

## Diaphragm Valve, Plastic

### Construction

The GEMÜ 610 pneumatically operated 2/2 way diaphragm valve has a low maintenance plastic piston actuator which can be controlled by inert gases.

Normally closed, Normally open and Double acting control functions are available.

### Features

- Suitable for inert and corrosive\* liquid and gaseous media
- The valve is insensitive to particulate, abrasive media
- Integral optical position indicator
- Compact design
- The valve body and diaphragm are available in various materials
- Optional flow direction and mounting position

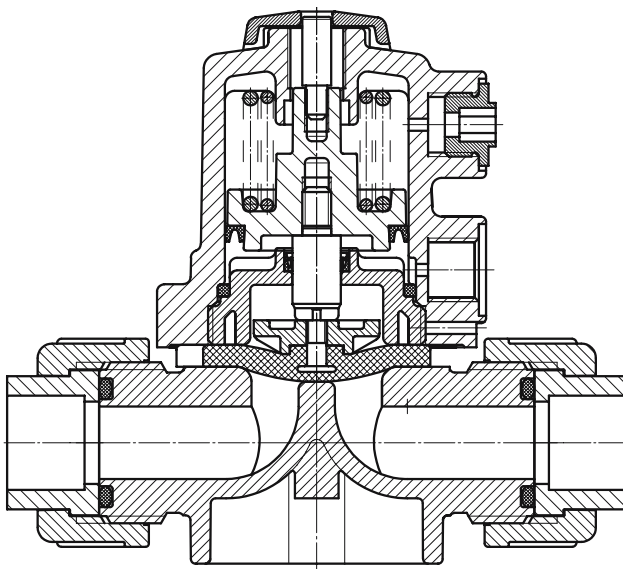
### Advantages

- All medium wetted parts and housing made of plastic
- Optional accessories
  - Stroke limiter
  - Electrical position indicator
  - Electrical position indicators with microswitches or proximity switches
- Special solutions and block versions upon request

\* see information on working medium on page 2



Sectional drawing



## Technical data

### Working medium

Corrosive, inert, gaseous and liquid media which have no negative impact in the physical and chemical properties of the body and diaphragm material.

Medium temperature 60° C

Maximum permissible temperature of working medium: see data sheet "Technical Information on Plastic Materials", extended temperature ranges upon request.

### Control medium

Inert gases

Max. perm. temperature of control medium 40° C  
Filling volume 0.061 NI

### Ambient conditions

Max. ambient temperature 60° C

Diaphragm size	DN	Working press.	Control pressure		K <sub>v</sub> value	Weight
		(bar)	C.f. 1	C.f. 2 + 3	(m³/h)	(g)
10	12	0 - 6 bar	5.0 - 7.0 bar	max. 5.5 bar see diagram	2.8	240
	15				3.5	290

All pressures are gauge pressures. Working pressure values were determined with static working 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 working pressures applied on both sides and for high purity media upon request.

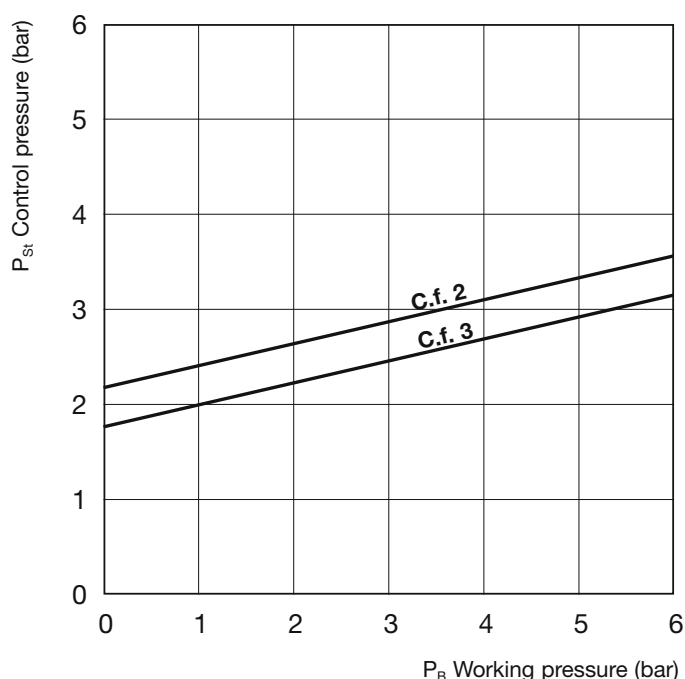
Die Angaben des Steuerdruckes sind abhängig vom Hub.

### O-ring material for valve bodies with union ends

Diaphragm material	O-ring material
CSM	EPDM
NBR	EPDM
FPM	FPM
EPDM	EPDM
PTFE	FPM

Other combinations upon request.

### Control pressure / Working pressure diagram



With pneumatically operated valves there is an interdependence between control pressure and working pressure regarding the valve stroke.

With valves closed by spring pressure this means: The lower the working pressure, the higher the control pressure must be to open the valve completely. With valves opened by spring pressure the opposite applies.

In principle care has to be taken that the stated maximum pressures are not exceeded and that the minimum pressures are adhered to.

Required control pressures can be seen from the adjacent diagram.

## Order data

Body configuration	Code
2/2 way	D

Connection	Code
Threaded sockets DIN ISO 228	1
Solvent cement sockets DIN	2
Union ends with DIN sockets	7
Spigots for IR butt welding, BCF	28
Union ends with inch sockets	33
Union ends with DIN spigots for IR butt welding)	78

Valve body material	Code
PVC-U	1
PP	5
PVDF	20

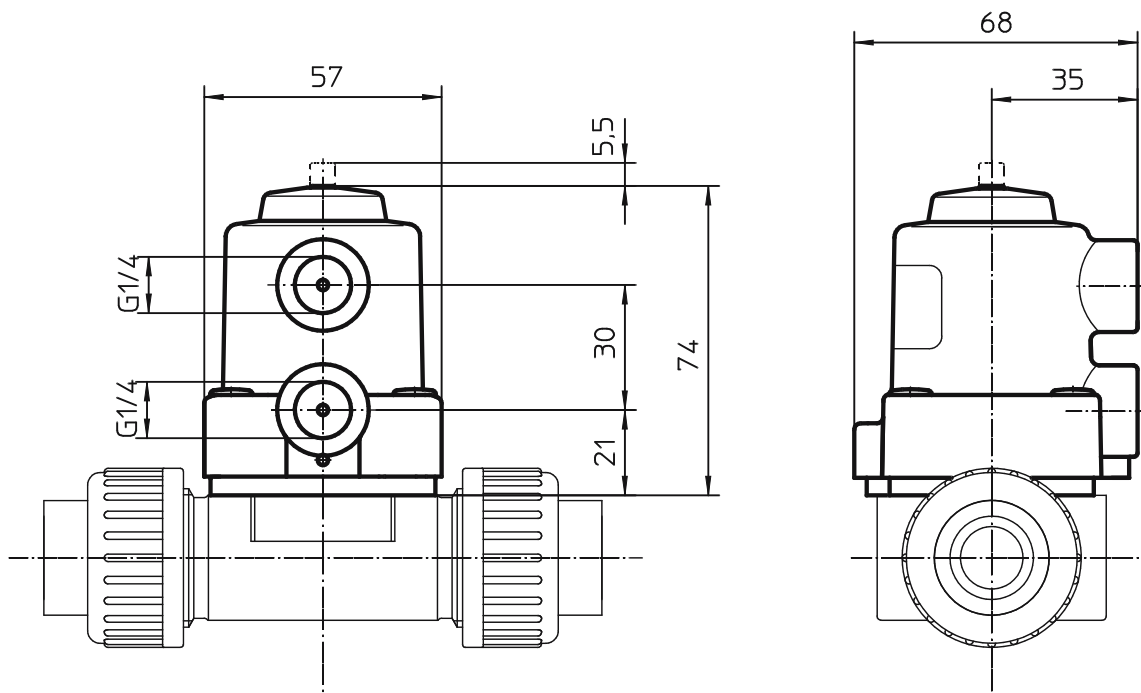
Diaphragm material	Code
NBR	2
FPM	4
EPDM	14
PTFE/EPDM	PTFE laminated 52

Control function	Code
Normally closed	1
Normally open	2
Double acting	3

Integrated mounting plate	Code
With integrated mounting plate Material code 20	M
Without mounting plate Material code 20	O
Without mounting plate Material code 1 and 5	-

Order example	610	15	D	7	1	14	1	-
Type	610							
Nominal size		15						
Body configuration (code)			D					
Connection (code)				7				
Valve body material (code)					1			
Diaphragm material (code)						14		
Control function (code)							1	
Integrated mounting plate (code)								-

# Actuator dimensions [mm]

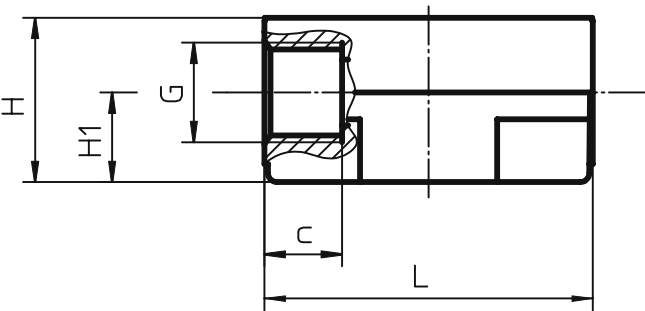


## Body dimensions

Threaded sockets, connection code 1 [mm]  
Valve body material PVC-U (Code 1), PP (Code 5), PVDF (Code 20)

Diaphragm size	DN	D	c	H Material code 1, 5	H Material code 20	H1 Material code 1, 5	H1 Material code 20	L
10	12	G 3/8	13	27.5	31.5	15	19	55

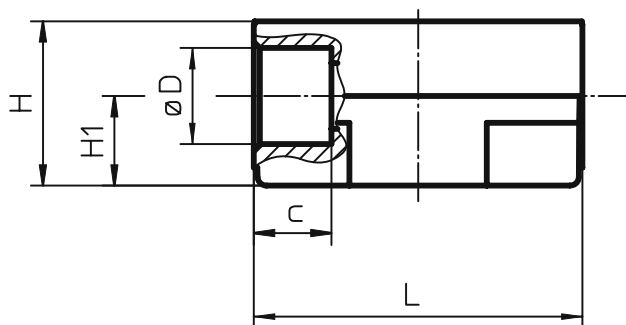
For materials see overview on last page.



**Solvent cement sockets, connection code 2 [mm]**  
**Valve body material PVC-U (Code 1)**

Diaphragm size	DN	D	c	H	H1	L
10	12	Ø16	13	27.5	15	55

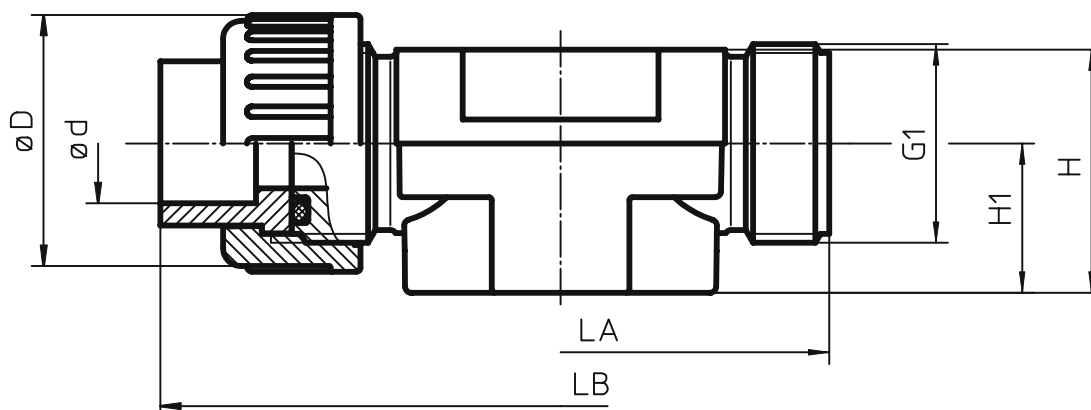
For materials see overview on last page.



**Union ends with sockets**  
**Connection code 7, 33 [mm]**  
**Valve body material PVC-U (Code 1), PP (Code 5), PVDF (Code 20)**

									Connection code 7		Connection code 33	
Diaphragm size	DN	NPS	G	øD	LA	H	H1 Material code 1, 5	H1 Material code 20	LB	ød	LB	ød
10	15	1/2"	G1	43	90	30	15	25	134	20	132	21.4

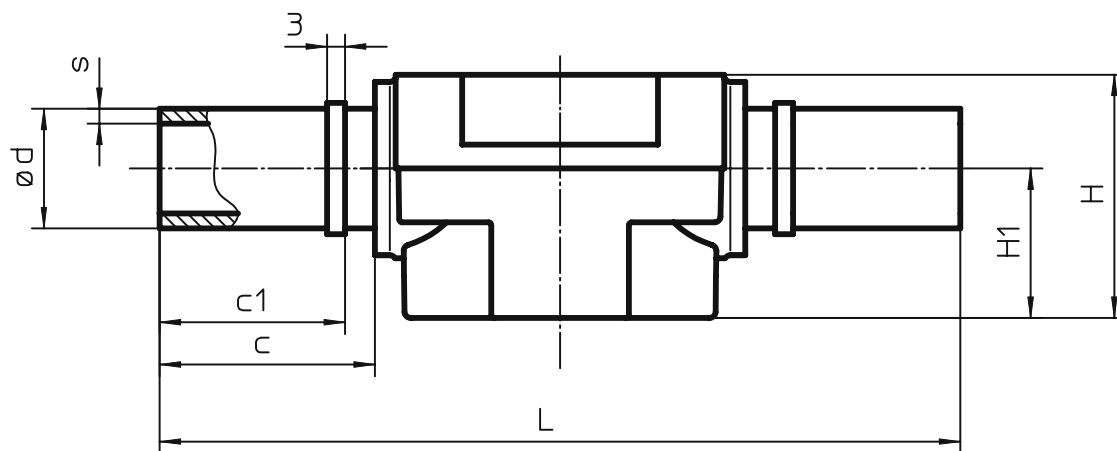
For materials see overview on last page.



**Spigots for IR butt welding, connection code 28, [mm]**  
**Valve body material PVDF (Code 20)**

Diaphragm size	DN	L	H	H1	ød	s	c	c1
10	15	134	41	25	20	1.9	31	37

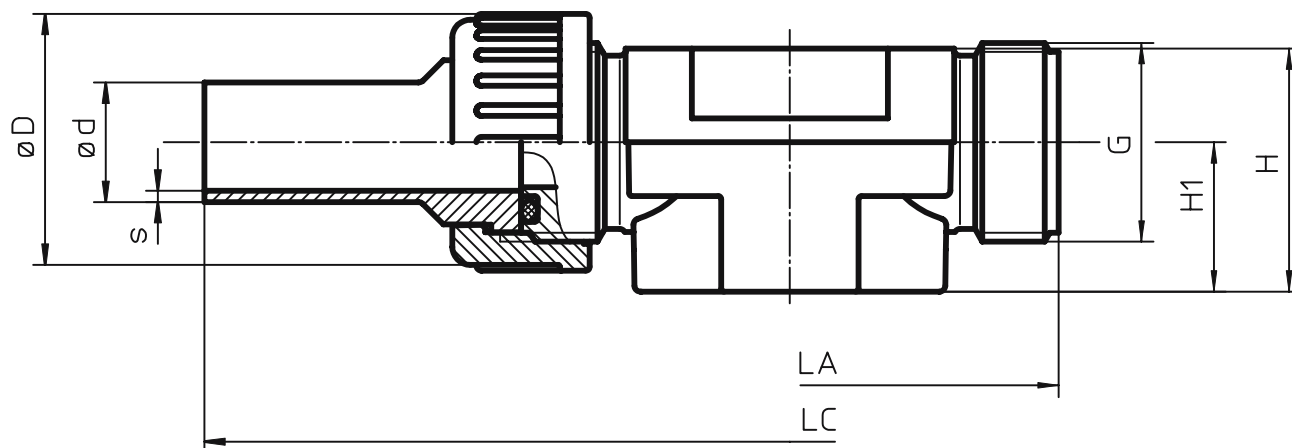
For materials see overview on last page.



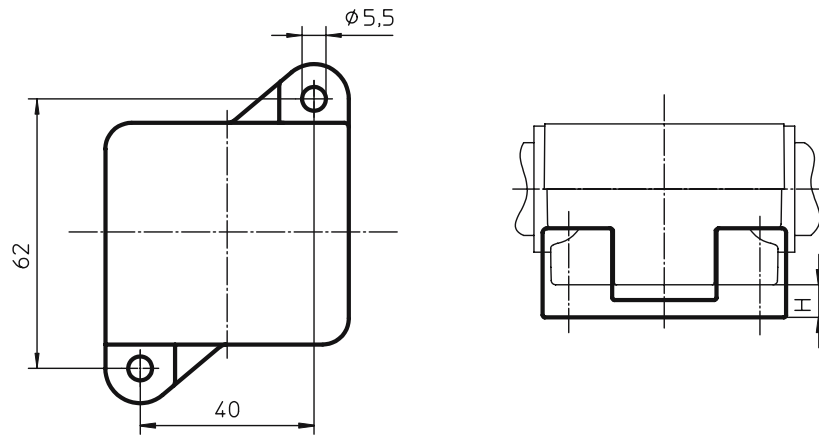
**Union ends with spigots**  
**Connection code 78, [mm]**  
**Valve body material PP (Code 5), PVDF (Code 20)**

Diaphragm size	DN	LA	LC	H Material code 5	H Material code 20	H1 Material code 5	H1 Material code 20	øD	G	ød	s	c
10	15	90	196	30	41	15	25	42	1	20	1.9	37

For materials see overview on last page.

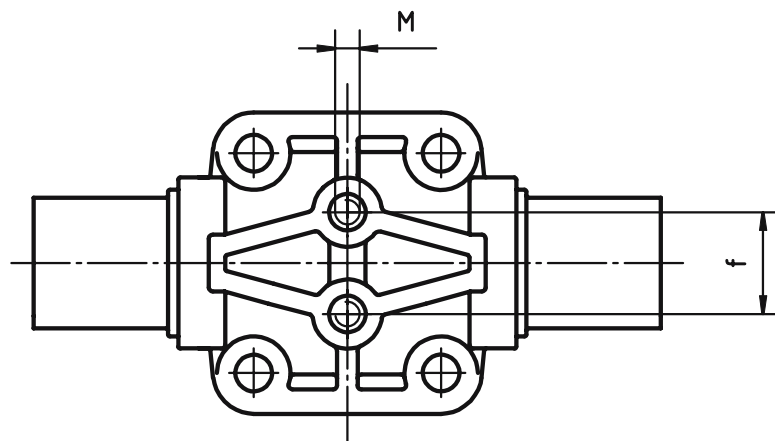


## Dimensions of mounting plate GEMÜ 1041 (mm)



Material code 20	H
DN 12	5
DN 15	4.5

## Mounting dimensions of valve body (mm)



Diaphragm size	DN	M	f	Depth of thread
10	12	M5	35.0	10
	15	M5	35.0	10

## Overview of valve bodies for GEMÜ 610

Connection code		1			2	7			28	33	78	
Material code		1	5	20	1	1	5	20	20	1	5	20
Diaphragm size	DN											
10	12	X	X	X	X	-	-	-	-	-	-	-
	15	-	-	-	-	X	X	X	X	X	X	X

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



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AND CONTROL SYSTEMS