

GEMÜ 565

Pneumatically operated control valve



Features

- Suitable for inert, corrosive, liquid and gaseous media
- Hermetic separation between medium and actuator

Description

The GEMÜ 565 2/2-way globe control valve has a stainless steel piston actuator and is pneumatically operated. All actuator parts are made from stainless steel (except seals). It is available with a Normally Closed control function (NC). PVC-U and PVDF are available as valve body materials. The control valve can only be operated with an electro-pneumatic positioner or process controller. Direct or remote mounting of a positioner (GEMÜ 1434, 1435, 1436) is required.

Technical specifications

- **Media temperature:** -20 to 80 °C
- **Ambient temperature:** -15 to 55 °C
- **Operating pressure:** 0 to 6 bar
- **Nominal sizes:** DN 3 to 15
- **Body configurations:** 2/2-way body
- **Connection types:** Threaded connection | Union end
- **Connection standards:** DIN
- **Body materials:** PVC-U | PVDF
- **Seat seal materials:** EPDM | FKM
- **Conformities:** EAC

Technical data depends on the respective configuration



Product line



GEMÜ 565



GEMÜ 566



GEMÜ R563
eSyStep



GEMÜ 566
eSyStep

	GEMÜ 565	GEMÜ 566	GEMÜ R563 eSyStep	GEMÜ 566 eSyStep
Operation				
Pneumatic	●	●	-	-
Motorized	-	-	●	●
Nominal sizes	DN 3 to 15	DN 8 to 20	DN 10 to 15	DN 8 to 20
Media temperature	-20 to 80 °C	0 to 90 °C	0 to 80 °C	0 to 90 °C
Operating pressure	0 to 6 bar	0 to 6 bar	0 to 6 bar	0 to 6 bar
Connection types				
Clamp	-	●	-	●
Threaded connection	●	●	●	●
Union end	●	-	●	-
Body configurations				
2/2-way body	●	●	●	●

Positioner product line



GEMÜ 1434
μPos

GEMÜ 1435
ePos

GEMÜ 1436
cPos

Controller type

Positioner	●	●	-
Positioner and process controller	-	-	●
Ambient temperature	0 to 60 °C	-20 to 60 °C	0 to 60 °C
Supply voltage			
24 V DC	●	●	●
Flow rate	15 NI/min	50 NI/min 90 NI/min	150 l/min 200 l/min 300 l/min
Measuring range			
Max. 30 mm, linear	●	●	●
Max. 50 mm, linear	-	●	●
Max. 75 mm, linear	-	●	●
Max. 90°, radial	-	●	●
Electrical connection type			
M12 cable gland	-	●	-
M12 connector	●	●	●
Programmable outputs			
No	●	-	-
Yes	-	●	●
Input option			
No	●	-	-
Yes	-	●	●
Conformity			
EAC	●	●	●

Product description



Item	Name	Materials
1	Optical position indicator	
2	Piston actuator	Stainless steel
3	Control medium connector	
4	Valve body	PVC-U, grey / regulating cone PEEK PVDF / regulating cone PEEK
	Seat seal	FKM, EPDM

Availabilities

DN	Connection types	
	Threaded socket DIN ISO 228 (code 1)	Union end with DIN insert (socket) (code 7)
	Material	
	PVC-U, grey (code 1), PVDF (code 20)	PVC-U, grey (code 1)
3	X	X
6	X	X
10	X	X
15	X	X

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
Control valve, pneumatically operated	565

2 DN	Code
DN 3	3
DN 6	6
DN 10	10
DN 15	15

3 Body configuration	Code
2/2-way body	D

4 Connection type	Code
Threaded socket DIN ISO 228	1
Union end with insert (socket) – DIN	7

5 Valve body material	Code
PVC-U, grey / regulating cone PEEK	1
PVDF / regulating cone PEEK	20

6 Seal material	Code
FKM	4
EPDM	19

7 Control function	Code
Normally closed (NC)	1

8 Actuator version	Code
Actuator size 1T2	1T2
Actuator size 1T3	1T3

9 Control characteristic	Code
Assignment (see "Kv value diagrams", page 8)	
Regulating cone, equal-percentage	A
Regulating cone, equal-percentage	B
Regulating cone, equal-percentage	C
Regulating cone, linear	D
Regulating cone, linear	E

10 Kv value	Code
Assignment (see "Kv value diagrams", page 8)	
63 l/h	63
100 l/h	100
160 l/h	160
250 l/h	250
400 l/h	400
630 l/h	630
1000 l/h	1000
1600 l/h	1600
2500 l/h	2500
3300 l/h	3300

Order example

Ordering option	Code	Description
1 Type	565	Control valve, pneumatically operated
2 DN	6	DN 6
3 Body configuration	D	2/2-way body
4 Connection type	1	Threaded socket DIN ISO 228
5 Valve body material	1	PVC-U, grey / regulating cone PEEK
6 Seal material	19	EPDM
7 Control function	1	Normally closed (NC)
8 Actuator version	1T2	Actuator size 1T2
9 Control characteristic	B	Regulating cone, equal-percentage
10 Kv value	400	400 l/h

Order data

In order to configure a complete control valve the pneumatically operated basic valve must be paired with an electro-pneumatic controller. The GEMÜ 1434, 1435 and 1436 positioners and process controllers can be used for this purpose.

You will find below two configuration examples of a complete valve.

Configuration example for a GEMÜ 565 control valve with directly mounted GEMÜ 1434 positioner

GEMÜ type	Order key
GEMÜ 565	565 15 D 1 1 19 1T3 A 250
GEMÜ 1434 positioner	1434 000 Z 1 A 14 1 00 01 010
Mounting kit for direct mounting of positioner	1434S01Z0342010
GEMÜ 1219 cable plug M12	1219 000 Z 00 00DG 00M0 M125 A

Configuration example for a GEMÜ 565 control valve with remotely mounted GEMÜ 1434 positioner

GEMÜ type	Order key
GEMÜ 565	565 15 D 1 1 19 1T3 A 250
GEMÜ 1434 positioner	1434 000 Z 1 A 14 1 00 01 010
Travel sensor for remote mounting	4232 000 Z 14 030 02M0 0000
Mounting kit for remote mounting	4232 S01 Z 292403000
GEMÜ 1219 cable plug M12	1219 000 Z 00 00DG 00M0 M125 A

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

Temperature

Media temperature: -20 – 80 °C
Observe pressure/temperature diagram

Control medium temperature: 0 – 70 °C

Ambient temperature: -15 – 55 °C

Storage temperature: 0 – 40 °C

Pressure

Operating pressure: 0 – 6 bar
All pressures are gauge pressures.

Control pressure: 3 to 7 bar
for actuator size 1T2

Pressure/temperature correlation:

Valve body material		Temperature in °C (valve body)												
Materials	Code	-20	-10	±0	5	10	20	25	30	40	50	60	70	80
PVC-U	1	-	-	-	-	6.0	6.0	6.0	6.0	6.0	3.5	1.5	-	-
PVDF	20	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.4	4.7

Permissible operating pressure in bar

The pressure rating (PN) depends on the connection code.

Data for extended temperature ranges on request. Please note that the ambient temperature and media temperature generate a combined temperature at the valve body which must not exceed the above values.

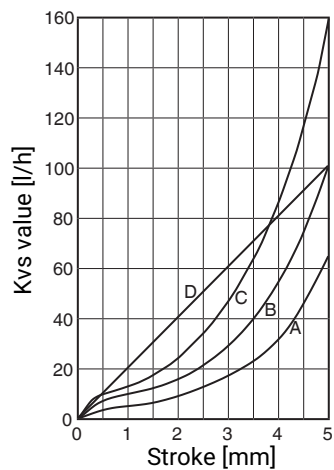
Filling volume: 0.031 dm³

Leakage rate: Control valve

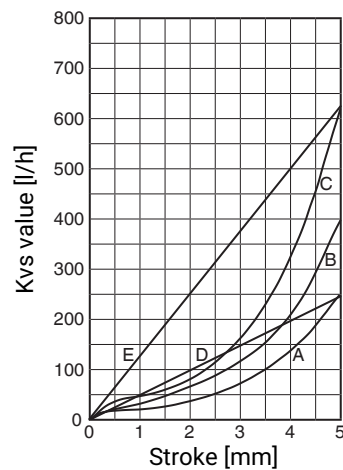
Seat seal	Standard	Test procedure	Leakage rate	Test medium
FKM, PTFE	DIN EN 60534-4	1	VI	Air

Kv values:

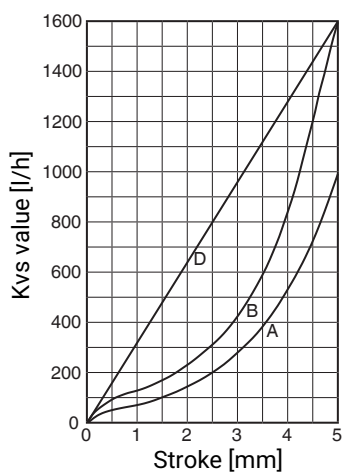
Control characteristic DN 3



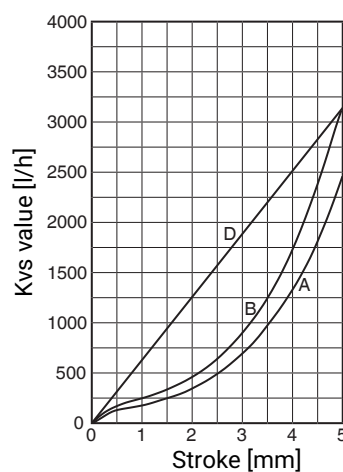
Control characteristic DN 6



Control characteristic DN 10



Control characteristic DN 15



DN	Control characteristic (code)				
Seat Ø [mm]	A	B	C	D	E
3	63.0	100.0	160.0	100.0	-
6	250.0	400.0	630.0	250.0	630.0
10	1000.0	1600.0	-	1600.0	-
15	2500.0	3300.0	-	3300.0	-

Kv values in l/h

Tolerance ± 10 %

Product compliance

Machinery Directive: 2006/42/EC

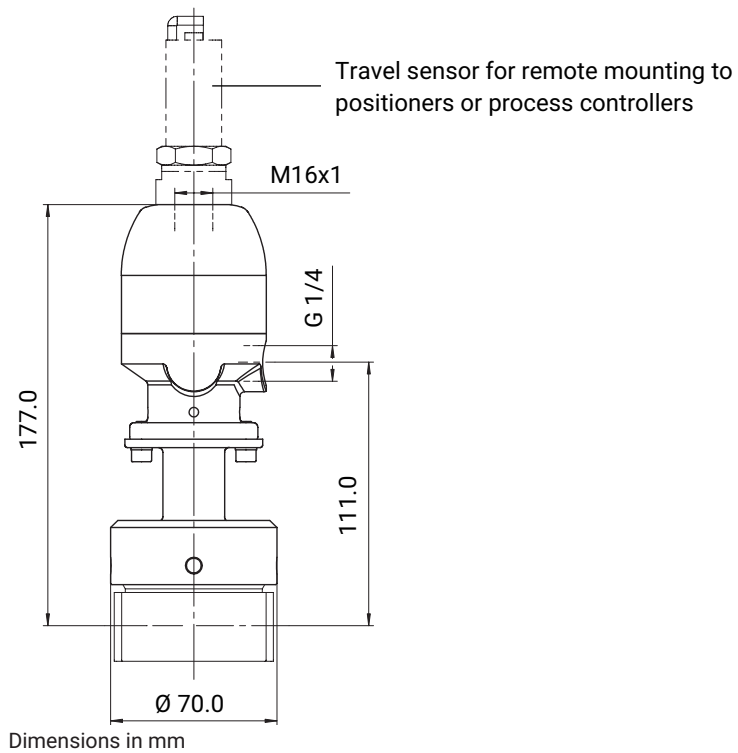
EAC: TR CU 010/2011
TR CU 004/2011

Mechanical data

Weight: 1.50 kg

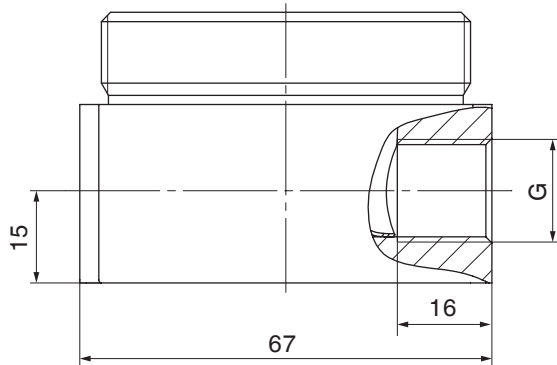
Dimensions

Overall dimensions



Body dimensions

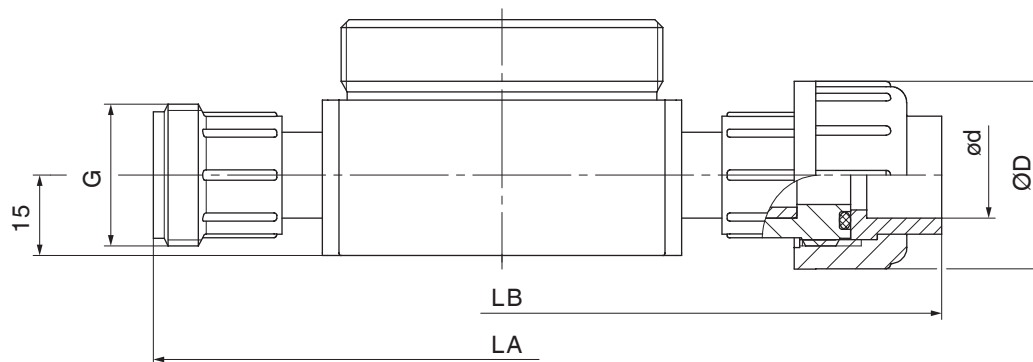
Threaded socket - DIN ISO 228 (code 1)



DN (seat)	G
3	G 3/8
6	G 3/8
10	G 3/8
15	G 1/2

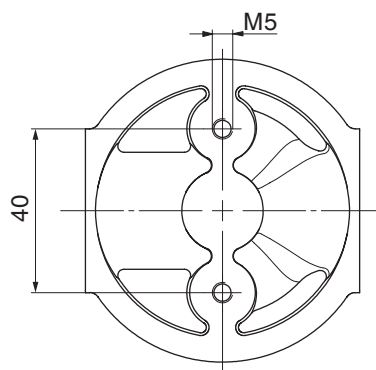
Dimensions in mm

Union end with insert (socket) - DIN (code 7)



DN	G	ØD	ød	LA	LB
3	G 3/4	35.0	16.0	130.0	164.0
6	G 3/4	35.0	16.0	130.0	164.0
10	G 3/4	35.0	16.0	130.0	164.0
15	G 1	43.0	20.0	130.0	168.0

Dimensions in mm

Valve body mounting

Dimensions in mm



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