

GEMÜ 566

Pneumatically operated control valve



Features

- Control of liquid and gaseous media from 63 to 2500 l/h
- Linear or equal-percentage control characteristic options
- Hermetic separation between medium and actuator
- Actuator and actuator type can be changed without draining or removing the valve body from the piping
- Various types of actuators available

Description

The GEMÜ 566 eSyStep 2/2-way straight seat control valve has a body with an integrated control mechanism. Pneumatic and motorized actuator types are available. The GEMÜ 566 eSyStep control valve was specially developed for controlling small volumes and allows flow rates from 63 l/h to 2500 l/h.

Technical specifications

- **Media temperature :** 0 to 90 °C
- **Ambient temperature:** -15 to 60 °C
- **Operating pressure :** 0 to 6 bar
- **Nominal sizes:** DN 8 to 20
- **Body configurations:** 2/2-way body
- **Connection types:** Clamp | Threaded connection
- **Connection standards:** ASME | DIN | EN | ISO
- **Body materials:** 1.4435, investment casting material
- **Seat seal materials:** EPDM | FKM
- **Conformities:** EAC | FDA | Regulation (EC) No. 1935/2004

Technical data depends on the respective configuration



further information
webcode: GW-566

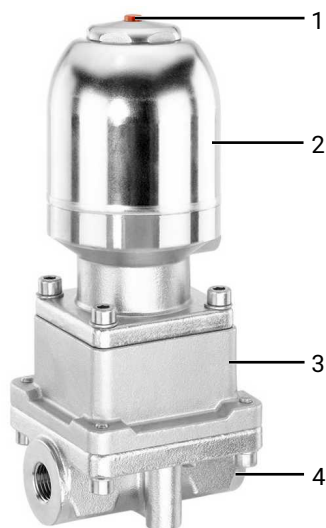




GEMÜ 566
eSyStep

Manual	●	-	-
Pneumatic	-	●	-
Motorized	-	-	●
Nominal sizes	DN 8 to 20	DN 8 to 20	DN 8 to 20
Operating pressure	0 to 6 bar	0 to 6 bar	0 to 6 bar
Body material			
1.4435, investment casting material	●	●	●
Connection types			
Clamp	●	●	●
Threaded connection	●	●	●

Construction - pneumatic valve



www.gemu-group.com

Availability

Availability of valve bodies

Threaded connection / Flange

DN	Connection type code 1 ¹⁾	Connection type code 88 ¹⁾
	Material code C1 ²⁾	
8	X	-
10	X	-
15	X	X
20	-	X

X = Standard

1) Connection type

Code 1: Threaded socket DIN ISO 228

Code 88: Clamp ASME BPE, face-to-face dimension FTF EN 558 series 7

2) Valve body material

Code C1: ASTM A 351 CF3M, investment casting

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	566

2 DN	Code
DN 8	8
DN 10	10
DN 15	15
DN 20	20

3 Body configuration	Code
2/2-way body	D

4 Connection type	Code
Threaded socket DIN ISO 228	1
Clamp ASME BPE, face-to-face dimension FTF EN 558 series 7	88

5 Valve body material	Code
ASTM A 351 CF3M, investment casting	C1

6 Seal material	Code
EPDM	19

7 Control function	Code
Normally closed (NC)	1

8 Actuator version	Code
Actuator size 1T1	1T1

9 Control characteristic	Code
Modified equal-percentage	G
linear	L

10 Kv value	Code
63 l/h	63
100 l/h	100
160 l/h	160
1000 l/h	1000
1600 l/h	1600
2500 l/h	2500

Order example

Ordering option	Code	Description
1 Type	566	Control valve
2 DN	8	DN 8
3 Body configuration	D	2/2-way body
4 Connection type	1	Threaded socket DIN ISO 228
5 Valve body material	C1	ASTM A 351 CF3M, investment casting
6 Seal material	19	EPDM
7 Control function	1	Normally closed (NC)
8 Actuator version	1T1	Actuator size 1T1
9 Control characteristic	G	Modified equal-percentage
10 Kv value	63	63 l/h

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 diaphragm material.

Temperature

Media temperature: Standard: 0 °C – 90 °C
CIP max. 30 min. 85 °C
(isolating diaphragm material code 19)

Control medium temperature: 0 – 70 °C

Ambient temperature: -15 – 60 °C

Storage temperature: 0 – 40 °C

Pressure

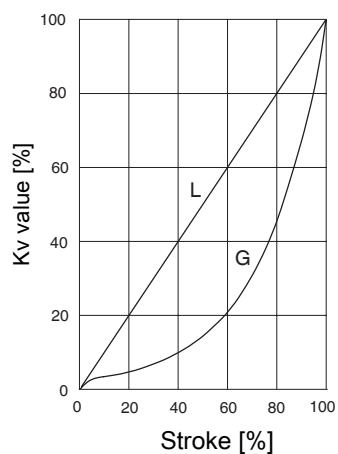
Operating pressure: 0 – 6 bar
All pressures are gauge pressures.

Control pressure: 4.5 – 7.0 bar

Filling volume: 0.03 dm³

Leakage rate:

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

Cv values:

Equal-percentage (connection code 1) / linear (connection code 1)

Control characteristic	Seat Ø [mm]	Kv value	DN 8	DN 10	DN 15
G	3	63	X	-	-
G, L	3	100	X	-	-
G	3	160	X	-	-
G, L	6	250	X	-	-
G	6	400	X	-	-
G, L	6	630	X	-	-
G	11	1000	-	X	-
G, L	11	1600	-	X	-
G, L	15	2500	-	-	X

G = equal-percentage, L = linear

Equal-percentage (connection code 88) / linear (connection code 88)

Control characteristic	Seat Ø [mm]	Kv value	DN 15	DN 20
G	3	63	X	-
G, L	3	100	X	-
G	3	160	X	-
G, L	6	250	X	-
G	6	400	X	-
G, L	6	630	X	-
G	11	1000	X	-
G, L	11	1600	X	-
G, L	15	2500	-	X

G = equal-percentage, L = linear

Product compliance

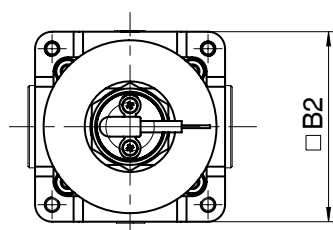
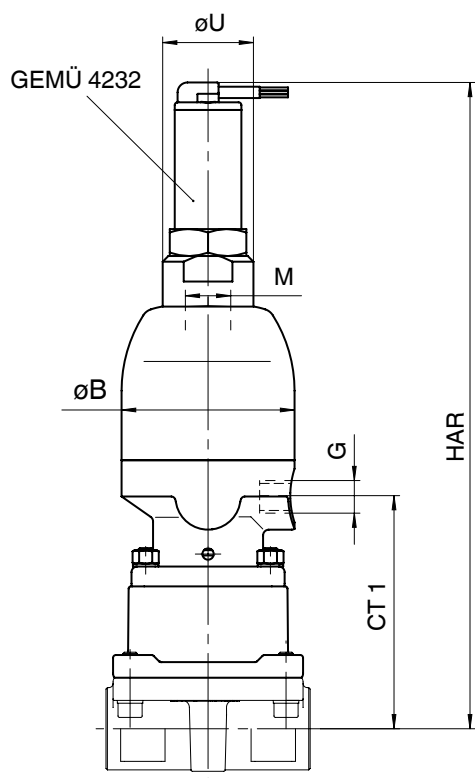
Machinery Directive:	2006/42/EC
EAC:	TR CU 010/2011 TR CU 004/2011
Food:	only for seal material code 19 FDA 21 CFR 177.2600 USP Class VI Title 87 USP Class VI Title 88 (50 °C and 121 °C) Regulation (EC) No. 1935/2004 Regulation (EC) No. 2023/2006
BSE/TSE:	EMA/410/01

Mechanical data

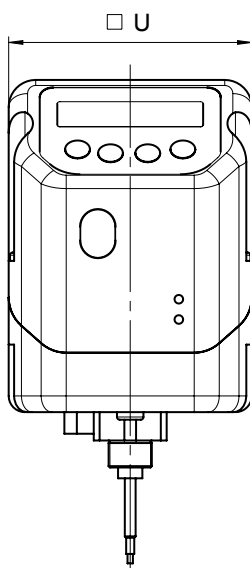
Stroke:	5 mm	
Weight:	DN 8	4.0
	DN 10	4.0
	DN 15	3.5
	DN 15, code 88	4.2
	DN 20, code 88	4.2
	Weights in kg	

Dimensions

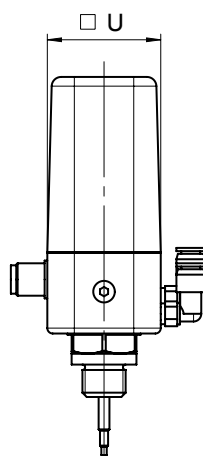
Installation and actuator dimensions



GEMÜ 1436



GEMÜ 1434



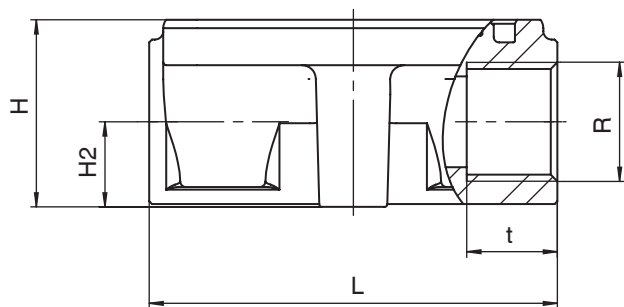
CT1	Ø B	□ B2	G	M
82	61	67	1/4	16x1

	HAR	□ U
GEMÜ 4232	228	32
GEMÜ 1434	255	42
GEMÜ 1436	283	90

Dimensions in mm

Body dimensions

Threaded socket



DN	Connection type code 1 ¹⁾				
	Material code C1 ²⁾				
	R	t	H	H2	L
8	G 1/4	16.0	33.0	15.0	72.0
10	G 3/8	16.0	33.0	15.0	72.0
15	G 1/2	16.0	33.0	15.0	72.0

Dimensions in mm

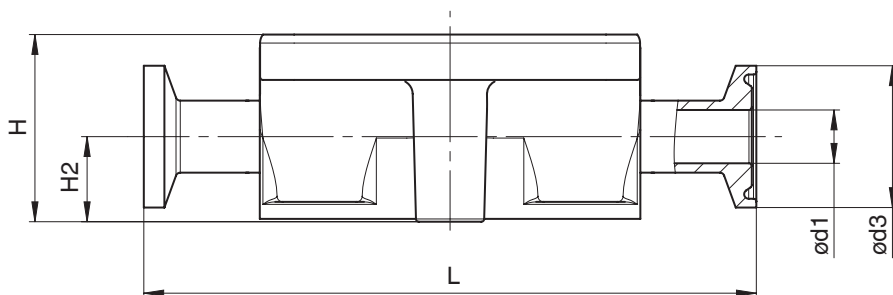
1) **Connection type**

Code 1: Threaded socket DIN ISO 228

2) **Valve body material**

Code C1: ASTM A 351 CF3M, investment casting

Clamp



DN	Connection type code 88 ¹⁾				
	Material code C1 ²⁾				
	L	H	H2	ød1	ød3
15	108.0	33.0	15.2	9.40	25.0
20	117.0	33.0	15.2	15.75	25.0

Dimensions in mm

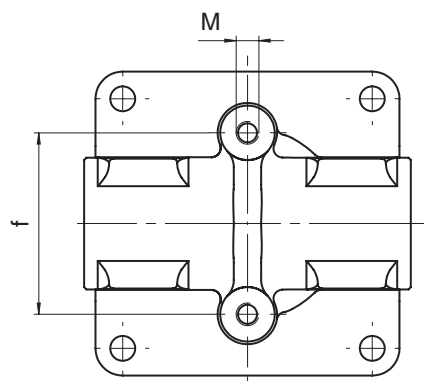
1) **Connection type**

Code 88: Clamp ASME BPE, face-to-face dimension FTF EN 558 series 7

2) **Valve body material**

Code C1: ASTM A 351 CF3M, investment casting

Valve body mounting



DN	f	M
8,10,15,20	40	M5

Dimensions in mm

Specification | GEMÜ regulating cones for globe valves

Customer/Project _____ Contact person _____

Date _____ Phone _____

Contact person (GEMÜ) _____ E-mail _____

Technical requirementsMedium ¹⁾

Requirement characteristic	1st operating point maximum flow	2nd operating point medium flow	3rd operating point minimum flow
Media temperature ⁴⁾			
Inlet pressure			
Outlet pressure			
Flow rate ^{2, 3)}			
in [m³/h] for liquids			
for gases ⁶⁾			
in [kg/h] for steam			

Operation	Manual					
	Pneumatic	Control function	NC (normally closed)	NO (normally open)	DA (double acting)	Double acting (normally open)
	Motorized	Voltage	24 V DC	Other		
Control fitting	Set value information		0-10 V	0/4–20 mA		
	Feature		linear	modified equal-percentage		

Valve body	Type	
	Required valve DN	
	Max. operating pressure (bar)	
	Ambient temperature ⁴⁾	
	Max. media temperature	
	Connection type	
	Body material	
	Seat seal ⁷⁾	PTFE Other
	Control pressure	min max

1) Liquid or gas?

For media other than water or air, it is useful to give data for the density and viscosity of the medium (with unit of measurement). Otherwise we will assume data for standard conditions.

2) For steam especially, the minimum or maximum flow rate should be assigned to the appropriate inlet or outlet pressure. The temperature of the medium should also be taken into account.**3) GEMÜ recommends a positioning ratio of 1 : 10 (e.g. minimal flow rate is 10 m³/h and the maximum flow rate is 100 m³/h). Please note that the valve only controls reliably from a flow of about 10% of the max. Kv value on account of the valve opening behaviour. Other positioning ratios are possible on request or in the selection of standard regulating cones.****4) The media temperature range must be specified for steam applications. T = 20 °C is assumed unless specified otherwise.****5) This data is not absolutely necessary. A room temperature of 20 °C is assumed unless specified otherwise.****6) Basis: standard conditions 0 °C, 1013.25 mbar. If conditions differ, please specify them.****7) The seat seal is made of PTFE as standard. For regulating needles with a Kv value between 0.1 and 1.0 m³/h, only a metal seal is possible. Other materials possible on request.**

The technical details of each enquiry must be checked by GEMÜ.

Comment:



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