GEMÜ®

Diaphragm Valve, Plastic

Construction

The GEMÜ 630 pneumatically operated 2/2-way valve has a low maintenance piston actuator which can be controlled by inert gaseous media. It has an integral optical position indicator as standard. It is available with control function Normally Closed.

Features

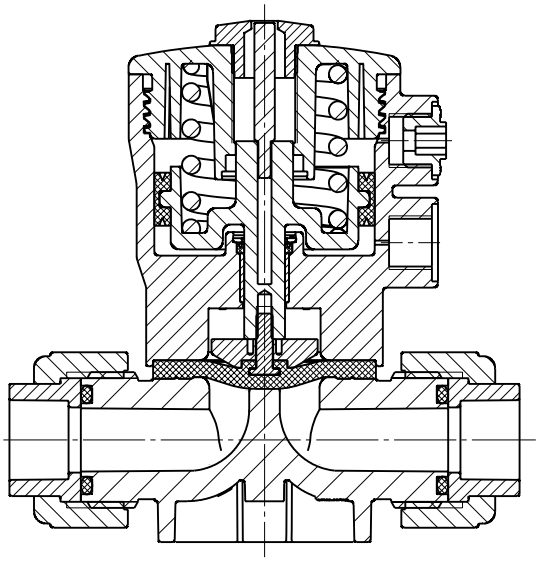
- Suitable for inert and corrosive* liquid and gaseous media
- Valve body and diaphragm available in various materials and designs
- Control connection positioned in-line with flow direction as standard, thus installable in extremely restricted spaces
- Optional flow direction and mounting position

Advantages

- Variable spring set for operating pressures up to 10 bar upstream and downstream
- Mounting plates for height compensation of differing body dimensions and nominal sizes
- Actuator top rotatable 4 x 90° (diaphragm size 25 - 50)
- Optional accessories
  - Electrical position indicator with microswitches or proximity switches
  - Pneumatic or electro-pneumatic positioners and process controllers

*see information on working medium on page 2

Sectional drawing



GEMÜ® 630

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.

Working medium temperature

Valve body PVC-U	10 to 60 °C
Valve body PP, PP-H	5 to 80 °C
Valve body PVDF	-10 to 80 °C

The permissible operating pressure depends on the working medium temperature.

Ambient temperature

Valve body PVC-U	10 to 50 °C
Valve body PP / PP-H	5 to 50 °C
Valve body PVDF	-10 to 50 °C

Control medium

Inert gases	
Min. required control pressure	see table below
Max. permiss. control pressure	6 bar
Max. perm. temperature of control medium	40 °C
Filling volume: Actuator size 1/N	0.02 dm^3

O-ring material for valve bodies with union ends

Diaphragm material	O-ring material
NBR	EPDM
FKM	FKM
EPDM	EPDM
PTFE	FKM

Other combinations on request

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 [bar]												
PVC-U	Code 1	-	-	-	-	6.0	6.0	6.0	6,0	6.0	3.5	1.5	-	-
PP / PP-H	Code 5 / N5	-	-	-	6.0	6.0	6.0	6.0	6,0	6.0	5.5	4.0	2.7	1.5
PVDF	Code 20	-	6.0	6.0	6.0	6.0	6.0	6.0	6,0	6.0	6.0	6.0	5.4	4.7

MG	DN	Control function 1 [bar]			Kv value
		Operating pressure		Control pressure	[m^3/h]
		EPDM/FKM	PTFE		
10	12	0 - 6	0 - 6	3.2 - 6.0	2.8
	15				3.5
	20				3.5

All pressures are gauge pressures.

Kv values determined acc. to DIN EN 60534, inlet pressure 5 bar, Δp 1 bar, PVC-U valve body and soft elastomer diaphragm.
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.

The Kv value curve (Kv value dependent on valve stroke) can vary depending on the diaphragm material and duration of use.

Order data

Body configuration	Code
2/2-way body	D

Control function	Code
Normally closed NC	1

Connection	Code
Threaded sockets DIN ISO 228	1
Solvent cement sockets DIN	2
Union ends with DIN insert (socket)	7
Spigots for IR butt welding, BCF	28
Union ends with inch insert - BS (socket)	33
Flare connection with PVDF union nut	75
Union ends with DIN insert (for IR butt welding)	78

Actuator version	Code
Piston ø 54	1/N

Integrated mounting plate	Code
With integrated mounting plate Material code 20, N5	M
Without mounting plate Material code 20	O
Without mounting plate	-

Valve body material	Code
PVC-U, grey	1
PP, glass fibre reinforced	5
PVDF	20
PP-H natural	N5*

* only with integrated mounting plate (code M)

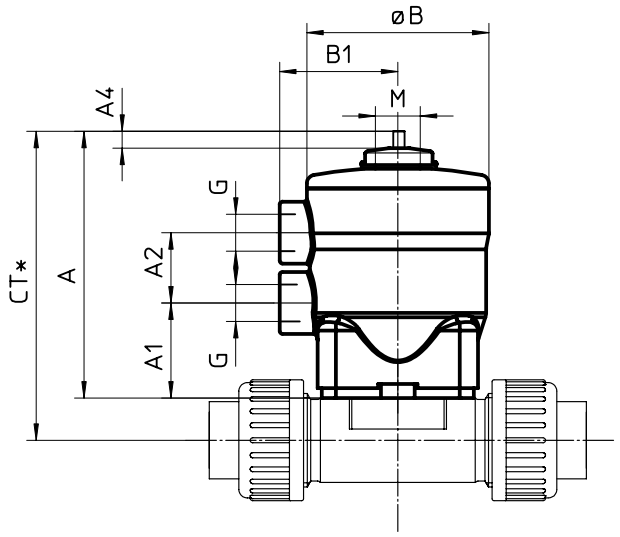
Special version	Code
NSF 61 Drinking water certification	N

Diaphragm material	Code
NBR	2
FKM	4
EPDM	17
EPDM	29
PTFE / EPDM, one-piece	54

Order example	630	15	D	7	1	29	1	1/N	-	N
Type	630									
Nominal size		15								
Body configuration (code)			D							
Connection (code)				7						
Valve body material (code)					1					
Diaphragm material (code)						29				
Control function (code)							1			
Actuator version (code)								1/N		
Integrated mounting plate (code)									-	
Special version (code)										N

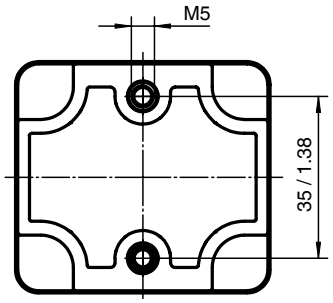
Dimensions [mm]

Actuator dimensions									
Diaphragm size	B	B1	A	A1	A2	A4 ca.	G	M	Weight [kg]
10	ø 67	43	94	34	25	6	G 1/4	M16x1	0.3

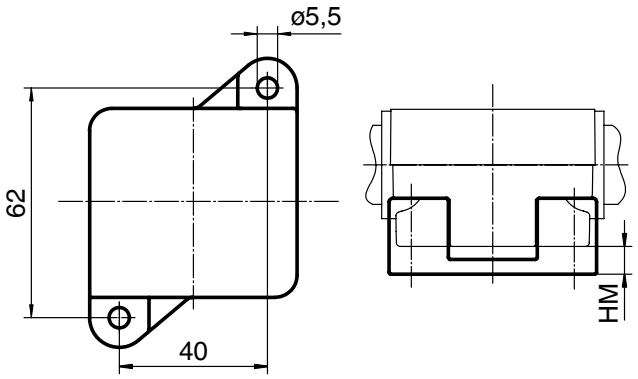


* CT = A + H1 (see body dimensions)

Valve body mounting dimensions		
Diaphragm size	M	f
10	M5	35.0



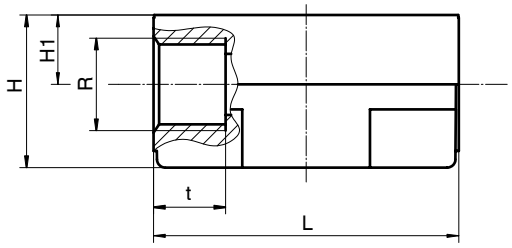
Dimensions of mounting plate Code M		
Diaphragm size	Material code 20, N5	HM
10	DN 12	5.0
	DN 15	4.5
	DN 20	4.5



Body dimensions [mm]

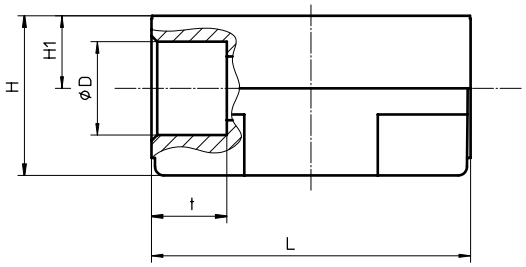
Threaded sockets, connection code 1 Valve body material: PVC-U (code 1), PP (code 5), PVDF (code 20)									
MG	DN	R	t	H		H1		L	Weight [kg]
				Material code 1, 5	Material code 20	Material code 1, 5	Material code 20		
10	12	G3/8	13	27.5	31.5	12.5	12.5	55	0.08

For materials see overview on page 8 MG = diaphragm size



Solvent cement sockets, connection code 2 Valve body material: PVC-U (code 1)							
MG	DN	ø D	t	H	H1	L	Weight [kg]
10	12	16	13	27.5	12.5	55	0.06

MG = diaphragm size



Body dimensions [mm]

Union ends with DIN insert (socket), connection code 7
Valve body material: PVC-U (code 1), PP (code 5), PVDF (code 20)*, PP-H (Code N5)*

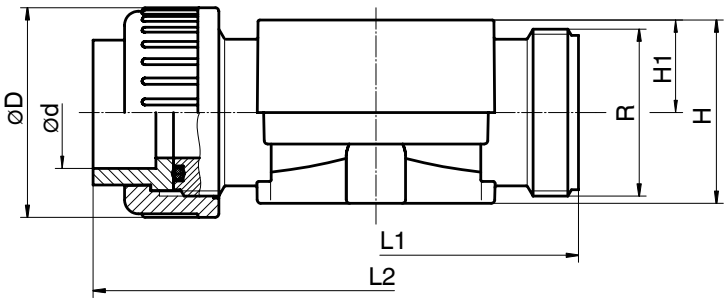
MG	DN	L1	L2			H		H1		øD	ød	R	Weight [kg]
			Material code										
			1	20	5, N5	1, 5	20, N5	1, 5	20, N5				
10	15	90	128	128	125	30	41	15	16	43	20	G 1	0.18

* with integrated mounting plate (code M), note dimension HM (see page 4)
For materials see overview on page 8 MG = diaphragm size

Union ends with inch insert (socket), connection code 33
Valve body material: PVC-U (code 1)

MG	DN	NPS	L1	L2	H	H1	øD	ød	R	Weight [kg]
10	15	1/2“	90	128	30	15	43	21.4	G 1	0.13

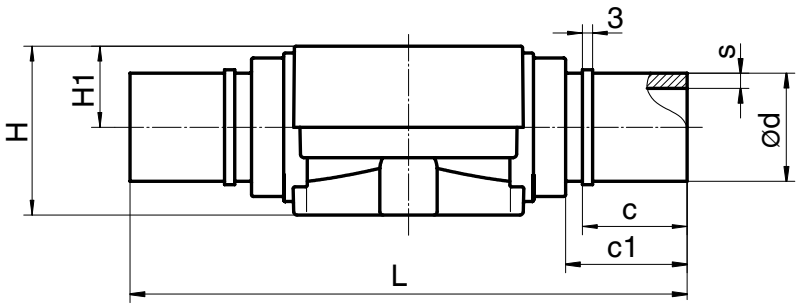
MG = diaphragm size



Spigots for IR butt welding, BCF, connection code 28
Valve body material: PVDF (code 20)

MG	DN	L	H	H1	ød	c	c1	s	Weight [kg]
10	15	134	41	16	20	31	37	1.9	0.13

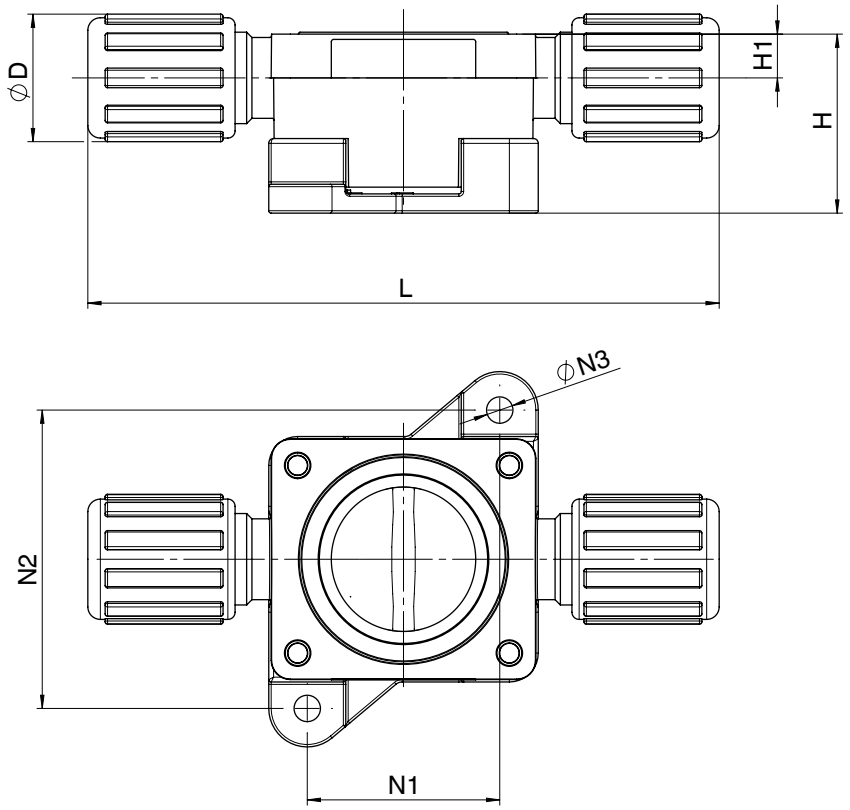
MG = diaphragm size



Body dimensions [mm]

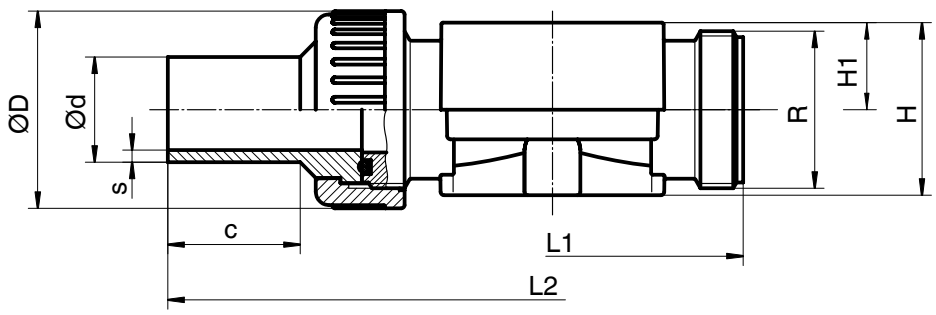
Flare connection with PVDF union nut, connection code 75 Valve body material: PP-H (code N5)									
MG	**DN**	**L**	**H**	**H1**	**øD**	**N1**	**N2**	**øN3**	**Weight [kg]**
10	15	132	38.1	10	26.5	40	62.0	5.5	0.08
	20	134	44.5	15	26.5	40	62.0	5.5	0.125

MG = diaphragm size



Union ends with insert, connection code 78 Valve body material: PP (code 5), PVDF (code 20)*, PP-H (code N5)*														
MG	**DN**	**L1**	**L2**	**H**		**H1**		**øD**	**ød**	**R**	**s**		**c**	**Weight [kg]**
				Material code							**Material code**			
				5	**20, N5**	**5**	**20, N5**				**5, N5**	**20**		
10	15	90	196	30	41	15	16	42	20	G 1	1.9	1.9	36	0.20

* with integrated mounting plate (code M), note dimension HM (see page 4)
For materials see overview on page 8 MG = diaphragm size



Overview of valve bodies for GEMÜ 630

Connection code		1			2	7				28	33	75	78		
Material code		1	5	20	1	1	5	20	N5	20	1	N5	5	20	N5
MG	DN														
10	12	X	X	X	X	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	X	X	X	X	X	X	X	X	X	X
	20	-	-	-	-	-	-	-	-	-	-	X	-	-	-

MG = diaphragm size

Overview - Product conformity NSF (special function code N)

Diaphragm size	DN	Connection code				Material code	Diaphragm material (code)
		1	2	7	33	1	17
10	12	X	X	-	-	X	X
	15	-	-	X	X	X	X

Accessories

GEMÜ 1470

NAMUR control air adapter
for GEMÜ 600,
Diaphragm size 40 and 50

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

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