

Diaphragm Valves, Plastic/Metal

Construction

GEMÜ SilverLine® is a range of simple yet robust plastic and metal diaphragm valves for the control of liquids and gases. Valve bodies are available in PVC-U, PP and brass.

GEMÜ S647 SilverLine® Version for direct pneumatic operation

GEMÜ S660 SilverLine® pneumatically operated with optical position indicator

GEMÜ S670 SilverLine® manually operated

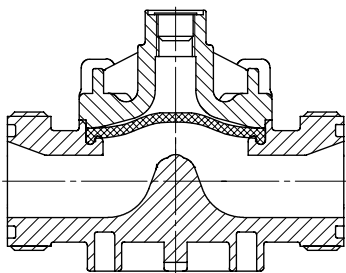
Features

- Compact design with few components
- Low weight
- Corrosion resistant materials
- Good flow coefficient
- Complies with the French drinking water standard ACS, medium wetted parts with PVC-U body and EPDM diaphragm
- Valve body and diaphragm available in various materials and designs
- Various connections available

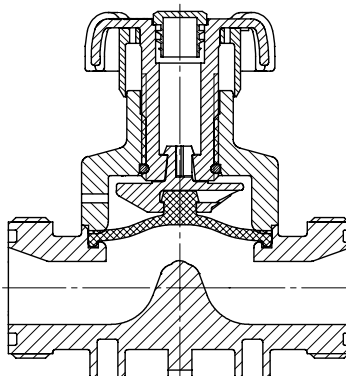
Advantages

- Excellent price-performance ratio
- Insensitive to particulate media
- Optional flow direction and mounting position

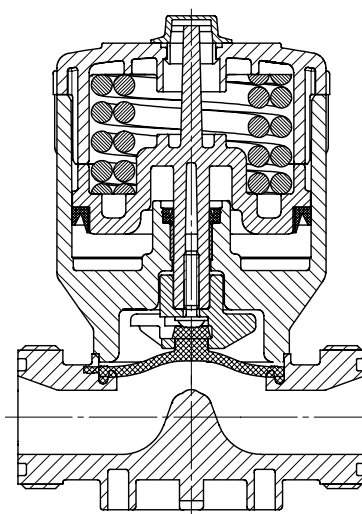
Sectional drawings



GEMÜ S647



GEMÜ S670



GEMÜ S660



GEMÜ S647



GEMÜ S660



GEMÜ S670



GEMÜ®
SilverLine®

S647, S660, S670

General 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.

Media temperature max. 60 °C
Maximum permissible temperature of working medium see data sheet "Technical Information on Plastic Materials".

Ambient conditions

Max. ambient temperature 40 °C

Flow direction

Optional

Pressure / temperature correlation

Temperature in °C (body)		-	10	20	25	30	40	50	60
Valve body material		Permissible operating pressure [bar]							
PVC-U	Code 1	-	10.0	10.0	10.0	8.0	6.0	3.5	1.5
PP	Code 5	10.0	10.0	10.0	10.0	8.5	7.0	5.5	4.0
Brass	Code 12	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.0

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.

Seal material for valve bodies with union ends

Diaphragm material	O-ring material
EPDM	EPDM
NBR	EPDM

Other materials on request.

Technical data GEMÜ S647

		Max. operating pressure	Control pressure	Kv value
DN	MG	EPDM / NBR		[m³/h]
20, 25	25	6 bar	see diagram	17.7
32, 40	40			34.8
50	50			44.7

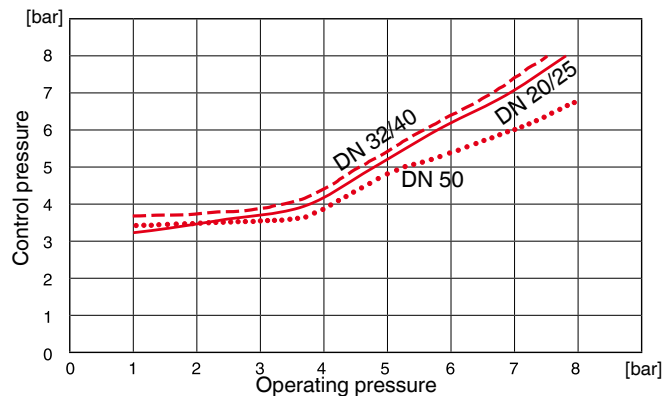
MG = diaphragm size

Control medium

Inert gases, max. 40 °C

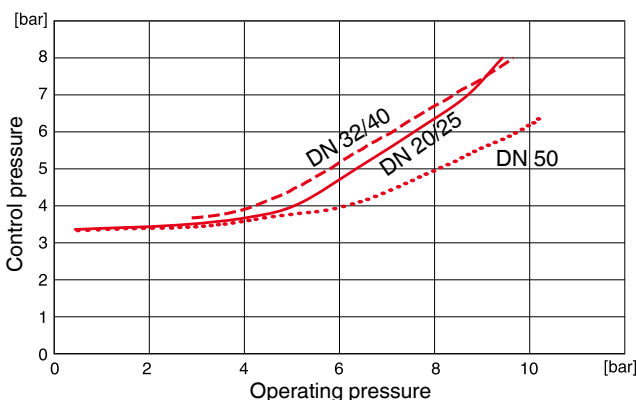
Operating pressure/Control pressure characteristics

PP (code 5)

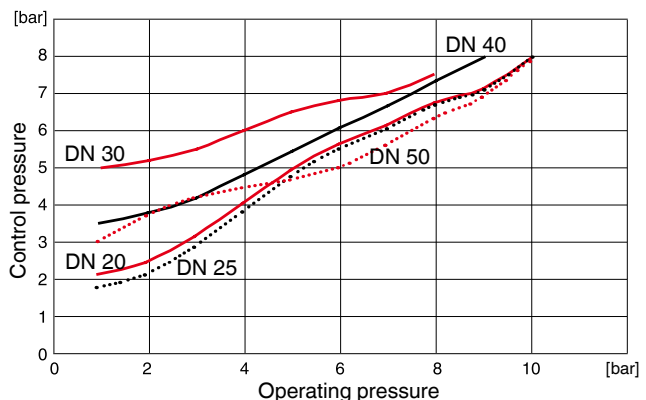


Operating pressure / Control pressure characteristics

PVC-U (code 1)



Brass (code 12)



Technical data GEMÜ S660

Control medium	
Inert gases	
Max. perm. temperature of control medium	40 °C
Filling volume (control function 1):	
Diaphragm size 15	0.018 dm ³
Diaphragm size 25	0.098 dm ³
Diaphragm size 40	0.339 dm ³
Diaphragm size 50	0.381 dm ³

		Max. operating pressure	Control pressure	Kv value
DN	MG	EPDM / NBR		[m ³ /h]
10, 15	15	6.0 bar	4.5 - 6.0 bar	4.5
20, 25	25			17.7
32, 40	40			34.8
50	50			44.7

Technical data GEMÜ S670

		Max. operating pressure	Kv value
DN	MG	EPDM / NBR	[m ³ /h]
10, 15	15	6.0 bar	4.5
20, 25	25		17.7
32, 40	40		34.8
50	50		44.7

Order data

Type	Code
Diaphragm valve with direct pneumatic operation	S647
Diaphragm valve with pneumatic actuator	S660
Diaphragm valve with manual operator	S670

Diaphragm material	Code
NBR	2
EPDM	14
Other diaphragm materials on request	

Body configuration	Code
2/2-way body	D

Control function	Code
Manually operated, S670	0
Normally closed (NC), S660	1
Closed by control pressure/ opened by operating pressure, S647	5

Connection	Code
Threaded sockets DIN ISO 228 (brass)	1
Union ends with DIN insert (socket)	7
Union ends with inch insert (socket)	33 ¹
Union ends with DIN insert (for IR butt welding)	78 ²
Body with threaded spigots for unions (without union nut, insert and O-ring)	7X
only for union insert material: ¹ PVC-U, ² PP	

Union insert material	Code
PVC-U, grey	1
PP	5
Without insert	X

Valve body material	Code
PVC-U, grey	1
PP-R-GR (reinforced polypropylene)	5
CW617N, brass (only connection code 1)	12

Order example	S670	20	D	7	1	14	0	1
Type	S670							
Nominal size		20						
Body configuration (code)			D					
Connection (code)				7				
Valve body material (code)					1			
Diaphragm material (code)						14		
Control function (code)							0	
Union insert material (code)								1

Dimensions GEMÜ S647 [mm]

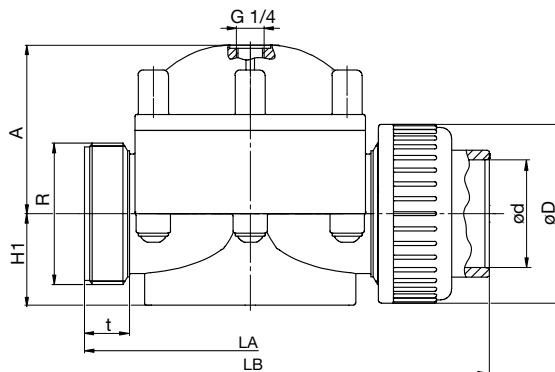
Valve body material: PVC-U (code 1), PP (code 5); connection code 7, 7X, 33

DN	A	H1	7X			7, 33		7		33
			LA	R	t	ød	øD	LB		
								PVC-U**	PP**	PVC-U**
20*	59.0	31.0	116	G 1 1/2	15	25	60	160	154	160
25	59.0	31.0	116	G 1 1/2	15	32	60	166	158	166
32*	78.2	42.5	154	G 2 1/4	21	40	83	222	202	212
40	78.2	42.5	154	G 2 1/4	21	50	83	222	207	222
50	80.5	52.5	182	G 2 3/4	26	63	103	264	243	264

For materials see overview on page 7

* Only available with union ends
incorporating a reducing socket

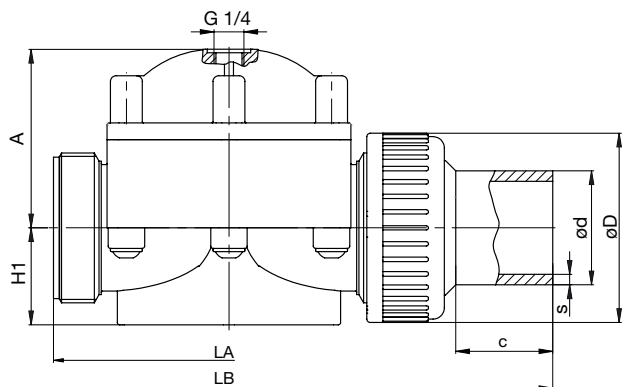
**Insert material



Valve body material PP (Code 5);
connection code 78

DN	A	H1	LA	LB	ød	øD	c	s
20*	59.0	31.0	116	228	25	60	33	2.3
25	59.0	31.0	116	234	32	60	39	3.0
32*	78.2	42.5	154	278	40	83	40	3.7
40	78.2	42.5	154	284	50	83	42	4.6
50	80.5	52.5	182	318	63	103	44	5.8

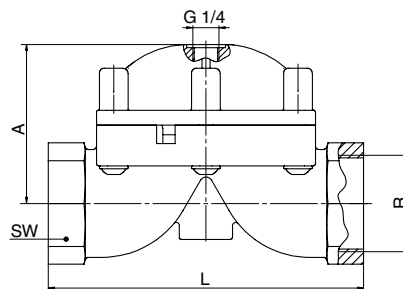
* Only available with union ends incorporating a reducing socket
For materials see overview on page 7



Valve body material: Brass (code 12);
connection code 1

DN	A	R	L	SW
20	63	G 3/4	95	32
25	63	G 1	110	41
32	78	G 1 1/4	150	50
40	78	G 1 1/2	150	55
50	84	G 2	165	70

For materials see overview on page 7



Dimensions GEMÜ S660 [mm]

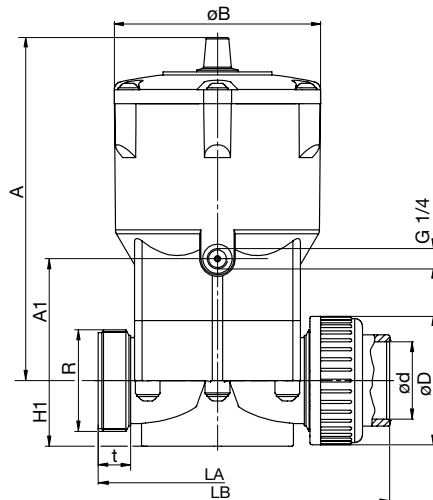
Valve body material: PVC-U (code 1), PP (code 5); connection code 7, 7X, 33

DN	A	A1	øB	H1	7X			7, 33		7		33
					LA	R	t	ød	øD	LB		
										PVC-U**	PP**	PVC-U**
10*	85	31	63	27.0	90	G 1	16	16	43	128	134	-
15	85	31	63	27.0	90	G 1	16	20	43	128	125	128
20*	135	33	105	31.0	116	G 1 1/2	15	25	60	160	154	160
25	135	33	105	31.0	116	G 1 1/2	15	32	60	166	158	166
32*	222	79	151	42.5	154	G 2 1/4	21	40	83	222	212	212
40	222	79	151	42.5	154	G 2 1/4	21	50	83	222	207	222
50	234	90	161	52.5	182	G 2 3/4	26	63	103	264	243	264

For materials see overview on page 7

* Only available with union ends incorporating a reducing socket

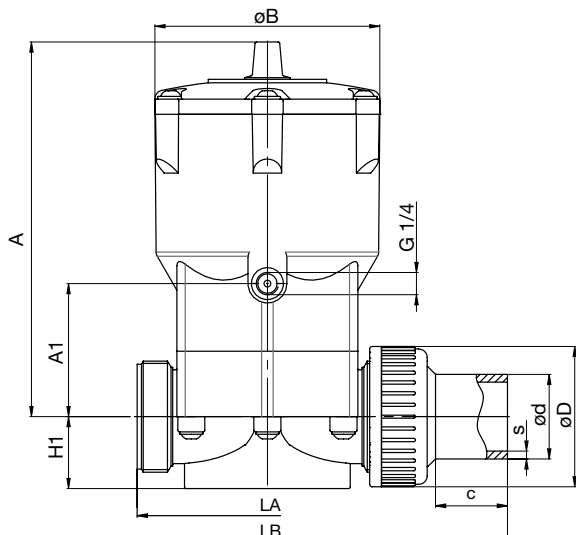
**Insert material



Valve body material: PVC-U (code 1),
PP (code 5); connection code 78

DN	A	A1	øB	H1	ød	øD	LB	c	s
15	85	31	63	27.0	20	43	196	36	1.9
20*	135	33	105	31.0	25	60	228	37	2.3
25	135	33	105	31.0	32	60	234	39	3.0
32*	222	79	151	42.5	40	83	278	40	3.7
40	222	79	151	42.5	50	83	284	42	4.6
50	234	90	161	52.5	63	103	318	44	5.8

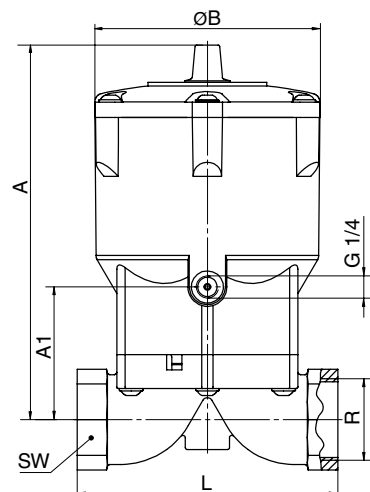
* Only available with union ends incorporating a reducing socket
For materials see overview on page 7



Valve body material: Brass (code 12);
connection code 1

DN	A	A1	øB	R	L	SW
15	85	31	63	G 1/2	75	27
20	138	36	105	G 3/4	95	32
25	138	36	105	G 1	110	41
32	222	79	151	G 1 1/4	150	50
40	222	79	151	G 1 1/2	150	55
50	237	93	161	G 2	180	70

For materials see overview on page 7



Dimensions GEMÜ S670 [mm]

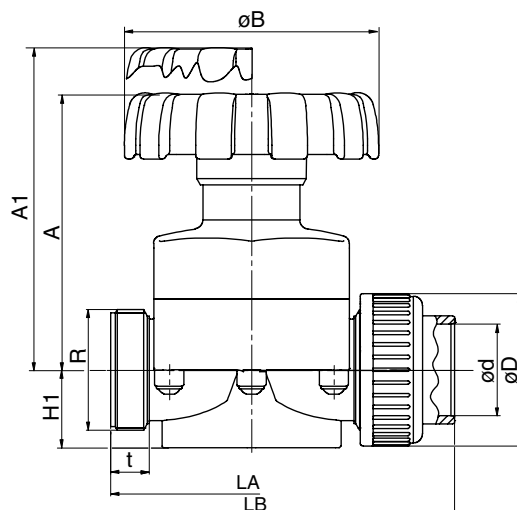
Valve body material: PVC-U (code 1), PP (code 5); connection code 7, 7X, 33

DN	A	A1	øB	H1	7X			7, 33		7			33
					LA	R	t	ød	øD	LB			
										PVC-U**	PP**	PVC-U**	
10*	82	86.3	70	27.0	90	G 1	16	16	43	128	134	-	
15	82	86.3	70	27.0	90	G 1	16	20	43	128	125	128	
20*	81	94.0	70	31.0	116	G 1 1/2	15	25	60	160	154	160	
25	81	94.0	70	31.0	116	G 1 1/2	15	32	60	166	158	166	
32*	139	155.0	139	42.5	154	G 2 1/4	21	40	83	222	212	212	
40	139	155.0	139	42.5	154	G 2 1/4	21	50	83	222	207	222	
50	142	158.0	139	52.5	182	G 2 3/4	26	63	103	264	243	264	

For materials see page 7

* Only available with union ends incorporating a reducing socket

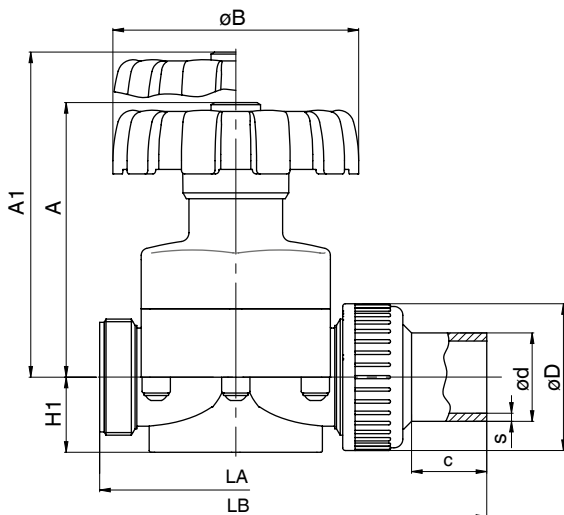
**Insert material



Valve body material: PVC-U (code 1), PP (code 5); connection code 78

DN	A	A1	øB	H1	ød	øD	LB	c	s
15	82	86.3	70	27.0	20	43	196	36	1.9
20*	81	94.0	70	31.0	25	60	228	37	2.3
25	81	94.0	70	31.0	32	60	234	39	3.0
32*	139	155.0	139	42.5	40	83	278	40	3.7
40	139	155.0	139	42.5	50	83	284	42	4.6
50	142	158.0	139	52.5	63	103	318	44	5.8

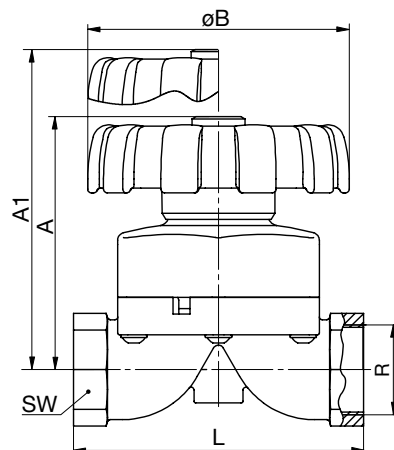
* Only available with union ends incorporating a reducing socket
For materials see overview on page 7



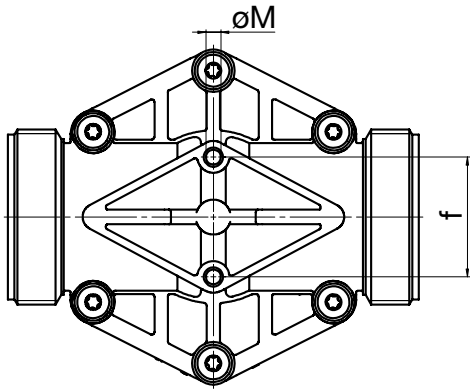
Valve body material: Brass (code 12); connection code 1

DN	A	A1	øB	R	L	SW
15	82	86.3	70	G 1/2	75	27
20	84	97.5	70	G 3/4	95	32
25	84	97.5	70	G 1	110	41
32	139	155.0	139	G 1 1/4	150	50
40	139	155.0	139	G 1 1/2	150	55
50	146	162.0	139	G 2	180	70

For materials see overview on page 7



Body dimensions [mm]



Plastic diaphragm valve, bottom view

DN	f	øM
10 - 25	25	2.8
32 - 50	45	5.6

Overview of valve bodies

Connection code	1	7	7X	33	78
Material code	MS (code 12)	PVC-U (code 1), PP (code 5)			
DN 10*	-	X	-	-	-
DN 15**	X	X	X	X	X
DN 20*	X	X*	-	X	-
DN 25	X	X	X	X	X
DN 32*	X	X*	-	X	X
DN 40	X	X	X	X	X
DN 50	X	X	X	X	X

* Only available with union ends incorporating a reducing socket

** only GEMÜ S660 and S670

SilverLine® Angle seat globe and diaphragm valves



GEMÜ S560 SilverLine®
pneumatically operated
DN 10 - 50

GEMÜ S680 SilverLine®
motorized
DN 10 - 25



Body material
Brass

GEMÜ S580 SilverLine®
motorized
DN 10 - 25



Body material
Brass



Body material
Polypropylene



Body material
Polypropylene

For further valves, accessories and other products, please see our Product Range catalogue and Price List. Contact GEMÜ.

GEMÜ® VALVES, MEASUREMENT
AND CONTROL SYSTEMS

