threaded socket DIN/NPT body configuration D (code 1)

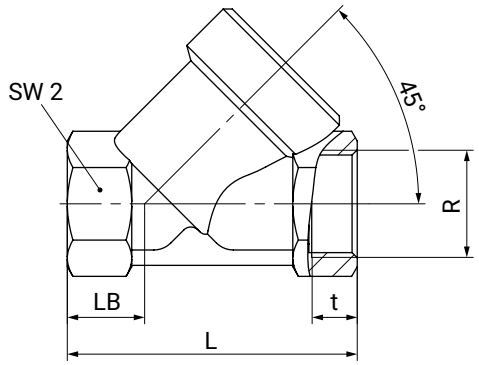


Fig. 1:

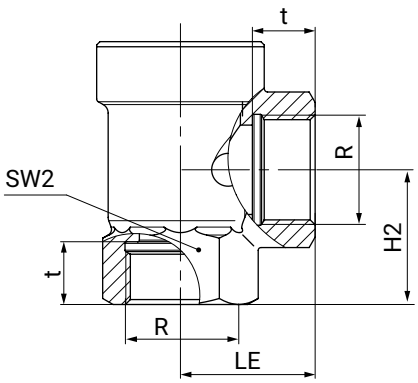
Connection type threaded socket DIN/NPT (code 1) [1)]

DN	NPS	L	LB	R		SW2	t	
				Connection type			Connection type	
				1	3D		1	3D
15	**1/2"**	65.0	16.5	G 1/2	1/2" NPT	27	15.0	13.6
20	**3/4"**	75.0	17.5	G 3/4	3/4" NPT	32	16.3	14.1
25	**1"**	90.0	24.0	G 1	1" NPT	41	19.1	17.0
32	**1¼"**	110.0	33.0	G 1¼	1¼" NPT	50	21.4	17.5
40	**1½"**	120.0	30.0	G 1½	1½" NPT	55	21.4	17.3
50	**2"**	150.0	40.0	G 2	2" NPT	70	25.7	17.8
65	**2½"**	190.0	46.0	G 2½	2½" NPT	85	30.2	23.7
80	**3"**	220.0	50.0	G 3	3" NPT	100	33.3	25.8

Dimensions in mm

1) **Connection type**
Code 1: Threaded socket DIN ISO 228

Threaded socket DIN/NPT body configuration E (code 1, 3D)



Connection type threaded socket DIN/NPT (code 1, 3D) [1], investment casting material (code 37) [2]

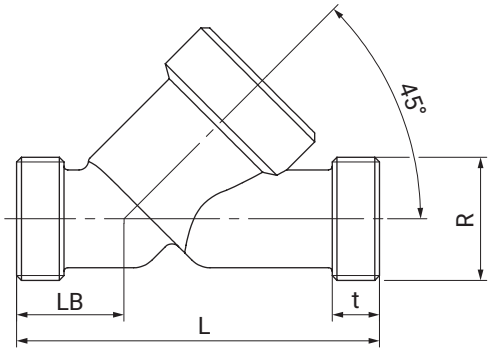
DN	NPS	H2	LE	SW2	R		t	
					Connection type		Connection type	
					1	3D	1	3D
15	**1/2"**	30.0	30.0	27	G 1/2	1/2" NPT	15.0	13.6
20	**3/4"**	37.5	35.0	32	G 3/4	3/4 " NPT	16.3	14.1
25	**1"**	41.0	41.0	41	G 1	1" NPT	19.1	17.0
32	**1¼"**	48.0	50.0	50	G 1¼	1¼" NPT	21.4	17.5
40	**1½"**	55.0	50.0	55	G 1½	1½" NPT	21.4	17.3
50	**2"**	62.0	60.0	70	G 2	2" NPT	25.7	17.8

Dimensions in mm

1) **Connection type**
Code 1: Threaded socket DIN ISO 228
Code 3D: Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8

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

Threaded spigot DIN (code 9)



Connection type threaded spigot DIN (code 9) [1], **investment casting material (code 37)** [2]

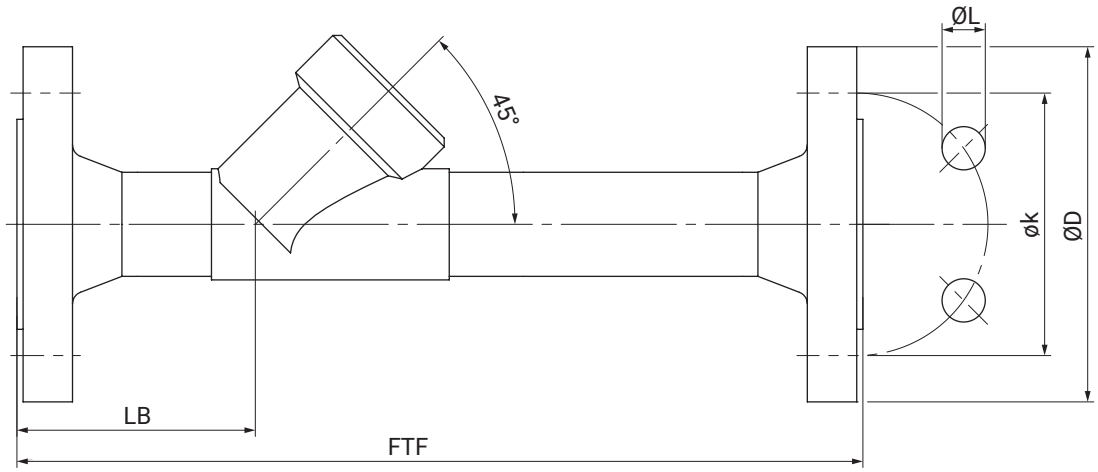
DN	L	LB	R	t
15	90.0	25.0	G 3/4	12.0
20	110.0	30.0	G 1	15.0
25	118.0	30.0	G 1¼	15.0
32	130.0	38.0	G 1½	13.0
40	140.0	35.0	G 1¾	13.0
50	175.0	50.0	G 2⅜	15.0
65	216.0	52.0	G 3	15.0
80	254.0	64.0	G 3½	18.0

Dimensions in mm

1) **Connection type**
Code 9: Threaded spigot DIN ISO 228

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

Flange, special length EN/ANSI (code 13, 47)



Connection type flange, special length EN/ANSI (code 13, 47) [1], investment casting material (code 34) [2]

DN	NPS	ØD		FTF	øk		ØL		LB	n
		Connection type			Connection type		Connection type			
		13	47		13	47	13	47		
15	**1/2"**	95.0	89.0	210.0	65.0	60.5	14.0	15.7	72.0	4
20	**3/4"**	105.0	98.6	280.0	75.0	69.8	14.0	15.7	78.0	4
25	**1"**	115.0	108.0	280.0	85.0	79.2	14.0	15.7	77.0	4
32	**1¼"**	140.0	117.3	310.0	100.0	88.9	18.0	15.7	89.0	4
40	**1½"**	150.0	127.0	320.0	110.0	98.6	18.0	15.7	91.0	4
50	**2"**	165.0	152.4	330.0	125.0	120.7	18.0	19.1	95.0	4

Dimensions in mm
n = number of bolts

1) **Connection type**
Code 13: Flange EN 1092, PN 25, form B
Code 47: Flange ANSI Class 150 RF

2) **Valve body material**
Code 34: 1.4435, investment casting

Accessories

GEMÜ 1434 µPos

Intelligent electro-pneumatic positioner

The GEMÜ 1434 µPos digital electro-pneumatic positioner is used to control pneumatically operated small to medium nominal size process valves with single acting linear actuators. The solid compact housing has a transparent cover. LEDs for status indication are integrated. Due to factory preconfiguration, this product does not require a display with operating keys. Pneumatic and electrical connections arranged so as to save space and enable easy access. All these features make the GEMÜ 1434 µPos a cost-effective solution for control tasks with basic requirements.

GEMÜ 1435 ePos

Intelligent electro-pneumatic positioner

The GEMÜ 1435 ePos digital electro-pneumatic positioner is used to control pneumatically operated process valves with single acting or double acting linear or quarter turn actuators, and detects the position of the valve using an external travel sensor. It has a robust aluminium housing with protected operating keys and an LCD display which allows the product to be individually adapted to the control task. The travel times can be set using integrated throttles. Connection and mounting to NAMUR is also possible. Therefore, the GEMÜ 1435 ePos is an optimal solution for control tasks with high requirements, especially in applications with harsh environmental conditions.

GEMÜ 1436 eco cPos

Intelligent electro-pneumatic positioner

The GEMÜ 1436 eco cPos digital electro-pneumatic positioner is used to control pneumatically operated process valves with single acting linear or quarter turn actuators. The positioner, travel sensor, switching valves and status LEDs are integrated into the robust and compact housing. Due to factory preconfiguration, this product does not require a display with operating keys. The pneumatic and electrical connections are arranged in one mounting direction to save space and enable easy access. All these features make this positioner a cost-effective solution for control tasks with basic requirements.

GEMÜ 1441 cPos-X

Intelligent electro-pneumatic positioner

The GEMÜ 1441 cPos-X is an intelligent, digital electro-pneumatic positioner in 2-wire technology used to control pneumatically operated process valves. It can be combined with single acting or double acting linear actuators or quarter turn actuators. This means that it can be used, among other things, for diaphragm, globe and diaphragm globe valves as well as for ball valves and butterfly valves, for instance. The positioner has a robust housing with a covered LCD display for status information. The positioner can be operated remotely using a mobile device in order to configure settings and to view detailed information.

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