

Data sheet

# Servo-operated 2/2-way solenoid valves with isolating diaphragm

Type EV222B



EV222B is an indirect servo-operated solenoid valve programme for use in connection with contaminated or aggressive media. Valve body in stainless steel, isolating diaphragm protecting the solenoid system against impurities, built in pilot filter, replaceable equalizing orifice, enclosures up to IP67 ensure a reliable and satisfaction function.

## Features

- Differential pressure: Up to 10 bar
- Viscosity: Up to 50 cSt
- Ambient temperature: Up to 60 °C
- Coil enclosure: Up to IP67
- Isolating diaphragm
- Water hammer damped
- Built in filter for protection of pilot system
- Stainless steel valve body
- DN 15 – DN 50
- Thread connection: From G ½ – G 2
- NC versions only

**Stainless steel valve body,  
NC**



Connection ISO 228/1	Seal material	Orifice size [mm]	K <sub>v</sub> - value [m <sup>3</sup> /h]	Differential pressure min. to max. [bar]	Media temperature min. to max. [°C]	Code number
G ½	FKM <sup>1)</sup>	15	4	0.3 – 10	0 – 50	<b>032U8526</b>
G ¾	FKM <sup>1)</sup>	20	8	0.3 – 10	0 – 50	<b>032U8527</b>
G 1	FKM <sup>1)</sup>	25	11	0.3 – 10	0 – 50	<b>032U8528</b>
G 1 ¼	FKM <sup>1)</sup>	32	18	0.3 – 10	0 – 50	<b>032U8529</b>
G 1 ½	FKM <sup>1)</sup>	40	24	0.3 – 10	0 – 50	<b>032U8530</b>
G 2	FKM <sup>1)</sup>	50	40	0.3 – 10	0 – 50	<b>032U8531</b>

<sup>1)</sup> Suitable for oil and air.

**Technical data**

Main type	EV222B 15	EV222B 20	EV222B 25	EV222B 32	EV222B 40	EV222B 50
Time to open [ms] <sup>1)</sup>	40	40	300	1000	1500	5000
Time to close [ms] <sup>1)</sup>	350	1000	1000	2500	4000	10000

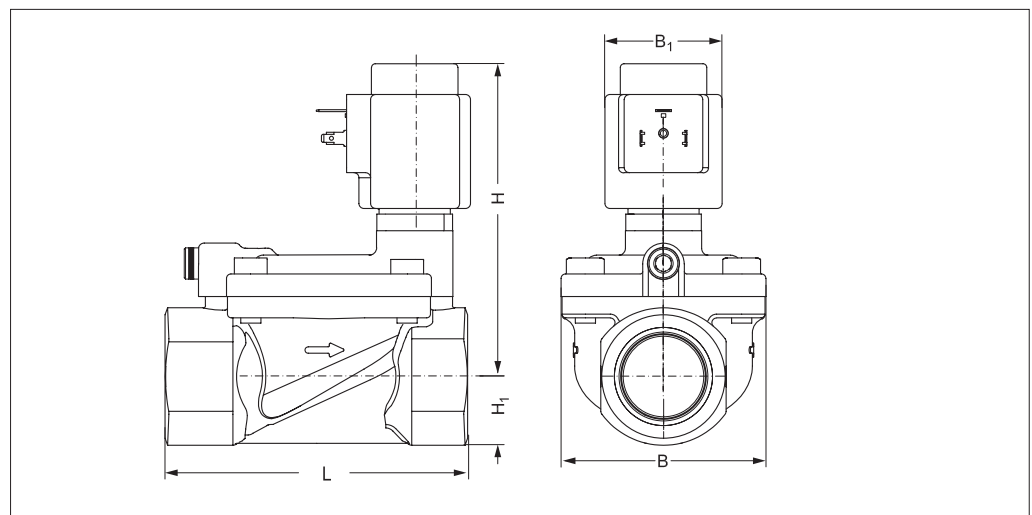
<sup>1)</sup> The times are indicative and apply to water. The exact times will depend on the pressure conditions. Closing times can be changed by replacement of the equalizing orifice.

Type	EV222B		
Installation	Vertical solenoid system is recommended.		
Nominal pressure	PN10		
Max. test pressure	16 bar		
Ambient temperature	Max. 60 °C (depending on coil type, see coil data sheet)		
Viscosity	Max. 50 cSt		
Materials	Valve body:	Stainless steel	W.no. 1.4581 / AISI 318
	Flange for isolating diaphragm:	Stainless steel	W.no. 1.4581 / AISI 318
	Diaphragm plate:	Stainless steel	W.no. 1.4581 / AISI 318
	Isolating diaphragm:	FKM	–
	Main diaphragm:	FKM	–
	O-rings:	FKM	–
	Close spring:	Stainless steel	W.no. 1.4310 / AISI 301
	Fluid above isolating diaphragm:	Silicone oil	–

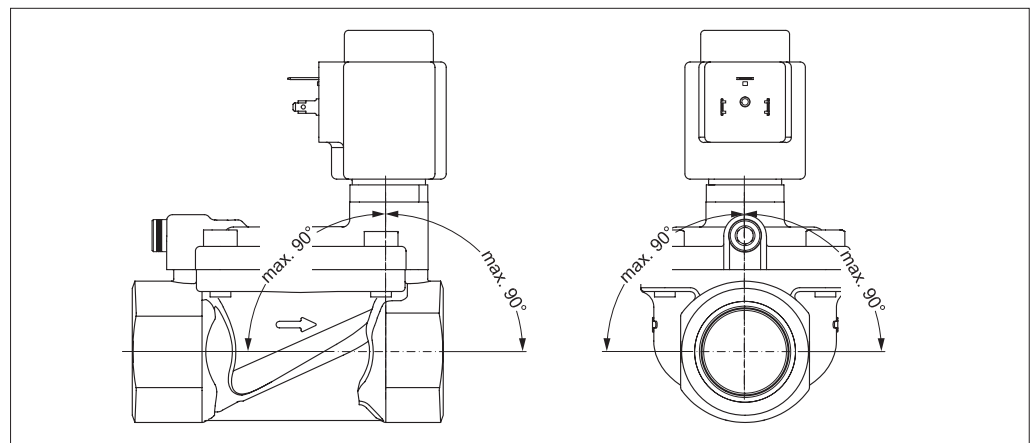
**Dimensions and weight**

Type	L [mm]	B [mm]	B <sub>1</sub> [mm] Coil type		H [mm]	H <sub>1</sub> [mm]	Weight without coil [kg]
			BB / BE	BG			
EV222B 15	80	52	46	68	104	15	0.8
EV222B 20	90	58	46	68	108	18	1.0
EV222B 25	109	70	46	68	118	22	1.4
EV222B 32	120	82	46	68	125	27	2.0
EV222B 40	130	95	46	68	134	32	3.2
EV222B 50	162	113	46	68	140	37	4.3




**Dimensions**



**Mounting angle**

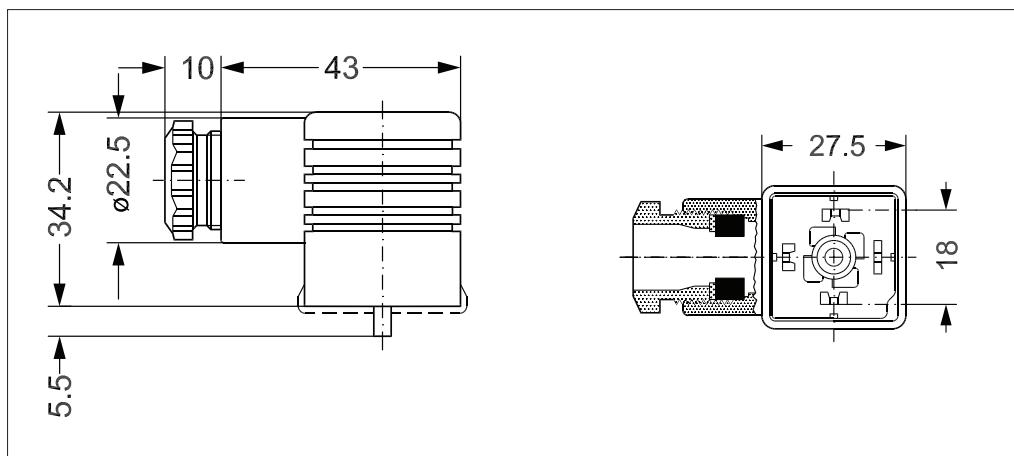


Below coils can be used with EV222B

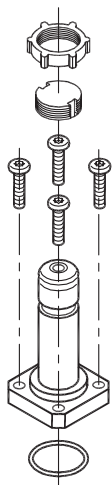
Coil	Type	Power consumption	Enclosure	Features
	BB, clip on	10 W AC 18 W DC	IP00 with spade connector	IP20 with protective cap, IP65 with cable plug
	BE, clip on	10 W AC 18 W DC	IP67	With terminal box
	BG, clip-on	12 W AC 20 W DC	IP67	With terminal box

**Accessories:**  
Cable plug

Application	Code number
GDM 2011 (grey) cable plug according to DIN 43650-A PG11	<b>042N0156</b>



**Isolating diaphragm kit**



Seal material	Code number
EPDM <sup>1)</sup>	<b>042U1009</b>
FKM <sup>2)</sup>	<b>042U1010</b>

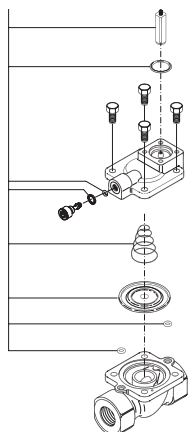
<sup>1)</sup> EPDM is recommended for water.  
Media temperature: -20 – 50 °C.  
<sup>2)</sup> Media temperature: 0 – 50 °C.



The isolating diaphragm design ensures that no fluid enters the armature area, which gives the following advantages:  
The valve is resistant to aggressive fluids, impurities in the fluid and to calcareous and scale deposits.

**The kit contains:**  
Assembled isolating unit  
O-ring  
4 screws  
Locking button  
Nut for the coil

**Diaphragm spare parts kit, NC**  
**(for complete spare parts kit, the isolating diaphragm kit must be ordered separately)**



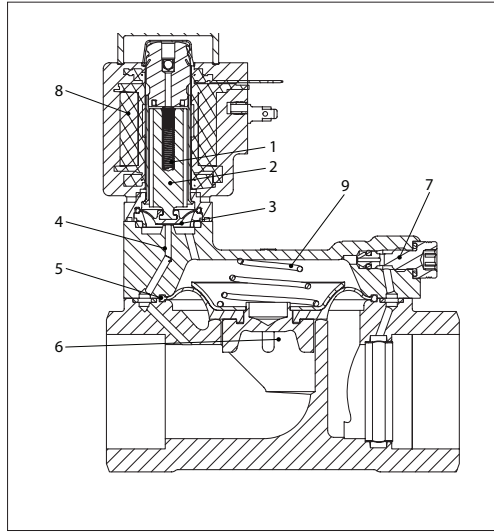
Type	Seal material	Code number
EV222B 15	FKM	<b>032U6326</b>
EV222B 20	FKM	<b>032U6327</b>
EV222B 25	FKM	<b>032U6328</b>
EV222B 32	FKM	<b>032U6329</b>
EV222B 40	FKM	<b>032U6330</b>
EV222B 50	FKM	<b>032U6331</b>



**The kit contains:**  
Locking button and nut for the coil  
Armature with valve plate and spring (not to be used for EV222B)  
O-ring for the actuator  
2 O-rings for the equalizing orifice  
Spring and diaphragm  
2 O-rings for the pilot system

**Function, NC**

1. Armature spring
2. Armature
3. Isolating diaphragm
4. Pilot orifice
5. Diaphragm
6. Main orifice
7. Equalizing orifice
8. Coil
9. Spring

**2/2-way servo-operated**

When voltage is applied to the coil (8), the armature (2) with the isolating diaphragm (3) is lifted clear of the pilot orifice (4) and the diaphragm (5) is lifted by the fluid pressure - the main orifice (6) opens.

When voltage is disconnected the isolating diaphragm (3) is pressed down against the pilot orifice (4) by the armature spring (1) and pressure is built up above the diaphragm (5) via the equalizing orifice (7). The main orifice is closed by the fluid pressure and the spring (9). The isolating diaphragm keeps the medium away from the actuator.

The space above the isolating diaphragm is filled up with silicone oil.