

Control Valve, Plastic/Metal

Construction

GEMÜ 563/568 is a motorized 2/2-way control valve with a low maintenance reversible synchronous electric motor. The valve is operated via a reduction gear and spring loaded cam, ensuring continuous contact between the cam and the valve spindle.

Features

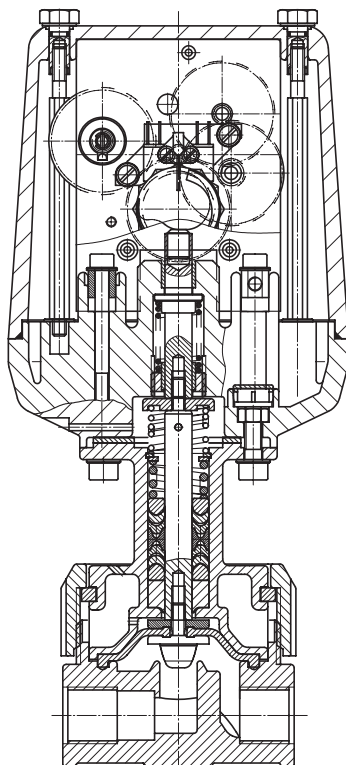
- Suitable for inert and corrosive* liquid and gaseous media
- The motor will withstand being stalled under full voltage
- Valve body and seals are available in various materials
- Suitable for use as a control valve
- Integrated optical position indicator

Advantages

- Direct processing of 0/4 - 20 mA signals via the integrated controller
- Opening and closing behaviour is independent of the operating pressure
- Hermetic separation between medium and actuator

*see information on working medium on page 2

Sectional drawing



GEMÜ 563
Plastic design



GEMÜ 568
Metal design

Technical data

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.

Leakage rate at 6 bar acc. to DIN 3230,
T.3: Leakage rate 3 (test with water)

Max. permissible temp. of working medium

GEMÜ 563:
See data sheet "Technical Information on Plastic Materials"

GEMÜ 568:
80° C

Input resistance

33 Ω (input protected by reverse diode)

Operating time

See design page 3

approx. 17 or 45 s

Protection class

IP 65 acc. to EN 60529

Ambient conditions

Ambient temperature -15 to +55° C
For limitations see table Pressure/temperature correlation

Electrical connection

2 x PG 13.5 (Design without integrated control module)

2 x circular connector
(Binder Series 717) (Design with integrated control module)

Power supply

24, 120, 230V 50/60 Hz ± 10%

Power consumption

3.5 VA

Nominal size	Operating pressure	Weight [kg]	
		GEMÜ 563	GEMÜ 568
DN	[bar]		
3, 6, 10, 15	0 - 6	1.6	2.4

All pressures are gauge pressures.

Rating

Continuously rated

Pressure / temperature correlation for plastic

Temperature in °C Plastic body		-20	-10	±0	5	10	20	25	30	40	50	60	70	80
Valve body material		Permissible operating pressure in bar												
PVC-U	Code 1	-	-	-	6.0	6.0	6.0	6.0	4.8	3.6	2.1	0.9	-	-
PVDF	Code 20	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.4	4.8	4.3	3.8	3.2	2.8

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

Order data

Body configuration	Code
Body configuration	D

Connection	Code
Threaded connections	
Threaded sockets DIN ISO 228 (GEMÜ 563/568)	1
Threaded spigots DIN 11851 (GEMÜ 568)	6
Union ends with DIN insert (socket) (GEMÜ 563)	7
Clamp connections	
Clamps DIN 32676 for pipe DIN 11850 (GEMÜ 568)	86

Valve body material	Code
PVC-U, grey (GEMÜ 563)	1
PVDF (GEMÜ 563)	20
1.4435 (ASTM A 351 CF3M) investment casting*(GEMÜ 568)	34
* Material equivalency 316 L	

Seat seal	Code
FPM	4
EPDM	14

Voltage/Frequency	Code
24V 50/60 Hz ±10%	C4
120V 50/60 Hz ±10%	G4
230V 50/60 Hz ±10%	L4

Control module (with connector)	Code
Without	-
Analogue signal processing	
Control of valve position. Actual value control inside the actuator by potentiometer (K 6025/K 6026); set value external, 0 - 10V	E1
Control of valve position. Actual value control inside the actuator by potentiometer (K 6025/K 6026); set value external, 0/4-20 mA	E2
Control of process variables. Actual value external, 0/4-20 mA; set value external, 0/4-20 mA (K 6023/K 6024)	E3
Control of valve position. Actual value control inside the actuator by potentiometer (K 6025/K 6026); set value external, external potentiometer	EP

Control characteristic	Code
Kv values / control characteristic / equal-percentage	A*
/ equal-percentage	B*
/ equal-percentage	C*
/ linear	D*
/ linear	E*
* For selection see diagrams page 4.	

Kv value	see page 4
Kv values: Tolerance ±10%.	

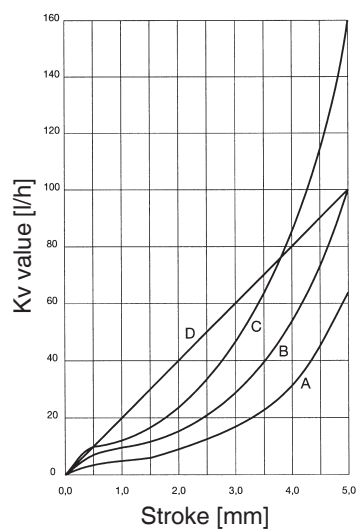
Design	K number
Standard: approx. 17 sec. operating time, 2 potential-free switching contacts	6023
Operating time approx. 45 sec., 2 potential-free switching contacts	6024
Operating time approx. 17 sec., with potentiometer 10 kΩ	6025
Operating time approx. 45 sec., with potentiometer 10 kΩ	6026

Order example	563	10	D	1	1	14	L4	E2	B	1600	6025
Type	563										
Nominal size		10									
Body configuration (code)			D								
Connection (code)				1							
Valve body material (code)					1						
Seat seal (code)						14					
Voltage/Frequency (code)							L4				
Integrated control modules (code)								E2			
Control characteristic (code)									B		
Kv value (see diagrams page 4)										1600	
Design (K number)											6025

Kv values [l/h]

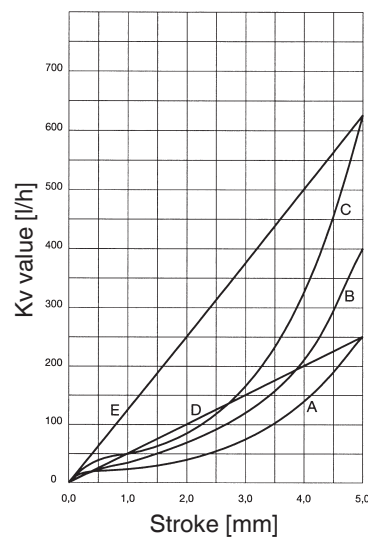
Characteristics DN 3 (seat)

Characteristic	Kv value [l/h]
A	63
B	100
C	160
D	100



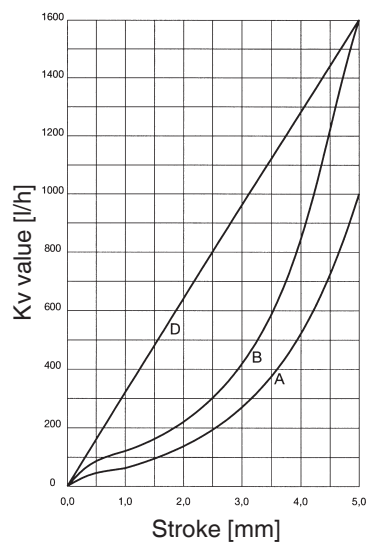
Characteristics DN 6 (seat)

Characteristic	Kv value [l/h]
A	250
B	400
C	630
D	250
e	630



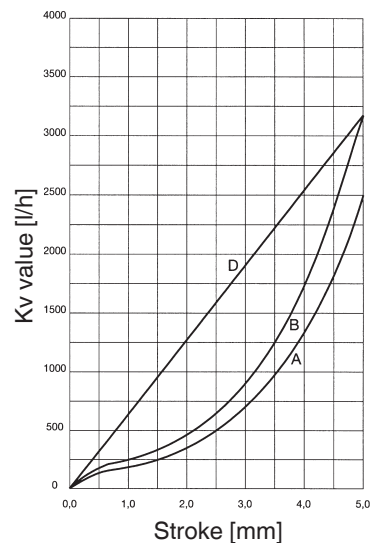
Characteristics DN 10 (seat)

Characteristic	Kv value [l/h]
A	1000
B	1600
D	1600



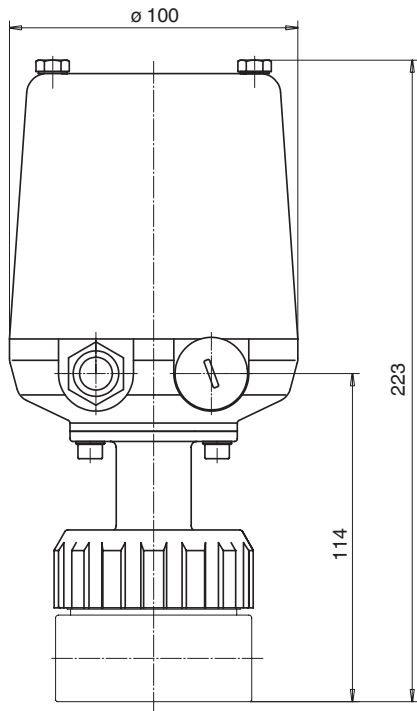
Characteristics DN 15 (seat)

Characteristic	Kv value [l/h]
A	2500
B	3300
D	3300

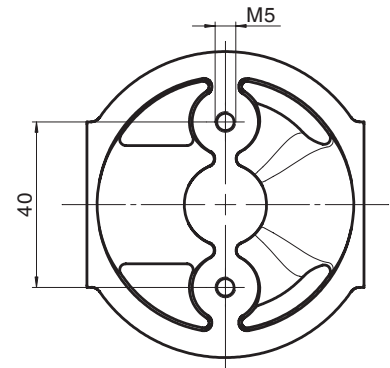


Dimensions [mm]

Actuator dimensions



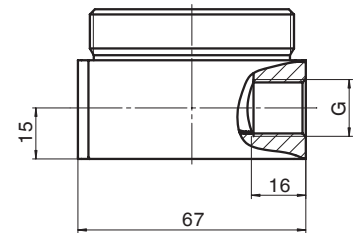
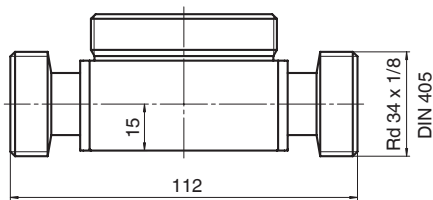
Mounting dimensions



Body dimensions - Threaded sockets DIN ISO 228
Connection code 1 (GEMÜ 563 / GEMÜ 568)
Valve body material code 1, 20, 34

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

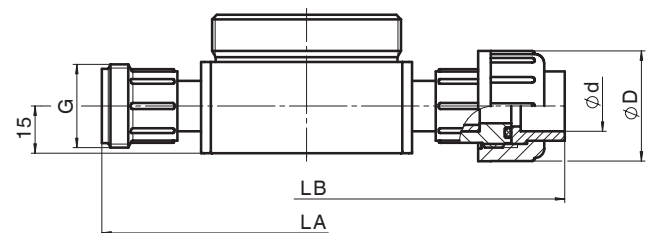
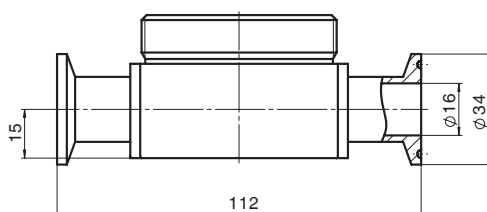
Body dimensions - Threaded spigots DIN 11851
Connection code 6 (only GEMÜ 568)
Valve body material code 34



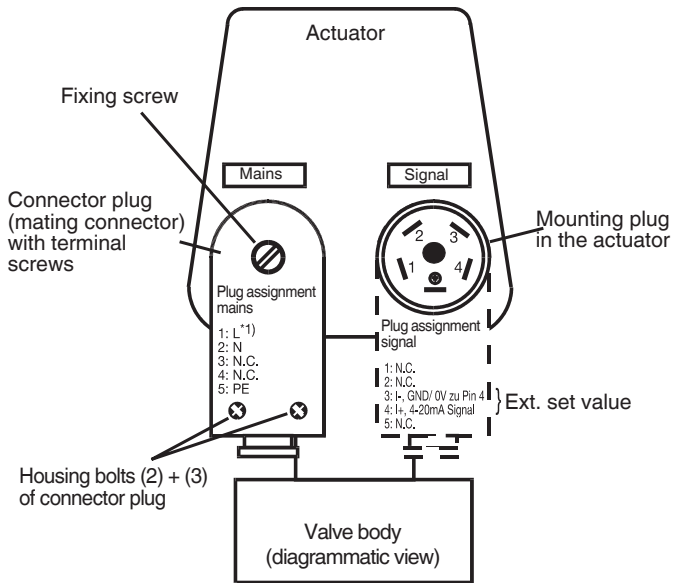
Body dimensions - Unions
Connection code 7 (only GEMÜ 563)
Valve body material code 1

DN	G	øD	ød	LA	LB
3	G 3/4	35	16	130	164
6	G 3/4	35	16	130	164
10	G 3/4	35	16	130	164
15	G 1	43	20	130	168

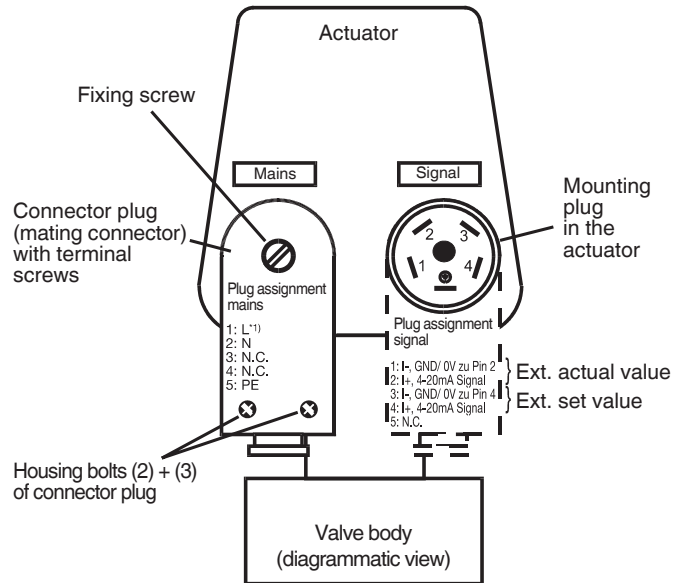
Body dimensions - Clamp connections
Connection code 86 (only GEMÜ 568)
Valve body material code 34



Connection diagram Integrated control modules code E2

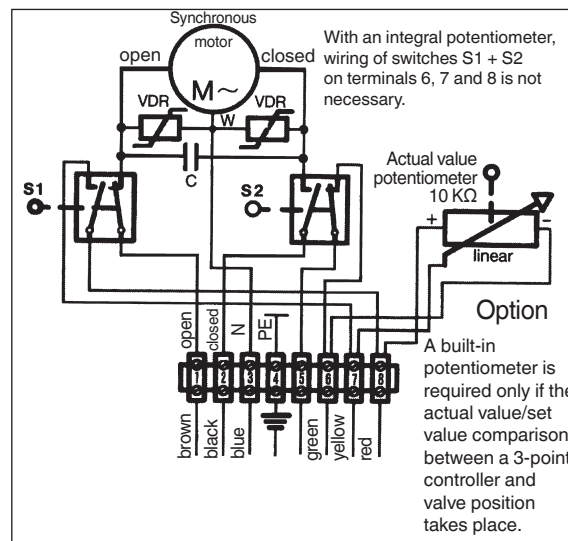


Connection diagram Integrated control modules code E3



*1) For the supply voltage (mains) check the details on the product label (24, 120, or 230V AC). N.C. = (not connected)

Connection diagram GEMÜ 563/568



Overview of valve bodies for GEMÜ 563 and GEMÜ 568

Connection code	GEMÜ 563			GEMÜ 568		
	1	7	86	1	6	86
Material code	1	20	1	34	34	34
DN 3	X	X	X	X	X	X
DN 6	X	X	X	X	X	X
DN 10	X	X	X	X	X	X
DN 15	X	X	X	X	X	X

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