

GEMÜ SUHK SUMONDO

Manual operator for single-use valves



Features

- Tried-and-tested, reliable actuator design (remains in system)
- Hermetic separation between medium and actuator
- Impact resistant, corrosion resistant
- Continuous minimum flow regulation thanks to closing stroke limiter
- Integral optical position indicator
- Autoclavable actuator

Description

The GEMÜ SUHK manual operator of the GEMÜ SUMONDO single-use valve is joined to the valve body GEMÜ SUB with a clamp. It is equipped with an internally welded diaphragm. The valve body and the actuator are locked with a defined opening and closing procedure. After a single use, the valve body and its diaphragm are removed from the actuator and disposed of. The actuator remains in the system and can be used multiple times.

Technical specifications

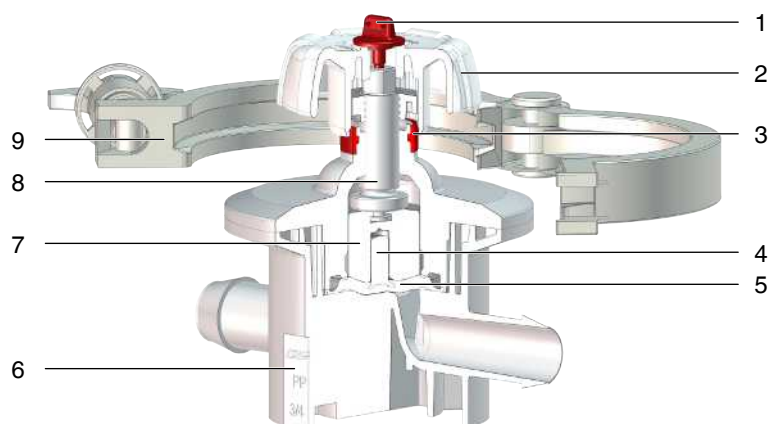
- **Media temperature :** 5 to 40 °C
- **Ambient temperature:** 0 to 40 °C
- **Operating pressure :** 0 to 4.9 bar
- **Body configurations:** 2/2-way body | Angle valve body | T-body
- **Connection types:** Clamp | Hose barb
- **Body materials:** PP-R, natural
- **Diaphragm materials:** TPE
- **Conformities:** EAC | USP

Technical data depends on the respective configuration



Product description

Construction



Item	Name	Materials
1	Special screw	PVDF
2	Handwheel	PVDF
3	Optical position indicator	PES
4	Diaphragm pin	PP-R
5	Diaphragm	TPE
6	Valve body	PP-R
7	Compressor	PVDF
8	Threaded spindle	PEEK
9	Tri-clamp	PA-glass reinforced

Availability

Diaphragm size Code	2/2-way body		T body		Angle valve body, right
	Hose barb	Clamp connection	Hose barb	Clamp connection	Hose barb
B	1/4"	-	-	-	-
	3/8"	-	3/8"	-	3/8"
	1/2"	-	1/2"	-	1/2"
C	1/2"	-	-	-	-
	3/4"	3/4"	3/4"	3/4"	-
	1"	1"	1"	1"	-
D	3/4"	3/4"	-	-	-
	1"	1"	-	-	-

Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Manual operator SUHK

Order codes

1 Type	Code
Manual operator, plastic version	SUHK

2 Diaphragm size	Code
Diaphragm size B	B
Diaphragm size C	C
Diaphragm size D	D

3 Diaphragm mounting	Code
Pin	G

4 Control function	Code
Manually operated	0

5 Actuator size	Code
Actuator size 1WR	1WR

Order example SUHK

Order option	Code	Description
1 Type	SUHK	Manual operator, plastic version
2 Diaphragm size	B	Diaphragm size B
3 Diaphragm mounting	G	Pin
4 Control function	0	Manually operated
5 Actuator size	1WR	Actuator size 1WR

Diaphragm valve body SUB

Order codes

1 Type	Code
Single-use body	SUB
2 Diaphragm size	Code
Diaphragm size B	B
Diaphragm size C	C
Diaphragm size D	D
3 Connection size 1	Code
DN 8 (1/4")	8
DN 10 (3/8")	10
DN 15 (1/2")	15
DN 20 (3/4")	20
DN 25 (1")	25
4 Body configuration	Code
2/2-way body	D
Angle valve body, right	R
T body	T

5 Connection	Code
Clamp connection similar to ASME-BPE	CA
Hose barb	HB
6 Body material	Code
PP-R, natural	B8
7 Diaphragm material	Code
TPE	K8
8 Connection size 2	Code
1/4" (DN 8)	8
3/8" (DN 10)	10
1/2" (DN 15)	15
3/4" (DN 20)	20
1" (DN 25)	25
9 Connection of spigot 2	Code
Clamp connection similar to ASME-BPE	CA
Hose barb	HB

Order example SUB

Ordering option	Code	Description
1 Type	SUB	Single-use body
2 Diaphragm size	B	Diaphragm size B
3 Connection size 1	10	DN 10 (3/8")
4 Body configuration	T	T body
5 Connection	HB	Hose barb
6 Body material	B8	PP-R, natural
7 Diaphragm material	K8	TPE
8 Connection size 2	10	3/8" (DN 10)
9 Connection of spigot 2	HB	Hose barb

Technical data

Medium

Working medium: Corrosive, inert, liquid media which have no negative impact on the physical and chemical properties of the body and diaphragm material.

Temperature

Media temperature: 5 to 40 °C

Ambient temperature: 0 to 40 °C

Storage temperature: 0 to 40 °C

Pressure

Operating pressure: 0 – 4.9 bar (Diaphragm size code B, C),
0 – 4.5 bar (Diaphragm size code D)

Kv values:

AG	MG	Connection type code ¹⁾	Body con- figuration code ²⁾	Kv value [m³/h]	Cv value [US-gpm]	
8	B	HB	D	0.47	0.55	
10			D	T	1.08	1.26
				R	1.03	1.21
				R	1.02	1.19
15		HB	D	1.59	1.86	
			T	1.47	1.72	
			R	1.44	1.68	
15	C	HB	D	2.17	2.54	
20		HB	D	3.29	3.85	
			T	2.15	2.52	
		CA	D	3.29	3.85	
T			2.15	2.52		
25		HB	D	4.55	5.32	
			T	3.81	4.46	
		CA	D	4.55	5.32	
			T	3.81	4.46	
20	D	CA, HB	D	9.21	10.78	
25		CA, HB	D	12.19	14.26	

1) **Connection**

Code CA: Clamp connection similar to ASME-BPE

Code HB: Hose barb

2) **Body configuration**

Code D: 2/2-way body

Code R: Angle valve body, right

Code T: T body

Kv values determined based on standard DIN EN 60534-2-3:1998, inlet pressure 4 bar, Δp 1 bar

The Kv values for other product configurations (e.g. other diaphragm or body materials) may differ. In general, all diaphragms are subject to the influences of pressure, temperature, the process and their tightening torques. Therefore the Kv values may exceed the tolerance limits of the standard.

Kv values in m³/h (Cv values in gpm)

MG = diaphragm size

Product compliance

- Certifications:**
- USP Bacterial Endotoxins Test, USP <85>
 - USP Biological Reactivity Test in vitro, USP <87>
 - USP Biological Reactivity Tests in vivo for Class VI, USP <88>
 - USP Physicochemical Tests for Plastics, USP <661>
 - USP Particulate Matter in Injections, USP <788>, USP <790>
 - Validation guide on request

Mechanical data

Service life:	Manual operator:	3 years from date of first use
	Diaphragm valve body (SUB):	100.000 switching cycles (according to GEMÜ product validation) or max. 4.5 years from production date (1.5 years before sterilization/3 years after sterilization)

Weight

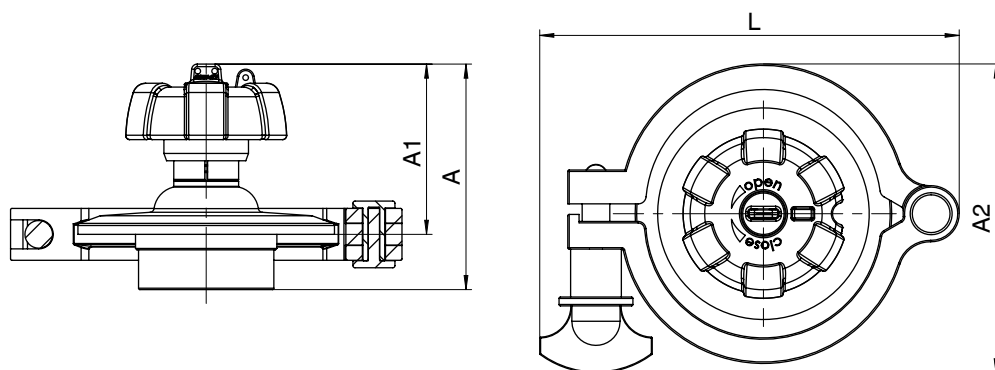
Type	Con- nection Code ¹⁾	Body config- uration Code ²⁾	MG B			MG C			MG D	
			1/4" (DN 8)	3/8" (DN 10)	1/2" (DN 15)	1/2" (DN 15)	3/4" (DN 20)	1" (DN 25)	3/4" (DN 20)	1" (DN 25)
SUB	HB	D	36	40	42	91	94	99	80	80
		T	-	44	47	-	108	113	-	-
		R	-	43	46	-	-	-	-	-
	CA	D	-	-	-	-	97	100	99	100
		T	-	-	-	-	111	112	-	-
SUHK			186	186	186	272	272	272	326.5	326.5

Weight in g, MG = diaphragm size

- 1) **Connection**
 Code CA: Clamp connection similar to ASME-BPE
 Code HB: Hose barb
- 2) **Body configuration**
 Code D: 2/2-way body
 Code R: Angle valve body, right
 Code T: T body

Dimensions

Actuator dimensions

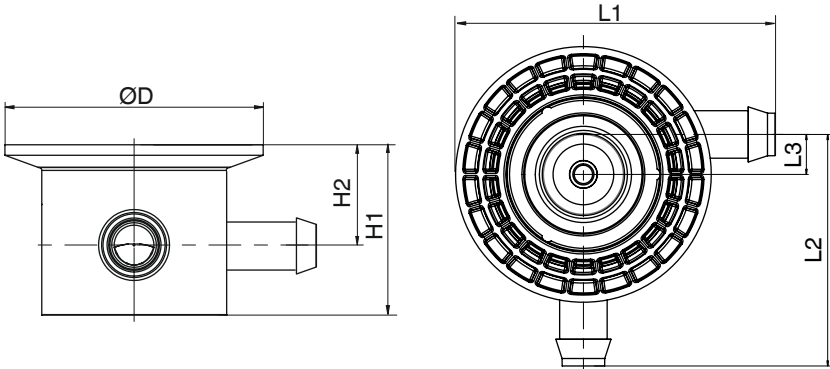


	MG B	MG C	MG D
	1/4" (DN 8), 1/2" (DN 15)	3/4" (DN 20), 1" (DN 25)	3/4" (DN 20), 1" (DN 25)
A	80.5	80.0	81.2
A1	74.9	60.4	55.3
A2	86.5	109.6	109.6
L	122.5	148.8	148.8

Dimensions in mm, MG = diaphragm size

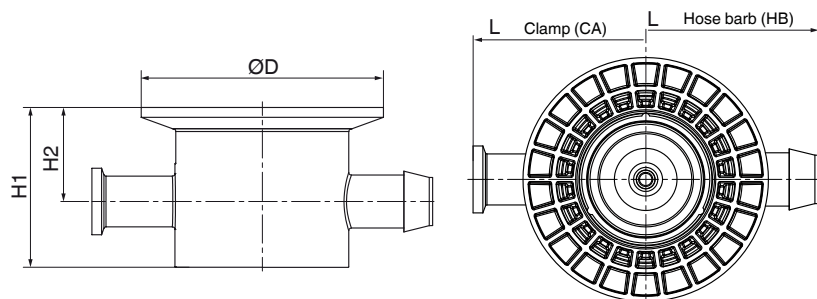
Body dimensions

Angle valve body, right (code R)



	MG B	
	3/8" (DN 10)	1/2" (DN 15)
L1	48.0	55.8
L2	58.0	66.8
L3	10.0	10.0
H1	33.3	33.3
H2	22.3	22.3
$\varnothing D$	64.0	64.0

Dimensions in mm, MG = diaphragm size

2/2-way body (code D)

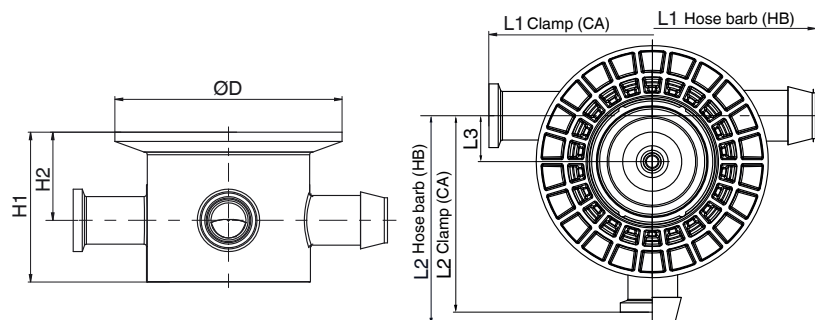
	Con- nection Code ¹⁾	MG B			MG C		MG D		
		1/4" (DN 8)	3/8" (DN 10)	1/2" (DN 15)	1/2" (DN 15)	3/4" (DN 20)	1" (DN 25)	3/4" (DN 20)	1" (DN 25)
L	CA	-	-	-	-	128.0	137.4	134.6	134.6
H1		-	-	-	-	60.0	60.0	58.5	58.5
H2		-	-	-	-	35.3	35.3	38.0	39.5
ØD		-	-	-	-	91.0	91.0	91.6	91.6
L	HB	80.6	95.9	111.5	126.0	128.0	140.0	139.0	139.0
H1		33.3	33.3	33.3	60.0	60.0	60.0	58.5	58.5
H2		22.3	22.3	22.3	35.3	35.3	35.3	38.0	39.5
ØD		64.0	64.0	64.0	91.0	91.0	91.0	91.6	91.6

Dimensions in mm, MG = diaphragm size

1) **Connection**

Code CA: Clamp connection similar to ASME-BPE

Code HB: Hose barb

T valve body (Code T)

	Connection Code ¹⁾	MG B		MG C	
		3/8" (DN 10)	1/2" (DN 15)	3/4" (DN 20)	1" (DN 25)
L1_C A	CA	-	-	128.0	137.4
L2_C A		-	-	82.0	82.0
L3_C A		-	-	18.0	18.0
H1_C A		-	-	60.0	60.0
H2_C A		-	-	35.3	35.3
ØD_C A		-	-	91.0	91.0
L1_H B	HB	96.0	111.5	128.0	140.0
L2_H B		58.0	65.8	82.0	88.0
L3_H B		10.0	10.0	18.0	18.0
H1_H B		33.3	33.3	60.0	60.0
H2_H B		22.3	22.3	35.3	35.3
ØD_H B		64.0	64.0	91.0	91.0

Dimensions in mm, MG = diaphragm size

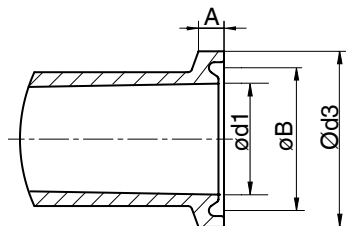
1) **Connection**

Code CA: Clamp connection similar to ASME-BPE

Code HB: Hose barb

Connection dimensions

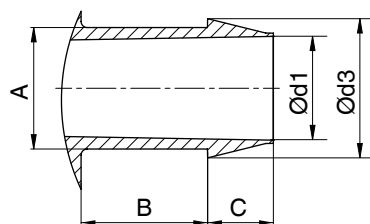
Clamp (code CA)



MG	DN	A	øB	ød1	ød3
C	3/4" (DN 20)	3.6	21.9	15.75	25.0
	1" (DN 25)	3.6	31.0	22.1	34.0
D	3/4" (DN 20)	2.85	43.4	19.05	50.5
	1" (DN 25)	2.85	43.4	25.4	50.5

Dimensions in mm, MG = diaphragm size
Tolerance ± 0.2 mm

Hose barb (code HB)



MG	DN	A	B	C	ød1	ød3
B	1/4" (DN 8)	7.9	10.6	4.5	5.9	9.3
	3/8" (DN 10)	11.9	16.0	6.7	9.4	13.8
	1/2" (DN 15)	15.9	21.4	9.1	12.6	18.8
C	1/2" (DN 15)	15.9	21.4	9.1	12.6	18.8
	3/4" (DN 20)	19.9	20.7	10.8	17.0	22.8
	1" (DN 25)	28.0	24.7	11.5	25.3	30.8
D	3/4" (DN 20)	22.0	21.4	7.5	19.0	25.0
	1" (DN 25)	28.0	22.2	11.5	25.4	30.8

Dimensions in mm, MG = diaphragm size
Tolerance ± 0.2 mm



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