GEMÜ®

Diaphragm Valve, Metal

with integrated automation module

Construction

The GEMÜ 651 piston actuated 2/2-way diaphragm valve is designed for use in sterile applications and has a fully integrated automation module. Normally closed and Normally open control functions are available.
The automation module is available in two versions. Either as a **combi switchbox** with integrated 3/2-way pilot valve for valve actuation and position feedback or with an integrated **electro-pneumatic positioner**. GEMÜ 651 has a microprocessor controlled, intelligent position sensor as well as an integrated analogue travel sensor system. The **Speed**$^{-AP}$ function simplifies commissioning. The base of the actuator housing is made of stainless steel, the cover is made of a stable transparent plastic material.

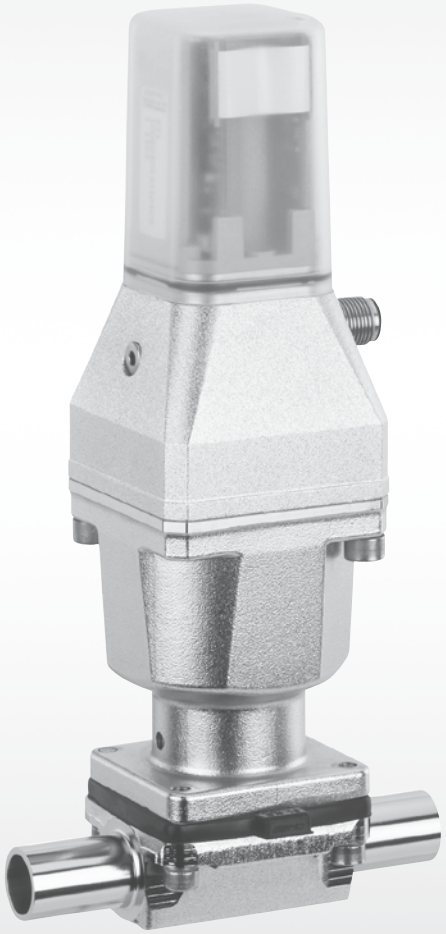
Features

- Suitable for inert and corrosive* liquid and gaseous media
- Compact design (ideal when space is at a premium)
- CIP cleaning capability
- **Integrated automation module as either**
  - combi switchbox or
  - electro-pneumatic positioner
- Integrated travel and system control
- AS-Interface field bus connection (option for combi switchbox)

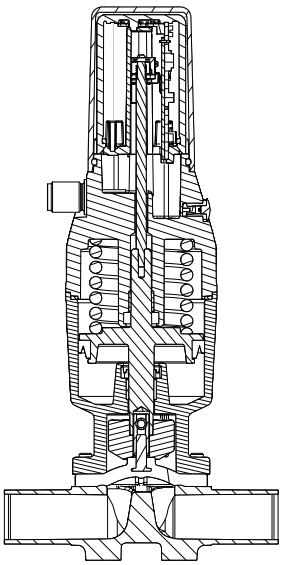
Advantages

- Reduced planning and cabling time
- Integrated air ports
- **Speed**$^{-AP}$ function for fast commissioning
- Optional flow direction
- Installation for an optimized draining is possible
- M5 control air connectors, available in-line with piping or rotated by 90°

*see information on working medium on page 2



Sectional drawing



GEMÜ® 651

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 diaphragm material.

The valve will seal in both flow directions up to full operating pressure (gauge pressure).

Temperatures

Medium temperature	-10 ... 100 °C
Ambient temperature	
Actuator size 0/1	0 … +60 °C
Actuator size 2	0 … +50 °C
Max. permissible temperature of control medium	
Actuator size 0/1	60 °C
Actuator size 2	50 °C
Flow rate of pilot valve (at 6 bar)	
Actuator size 0/1	15 l/min
Actuator size 2	100 l/min
Sterilisation temperature	
EPDM (Code 13/3A)	150 °C, max. 60 min
EPDM (Code 17)	150 °C, max. 180 min
PTFE (Code 52/5A)	Constant temperature* 150 °C
PTFE (Code 5E)	Constant temperature* 150 °C

The sterilisation temperature is valid for steam or superheated water.
* The valves concerned must be serviced regularly if steam is applied continuously.

Control medium

Quality classes to DIN ISO 8573-1

Actuator size 0/1	
Dust content	Class 3 (max. particle size 5 µm), (max. particle density 5 mg/m^3)
Pressure dew point	Class 3 (max. pressure dew point -20 °C)
Oil concentration	Class 3 (max. oil concentration 1 mg/m^3)
Actuator size 2	
Dust content	Class 3 (max. particle size 5 µm), (max. particle density 5 mg/m^3)
Pressure dew point	Class 4 (max. pressure dew point 3 °C)
Oil concentration	Class 5 (max. oil concentration 25 mg/m^3)

Filling volume

Actuator size 0:	0.028 dm^3
Actuator size 1:	0.071 dm^3
Actuator size 2:	0.239 dm^3

Materials

Actuator housing	Cover: PP Base: 1.4408

Technical data

General information

Protection class	IP 65 / IP 67*
Electrical protection class	III
Mounting position	Optional
Directives	
EMC directive	2004/108/EG
Interference resistance	EN61000-6-2
Interference emission Automation module B2	EN61000-6-4 (class B)
Interference emission Automation module F0/F1	EN61000-6-4 (class A)
Low voltage directive	2006/95/EG

* IP 67 is achieved by piping away the exhausting air. Replace threaded exhaust air plugs by M5 adapter (1434 000 Z2) for this purpose.

		Operating pressure		Control pressure		Actuator weight
Diaphragm size	**DN**	**EPDM**	**PTFE**	**C.f. 1**	**C.f. 2**	**[g]**
8	4 ... 15	0 - 10 bar	0 - 6 bar	3.5 - 7 bar	max. 4.5 bar	1000
10	10 ... 15	0 - 10 bar	0 - 6 bar	4.5 - 7 bar	max. 4.5 bar	1500
25	15 ... 25	0 - 10 bar	0 - 6 bar	5.0 - 7 bar	max. 4.5 bar	3800

All pressures are gauge pressures. Operating pressure values were determined with static operating pressure applied on one side of a closed valve. Sealing at the valve seat and atmospheric sealing is ensured for the given values. Information on operating pressures applied on both sides and for high purity media on request.

Kv values [m^3/h]								
Diaphragm size	**DN**	**DIN Code 0**	**DIN 11850 Series 1 Code 16**	**DIN 11850 Series 2 Code 17**	**DIN 11850 Series 3 Code 18**	**SMS 3008 Code 37**	**ASME BPE Code 59**	**EN ISO 1127 Code 60**
8	4	0.5	-	-	-	-	-	-
	6	1.1	-	-	-	-	-	1.2
	8	1.3	-	-	-	-	0.6	2.2
	10	-	2.1	2.1	2.1	-	1.3	-
	15	-	-	-	-	-	2.0	-
10	10	-	2.4	2.4	2.4	-	2.2	3.3
	15	3.3	3.8	3.8	3.8	-	2.2	4.0
	20	-	-	-	-	-	3.8	-
25	15	4.1	4.7	4.7	4.7	-	-	7.4
	20	6.3	7.0	7.0	7.0	-	4.4	13.2
	25	13.9	15.0	15.0	15.0	12.6	12.2	16.2

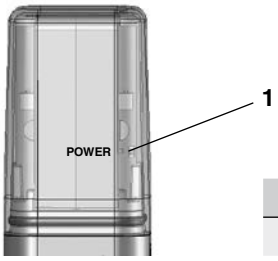
Kv values determined acc. to IEC 534 standard, inlet pressure 6 bar, Δ p 1 bar, stainless steel valve body and soft elastomer diaphragm.

Automation module E0, combi switchbox

Electrical data

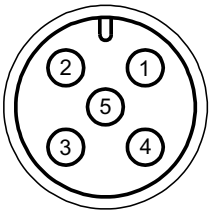
Power supply	
Power supply U_V	U_V = 24V DC ±10%
Current consumption	$I_{typ.}$ = 40 mA (at 24V DC)
Reverse battery protection	Yes
Electrical connection	
Electrical connection	M12 5-pin plug (A-coded)

Optical indication - Automation module E0



LED	Designation	Colour
1	POWER	yellow

Electrical connections - Automation module E0



Connection	Pin	Signal name
X 1 A-coded M12 plug	1	U+, 24V DC pilot valve
	2	n.c.
	3	GND
	4	n.c.
	5	n.c.

Automation module B2, combi switchbox with AS-Interface

Electrical data

Power supply	
Power supply U_V	26.5 ... 31.6V DC acc. to AS-Interface specification
Current consumption	max. 120 mA
Rating	Continuously rated
Reverse battery protection	Yes
Electrical connection	
Electrical connection	M12 5-pin plug (A-coded)
AS-Interface profile	
AS-Interface specification	3.0; max. 62 slaves
AS-Interface profile	S 7.A.E
I/O configuration	7
ID-Code	A
ID2-Code	E
Approvals	
AS-Interface certificate	Certificate no.: 65202

Inputs / outputs

Inputs AS-Interface (as seen from the AS-Interface master)

Bit	Function	Logic
DI0	Indication of Open position	0 = process valve not in Open position 1 = process valve in Open position
DI1	Indication of Closed position	0 = process valve not in Closed position 1 = process valve in Closed position
DI2	Indication of operating mode	0 = normal operation 1 = programming mode
DI3	Error 2	see table: Error analysis
FID	Error 1	see table: Error analysis

Outputs AS-Interface (as seen from the AS-Interface master)

Bit	Function	Logic
DO0	Activation of pneum. outlet 2/4 (c.f. 1 and 2) (activation of pilot valve Y1/Y2)	0 = pneum. outlet 2 vented/outlet 4 pressurized 1 = pneum. outlet 2 pressurized/ outlet 4 vented
DO1	Selection of programming mode	0 = manual programming 1 = automatic programming
DO2	Selection of operating mode	0 = normal operation 1 = programming mode
DO3	not available	

Parameter outputs

Bit	Function	Logic
P0	Setting of switch points	see table: Switch points
P1	Setting of switch points	see table: Switch points
P2	Setting of switch points	see table: Switch points

Switch points

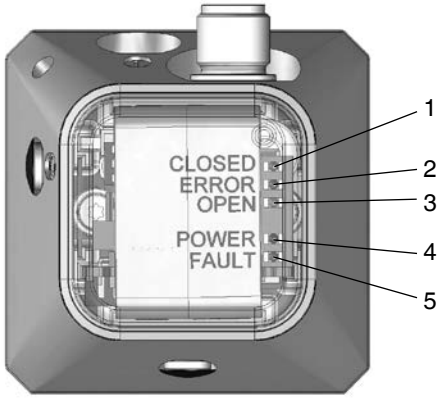
P2	P1	P0	Switch point OPEN [%]	Switch point CLOSED [%]
0	0	0	12	25
0	0	1	25	25
0	1	0	6	12
0	1	1	12	12
1	0	0	25	12
1	0	1	6	6
1	1	0	12	6
1	1	1	25	6

Switch points: The data in the table refers to the percentage of travel before the programmed switching point at which the switch will transmit the position is achieved.

Error analysis

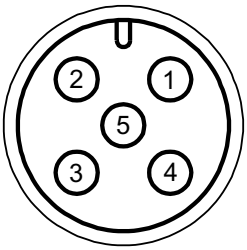
Error 1	Error 2	Error function
1	0	Internal error
0	1	Programming error
1	1	Sensor error

Optical indication - Automation module B2



LED	Designation	Colour
1	CLOSED	orange
2	ERROR	red
3	OPEN	yellow
4	POWER	green
5	FAULT	red

Electrical connections - Automation module B2



Automation module B2

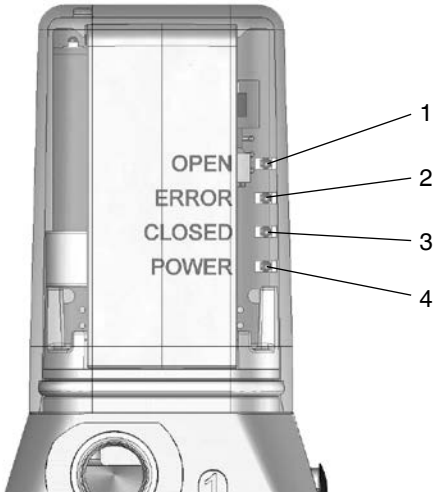
Connection	Pin	Signal name
X 1 A-coded M12 plug	1	AS-Interface +
	2	n.c.
	3	AS-Interface -
	4	n.c.
	5	n.c.

Automation module F0/F1, positioner

Electrical data

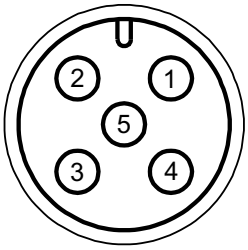
Power supply	
Power supply U_V	U_V = 24V DC +10% / -5%
Current consumption	$I_{typ.}$ = 70 mA (at 24V DC)
Analogue input	
Accuracy	≤ 0.3 %
Set value input	4-20 mA
Digital input	
Initialisation input	
Voltage	U_{rated} = 24V DC
Level “Logical 1“	14V DC ≤ U_H ≤ 28V DC
Level “Logical 0“	0V DC ≤ U_L ≤ 8V DC
Input current	$I_{typ.}$ = 2.5 mA (at 24V DC)
Electrical connection	
Electrical connection	M12 5-pin plug (A-coded)
Positioner data	
System deviation	≤ 1 %
Initialisation	Automatic via 24V DC signal
Display elements	
Status display	4 visible LEDs
Analogue (Automation module F1)	
Accuracy / Linearity	≤ ± 1,0 % v.E.
Temperature drift	≤ ± 0,5 % v.E.
Resolution	12 bit
Actual value output	4 - 20 mA
Output	aktiv

Optical indication - Automation module F0/F1



LED	Designation	Colour
1	OPEN	yellow
2	ERROR	red
3	CLOSED	orange
4	POWER	yellow

Electrical connections - Automation module F0/F1

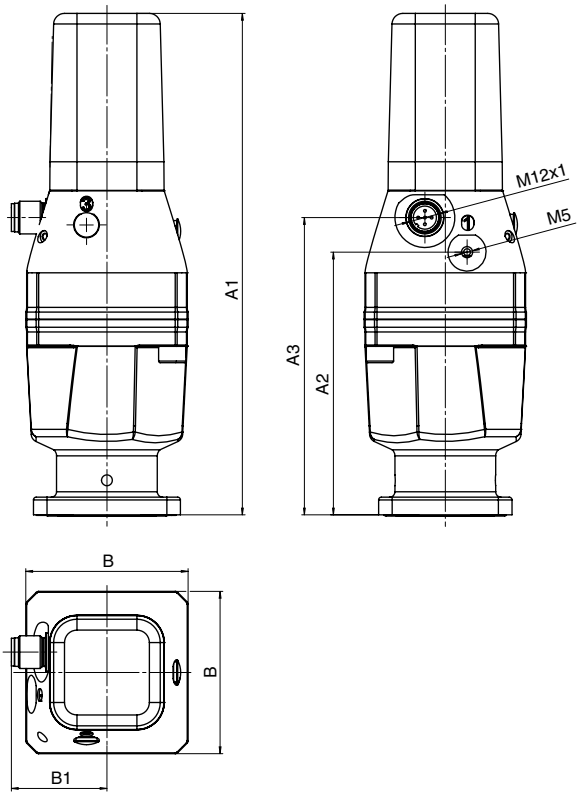


Automation module F0/F1

Connection	Pin	Signal name
X 1 A-coded M12 plug	1	Uv, 24 V DC supply voltage
	2	I+, 4-20 mA set value input
	3	I- / Uv GND
	4	I+, 4-20 mA actual value output (only automation module F1)
	5	Uv, initialisation 24 V DC, initialisation is started by impulse signal t ≥ 100 ms

Actuator dimensions - GEMÜ 9651

Actuator size	Diaphragm size	A1	A2	A3	B	B2
0	8	160	72.0	85.0	49	35
1	10	185	96.5	109.5	60	36
2	25	182	140.0	116.5	91	59



Order data (2/2-way valves)

Body configuration	Code
Tank bottom valve body	B**
2/2-way body	D
Multi-port design	M**
T body	T*

* For dimensions see T Valves brochure

** Dimensions and versions on request or according to customer requirements

Diaphragm material		Code
EPDM		13 3A*
EPDM		17
PTFE/EPDM convex	PTFE loose	5E
PTFE/EPDM	PTFE lamin.	52** 5A*

* for diaphragm size 8 ** for diaphragm size 10

Material complies with FDA requirements

Connection	Code
Butt weld spigots	
Spigots DIN	0
Spigots DIN 11850, series 1	16
Spigots DIN 11850, series 2	17
Spigots DIN 11850, series 3	18
Spigots DIN 11866, series A	1A
Spigots DIN 11866, series B	1B
Spigots JIS-G 3447	35
Spigots JIS-G 3459	36
Spigots SMS 3008	37
Spigots BS 4825, part 1	55
Spigots ASME BPE	59
Spigots EN ISO 1127	60
Spigots ANSI/ASME B36.19N, Schedule 10s	63
Spigots ANSI/ASME B36.19N, Schedule 40s	65
Threaded connections	
Threaded sockets DIN ISO 228	1
Threaded spigots to DIN 11851	6
One side threaded spigot to DIN 11851, other side cone spigot with union nut to DIN 11851	62
Aseptic unions on request	
Clamp connections	
Clamps ASME BPE for pipe ASME BPE, length ASME BPE	80
Clamps DIN 32676 series B for pipe EN ISO 1127, length EN 558, series 7	82
Clamps ASME BPE for pipe ASME BPE, length EN 558, series 7	88
Clamps DIN 32676 series A for pipe DIN 11850, length EN 558, series 7	8A
Clamps SMS 3017 for pipe SMS 3008, length EN 558, series 7	8E

For overview of available valve bodies for GEMÜ 651 see page 11

Control function		Code
Normally closed	(NC)	1
Normally open	(NO)	2

Actuator size		Code
Actuator size 0	(Diaphragm size 8)	0
Actuator size 1	(Diaphragm size 10)	1
Actuator size 2	(Diaphragm size 25)	2

Design (actuator)	Code
Connection in flow direction	T
Connection 90° to flow direction	R

Spring set		Code
Diaphragm size 8	C.f. 1	A
Diaphragm size 8	C.f. 2	1
Diaphragm size 10	C.f. 1+2	1
Diaphragm size 25	C.f. 1+2	1

Valve body material	Code
1.4435 - BN2 (CF3M), investment casting Fe<0.5%	32
1.4435 (ASTM A 351 CF3M ≙ 316L), investment casting	34
1.4408, investment casting	37
1.4435 (316L), forged body	40
1.4435 (BN2), forged body Fe<0.5%	42

Automation module	Code
Combi switchbox with integrated pilot valve and status LED	E0
Combi switchbox with integrated pilot valve, OPEN / CLOSED position feedback and Speed^{-AP} function, AS-Interface, 62 slaves, Spec. 3.0	B2
Positioner with Speed-AP function, set value input 4-20 mA	F0
Positioner with Speed-AP function, set value input 4-20 mA actual value output 4-20 mA	F1

For further order data see page 9

Order data (2/2-way valves)

Valve body surface finish, internal contour				
		Forged body Code 40, 42	Investment casting Code 32, 34	Code
Ra ≤ 6.3 µm	blasted internal/external	-	X	1500
Ra ≤ 6.3 µm	optical electropolishing	-	X	1509
Ra ≤ 0.8 µm	mechanically polished internal, blasted external	X	X	1502
Ra ≤ 0.8 µm	electropolished internal/external	X	-	1503
Ra ≤ 0.6 µm	mechanically polished internal, blasted external	X	X	1507
Ra ≤ 0.6 µm	electropolished internal/external	X	-	1508
Ra ≤ 0.4 µm	mechanically polished internal, blasted external	X	-	1536
Ra ≤ 0.4 µm	electropolished internal/external	X	-	1537
Ra ≤ 0.25 µm	mechanically polished internal, blasted external	X	-	1527
Ra ≤ 0.25 µm	electropolished internal/external	X	-	1516

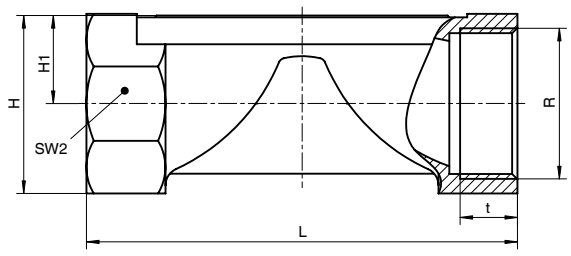
Ra acc. to DIN 4768; at defined reference points
Surface finish data refer to medium wetted surfaces

Order example	651	15	D	60	40	13	1	2	t	1		B2	1503
Type	651												
Nominal size		15											
Body configuration (code)			D										
Connection (code)				60									
Valve body material (code)					40								
Diaphragm material (code)						13							
Control function (code)							1						
Actuator size (code)								2					
Design (actuator) (code)									t				
Spring set (code)										1			
Automation module (code)												B2	
Surface finish (code)													1503

Body dimensions [mm]

Threaded sockets, connection code 1 Valve body material: investment casting (code 37)									
MG	DN	R	H	H1	t	L	SW2	Number of flats	Weight [kg]
8	8	G 1/4	19	9	11	72	18	6	0.09
10	12	G 3/8	25	13	12	55	22	2	0.17
	15	G 1/2	30	15	15	68	27	2	0.26
25	15	G 1/2	29	16	15	85	27	6	0.32
	20	G 3/4	32	16	16	85	32	6	0.34
	25	G 1	37	16	13	110	41	6	0.39

MG = Diaphragm size For materials see overview on page 12



Body dimensions [mm]

Butt weld spigots, connection code 0, 16, 17, 18, 1A, 1B, 60
Valve body material: Investment casting (code 34), forged body (code 40)

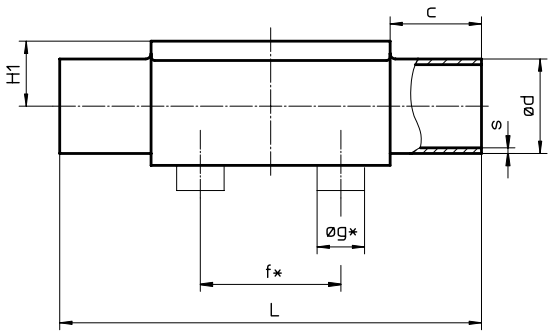
									DIN Series 0 Code 0		DIN 11850 Series 1 Code 16		DIN 11850 Series 2 Code 17		DIN 11850 Series 3 Code 18		DIN 11866 Series A Code 1A		DIN 11866 Series B Code 1B		EN ISO 1127 Code 60		Weight [kg]
MG	DN	NPS	f*	øg*	L	c	H1*	H1**	ød	s	ød	s	ød	s	ød	s	ød	s	ød	s	ød	s	
	4	-	-	-	72	20	8.5		6	1.0	-	-	-	-	-	-	-	-	-	-	-	-	0.09
	6	-	-	-	72	20	8.5		8	1.0	-	-	-	-	-	-	8	1.0	10.2	1.6	10.2	1.6	0.09
8	8	1/4"	-	-	72	20	8.5		10	1.0	-	-	-	-	-	-	10	1.0	13.5	1.6	13.5	1.6	0.09
	10	3/8"	-	-	72	20	8.5		-	-	12	1.0	13	1.5	14	2.0	13	1.5	-	-	-	-	0.09
	15	1/2"	-	-	72	20	8.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09
	10	3/8"	30	13.5	108	25	12.5		-	-	12	1.0	13	1.5	14	2.0	13	1.5	17.2	1.6	17.2	1.6	0.30
10	15	1/2"	30	13.5	108	25	12.5		18	1.5	18	1.0	19	1.5	20	2.0	19	1.5	21.3	1.6	21.3	1.6	0.30
	20	3/4"	30	13.5	108	25	12.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.30
	15	1/2"	40	13.5	120	25	13.0	19.0	18	1.5	18	1.0	19	1.5	20	2.0	19	1.5	21.3	1.6	21.3	1.6	0.62
25	20	3/4"	40	13.5	120	25	16.0	19.0	22	1.5	22	1.0	23	1.5	24	2.0	23	1.5	26.9	1.6	26.9	1.6	0.58
	25	1"	40	13.5	120	25	19.0	19.0	28	1.5	28	1.0	29	1.5	30	2.0	29	1.5	33.7	2.0	33.7	2.0	0.55

* only for investment cast design ** only for forged design MG = diaphragm size
For materials see overview on page 12

Butt weld spigots, connection code 35, 36, 37, 55, 59, 63, 65
Valve body material: Investment casting (code 34), forged body (code 40)

									JIS-G 3447 Code 35		JIS-G 3459 Code 36		SMS 3008 Code 37		BS 4825 Code 55		ASME BPE Code 59		ANSI/ASME B36.19M 10s Code 63		ANSI/ASME B36.19M 40s Code 65		Weight [kg]
MG	DN	NPS	f*	øg*	L	c	H1*	H1**	ød	s	ød	s	ød	s	ød	s	ød	s	ød	s	ød	s	
	4	-	-	-	72	20	8.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09
	6	-	-	-	72	20	8.5		-	-	10.5	1.20	-	-	-	-	-	-	10.3	1.24	10.3	1.73	0.09
8	8	1/4"	-	-	72	20	8.5		-	-	13.8	1.65	-	-	6.35	1.2	6.35	0.89	13.7	1.65	13.7	2.24	0.09
	10	3/8"	-	-	72	20	8.5		-	-	-	-	-	-	9.53	1.2	9.53	0.89	-	-	-	-	0.09
	15	1/2"	-	-	72	20	8.5		-	-	-	-	-	-	12.70	1.2	12.70	1.65	-	-	-	-	0.09
	10	3/8"	30	13.5	108	25	12.5		-	-	17.3	1.65	-	-	9.53	1.2	9.53	0.89	17.1	1.65	17.1	2.31	0.30
10	15	1/2"	30	13.5	108	25	12.5		-	-	21.7	2.10	-	-	12.70	1.2	12.70	1.65	21.3	2.11	21.3	2.77	0.30
	20	3/4"	30	13.5	108	25	12.5		-	-	-	-	-	-	19.05	1.2	19.05	1.65	-	-	-	-	0.30
	15	1/2"	40	13.5	120	25	13.0	19.0	-	-	21.7	2.10	-	-	-	-	-	-	21.3	2.11	21.3	2.77	0.62
25	20	3/4"	40	13.5	120	25	16.0	19.0	-	-	27.2	2.10	-	-	19.05	1.2	19.05	1.65	26.7	2.11	26.7	2.87	0.58
	25	1"	40	13.5	120	25	19.0	19.0	25.4	1.2	34.0	2.80	25.0	1.2	-	-	25.40	1.65	33.4	2.77	33.4	3.38	0.55

* only for investment cast design ** only for forged design MG = diaphragm size
For materials see overview on page 12



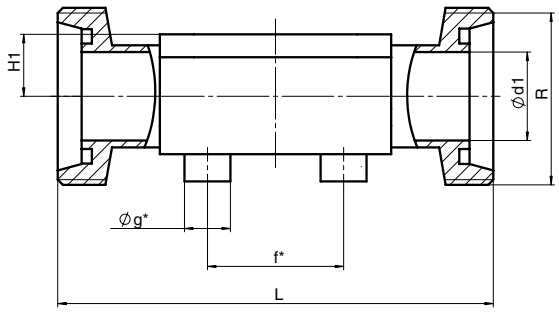
Body dimensions [mm]

Threaded connections, connection code 6, 62 Valve body material: investment casting (code 34), forged body (code 40)										
MG	DN	H1*	H1**	f*	øg*	ød1	Thread to DIN 405 R	Code 6 L	Code 62 L	Weight [kg]
8	10	8.5	-	-	-	10.0	RD 28 x 1/8	92	90	0.21
10	10	12.5	-	30.0	13.5	10.0	RD 28 x 1/8	118	116	0.33
	15	12.5	-	30.0	13.5	16.0	RD 34 x 1/8	118	116	0.35
25	15	13.0	19	40.0	13.5	16.0	RD 34 x 1/8	118	116	0.71
	20	16.0	19	40.0	13.5	20.0	RD 44 x 1/6	118	114	0.78
	25	19.0	19	40.0	13.5	26.0	RD 52 x 1/6	128	127	0.79

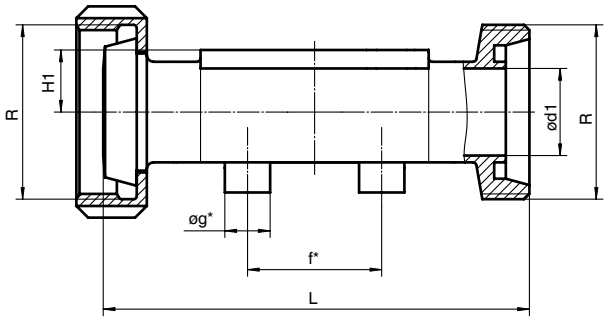
* only for investment cast design ** only for forged design MG = diaphragm size

For materials see overview on page 12

Code 6

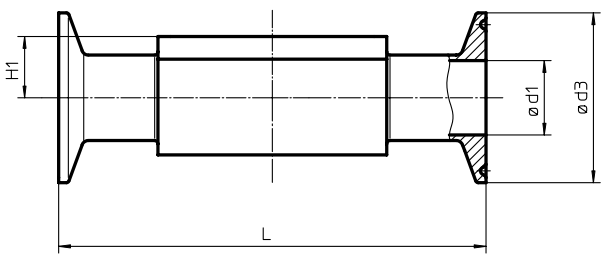


Code 62



Clamp connections, connection code 80, 82, 88, 8A, 8E Valve body material: forged body (code 40)																			
				for pipe ASME BPE Code 80			for pipe EN ISO 1127 Code 82			for pipe ASME BPE Code 88			for pipe DIN 11850 Code 8A			for pipe SMS 3008 Code 8E			Weight [kg]
MG	DN	NPS	H1	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	ød1	ød3	L	
8	6	1/8"	8.5	-	-	-	7.0	25.0	63.5	-	-	-	6	25.0	63.5	-	-	-	-
	8	1/4"	8.5	4.57	25.0	63.5	10.3	25.0	63.5	-	-	-	8	25.0	63.5	-	-	-	0.15
	10	3/8"	8.5	7.75	25.0	63.5	-	-	-	-	-	-	10	34.0	88.9	-	-	-	0.18
	15	1/2"	8.5	9.40	25.0	63.5	-	-	-	9.40	25.0	108	-	-	-	-	-	-	0.18
10	10	3/8"	12.5	-	-	-	14.0	25.0	108.0	-	-	-	10	34.0	108.0	-	-	-	0.30
	15	1/2"	12.5	9.40	25.0	88.9	18.1	50.5	108.0	9.40	25.0	108	16	34.0	108.0	-	-	-	0.43
	20	3/4"	12.5	15.75	25.0	101.6	-	-	-	15.75	25.0	117	-	-	-	-	-	-	0.43
25	15	1/2"	19.0	-	-	-	18.1	50.5	108.0	-	-	-	16	34.0	108.0	-	-	-	0.75
	20	3/4"	19.0	15.75	25.0	101.6	23.7	50.5	117.0	15.75	25.0	117	20	34.0	117.0	-	-	-	0.71
	25	1"	19.0	22.10	50.5	114.3	29.7	50.5	127.0	22.10	50.5	127	26	50.5	127.0	22.6	50.5	127	0.63

MG = diaphragm size



Overview of valve bodies for GEMÜ 651

		Spigots																						
Connection code		**0**		**16**		**17**		**18**		**1A**	**1B**	**35**		**36**	**37**		**55**		**59**		**60**		**63**	**65**
Material code		**34**	**40**	**34**	**40**	**34**	**40**	**34**	**40**	**40**	**40**	**34**	**40**	**40**	**34**	**40**	**34**	**40**	**34**	**40**	**34**	**40**	**40**	**40**
MG	**DN**																							
8	4	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	X	X	-	-	-	-	-	-	X	X	-	-	X	-	-	-	-	-	-	-	X	X	X
	8	X	X	-	-	-	-	-	-	X	X	-	-	X	-	-	X	X	X	X	X	X	X	X
	10	-	-	X	X	X	X	X	X	X	-	-	-	-	-	-	X	X	X	X	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-
10	10	-	-	X	X	X	X	X	X	X	X	-	-	X	-	-	-	X	-	X	X	X	X	X
	15	X	X	X	X	X	X	X	X	X	X	-	-	X	-	-	X	X	-	X	X	X	X	X
	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-
25	15	X	X	X	X	X	X	-	X	X	X	-	-	X	-	-	-	-	-	-	X	X	X	X
	20	X	X	X	X	X	X	-	X	X	X	-	-	X	-	-	X	X	X	X	X	X	X	X
	25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X

MG = diaphragm size

		Threaded connections					Clamps				
Connection code		**1**	**6**		**62**		**80**	**82**	**88**	**8A**	**8E**
Material code		**37**	**34**	**40**	**34**	**40**	**40**	**40**	**40**	**40**	**40**
MG	**DN**										
8	4	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	K	-	K	-
	8	X	-	-	-	-	K	K	-	K	-
	10	-	W	W	W	W	K	-	-	W	-
	15	-	-	-	-	-	K	-	W	-	-
10	10	-	W	W	W	W	-	K	-	K	-
	15	X	W	W	W	W	K	W	K	K	-
	20	-	-	-	-	-	K	-	K	-	-
25	15	X	W	W	W	W	-	W	-	K	-
	20	X	W	W	W	W	K	K	K	K	-
	25	X	W	W	W	W	K	K	K	K	K

X Standard
K Connections completely machined (not welded)
W Welded construction

MG = diaphragm size

Availability of material code 32 same as code 34, code 42 same as code 40

Accessories

GEMÜ 1219
Connector plug

GEMÜ 4180
Connector plug

Other diaphragm valves

GEMÜ 601/673
DN 4 - 50

GEMÜ 653/654
DN 4 - 100

GEMÜ 650
DN 4 - 50

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

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Subject to alteration · 10/2014 · 88264155