

## Solenoid Valve, Plastic

### Construction

The GEMÜ 225 servo assisted 2/2-way plastic solenoid valve has a high performance coil which is hermetically separated from the medium by means of a flexible PTFE bush. The coil is assisted by a servo-control piston mechanism. The valve seal is carried in a pendulum bearing. The valve seal is carried in a pendulum bearing. The electrical connection is made via a plug complying with DIN EN 175301-803 form A.

The DC design includes a rectifier in the terminal enclosure, so that the valve can be used with an AC supply. The valve has a manual override and an optical position indicator as standard.

### Features

- Suitable for inert and corrosive\* liquids and gases
- Corrosion-resistant, therefore suitable for water treatment plants, washing and cleaning installations, the food and foodstuffs industries, the chemical industry, electroplating, titration equipment, for the photographic industry and for laboratory, analytical and medical apparatus.
- Sizes DN 25 and upwards have additional forced operation

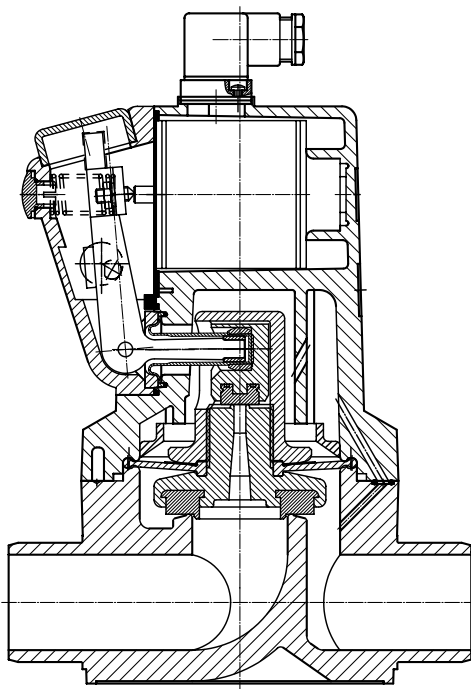
### Advantages

- Hermetic separation of medium and actuator
- Manual override allows the valve to be opened and closed during a power failure
- Optical position indicator

\* see information on working medium on page 2



Sectional drawing GEMÜ 225



## 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.

Perm. temperature of working medium 10 ... 60 °C

### Ambient conditions

Max. permissible ambient temperature 40 °C

### General information

Protection class acc. to EN 60529 IP 65

#### Directives

Pressure Equipment Directive 97/23/EC

Low Voltage Directive 2006/95/EC

EMC Directive 89/336/EEC

#### Applied standards

Radio interference voltage

148.5 kHz...30 MHz EN 55014:1993

150 kHz...30 MHz EN 55011:1993

### Rating

Continuously rated

### Electrical data

#### Power supply\*

##### Supply voltage (±10%)

24 V AC

120 V AC

230 V AC

24 V DC

##### Mains frequency

50/60 Hz

50/60 Hz

50/60 Hz

-

#### Power consumption

##### AC voltage

DN 15 - 20

DN 25 - 50

##### Pull-in power

125 VA

400 VA

##### Hold-in power

12 VA

14 VA

##### DC voltage

DN 15 - 20

DN 25 - 50

95 W

70 W

7 W

18 W

\* perm. voltage tolerance according to VDE 0580

### Pressure / temperature correlation for plastic

Temperature in °C (plastic body)	-20	-10	±0	5	10	20	25	30	40	50	60
Valve body material	permissible operating pressure in bar										
PVC-U Code 1	-	-	-	-	6.0	6.0	6.0	4.8	3.6	2.1	0.9

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.

Nominal size*	Operating pressure**	Kv-value	Weight
[DN]	[bar]	[m³/h]	[kg]
15	0.5 - 6	1.8	0.90
20	0.5 - 6	2.3	0.90
25	0 - 6	6.0	2.80
32	0 - 6	7.5	2.80
40	0 - 6	9.5	3.60
50	0 - 6	12.5	3.60

\* Nominal size corresponds to valve seat diameter

\*\* Operating pressure applies for free outlet. For closed systems the pressure drop is 1 bar at the valve.

All pressures are given as gauge values.

### Notes

#### Installation note

Caution: DC solenoids are designed for unsmoothed voltages, e.g. as obtained from a bridge rectifier.

#### Wiring note

Special wiring on request. When using electronic switches and additional wiring avoid inadmissible residual currents by proper design.

## Order data

Body configuration	Code
2/2-way body	D

Control function	Code
Normally closed	1

Connections	Code
Solvent cement spigots, DIN	0
Union ends with DIN insert (socket)	7
Solvent cement spigots, inch	30

Supply voltage	Code
24 V AC	24
120 V AC	120
230 V AC	230
24 V DC	24

Valve body material	Code
PVC-U	1

Mains frequency	Code
50/60 Hz	50/60
DC	DC

Seal material	Code
FPM	4
EPDM	14

Order example	225	15	D	7	1	14	1	230	50
Type	225								
Nominal size		15							
Body configuration (code)			D						
Connections (code)				7					
Valve body material (code)					1				
Seal material (code)						14			
Control function (code)							1		
Voltage (code)								230	
Frequency (code)									50

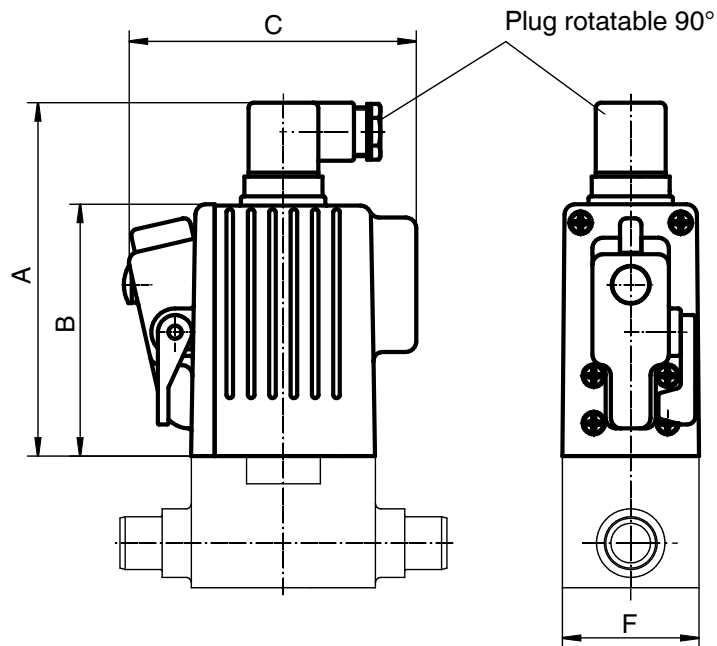
**Order information:** Suitable plug acc. to DIN EN 175301-803 form A, loose plug: type GEMÜ 1220/1221

## Voltage / Frequency availability

AC: 24 V, 120 V, 230 V      50/60 Hz  
DC: 24 V      DC

Other voltages on request

## Actuator dimensions [mm]

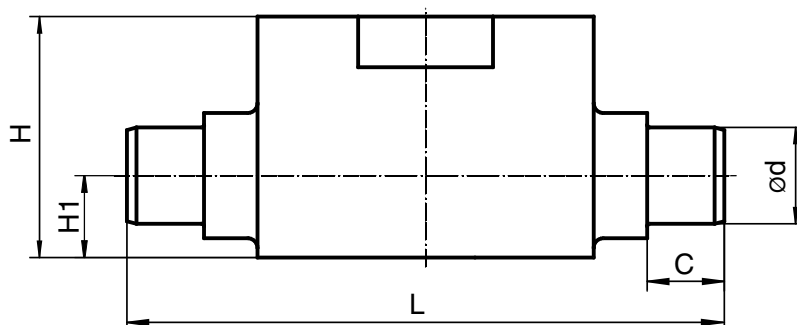


DN	A	B	C	F
15	134	100	110	52
20	134	100	110	52
25	167	128	144	88
32	167	128	144	88
40	196	157	158	110
50	196	157	158	110

## Body dimensions [mm]

### Solvent cement spigots, connection code 0, 30

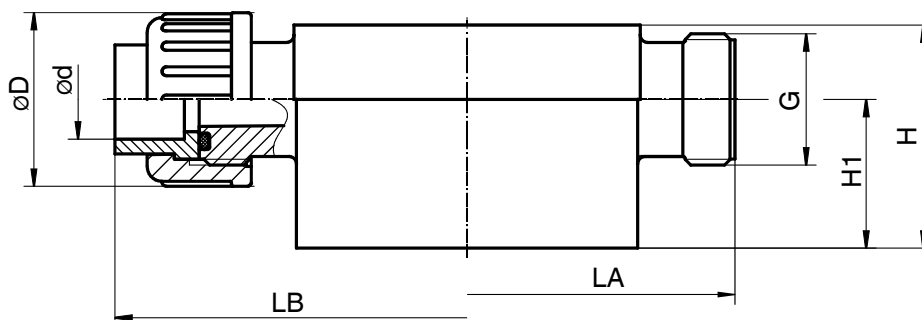
DN	C	ød		H	H1	L
		Code 0	Code 30			
15	16	20	21.34	50	17	124
20	19	25	26.67	50	17	144
25	22	32	33.40	72	24	154
32	26	40	42.20	72	24	174
40	31	50	48.20	85	27	194
50	39	63	60.30	85	27	224



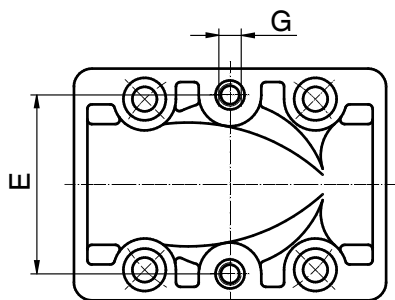
## Body dimensions [mm]

### Union ends with insert, connection code 7

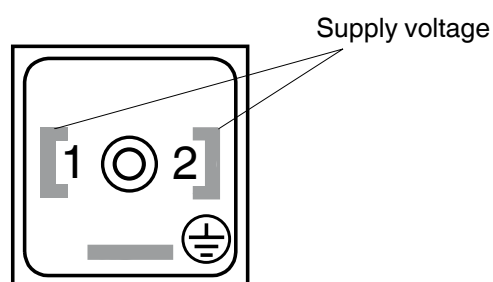
DN	øD	ød	H	H1	LA	LB	G
15	43	20	63	30	108	146	G 1
20	53	25	63	30	108	152	G 1 1/4



### Mounting dimensions [mm] GEMÜ 225



### Connection diagram for plug form A (DIN EN 175301-803)



DN	E	G	
		Connection code 0, 7	Connection code 30
15	40.0	M5	10 - 32 UNF
20	40.0	M5	10 - 32 UNF
25	44.5	M8	5/16" - 32 UNF
32	44.5	M8	-
40	44.5	M8	-
50	44.5	M8	-

The GEMÜ 1220 plug (with light) or GEMÜ 1221 (without light) is available as a spare part.

## Overview of valve bodies for GEMÜ 225

Connection code	0	7	30
DN 15	X	X	X
DN 20	X	X	X
DN 25	X	-	X
DN 32	X	-	-
DN 40	X	-	-
DN 50	X	-	-

## Other GEMÜ plastic solenoid valves



GEMÜ 52, 102, 202  
DN 2 - 15 (0 - 6 bar)



GEMÜ 205  
DN 10 - 50 (0 - 6 bar)

## Other GEMÜ brass or stainless steel solenoid valves



GEMÜ 8253  
DN 8 - 50 (0 - 10 bar)



GEMÜ 8257  
DN 10 (0 - 10 bar)



GEMÜ 8258  
DN 8 - 50 (0.1 - 16 bar)



GEMÜ 8259  
DN 2 - 5 (0 - 20 bar)

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

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AND CONTROL SYSTEMS

