

# Solenoid valves 2/2-way servo-operated

## Type EV220B 65-100

### Features



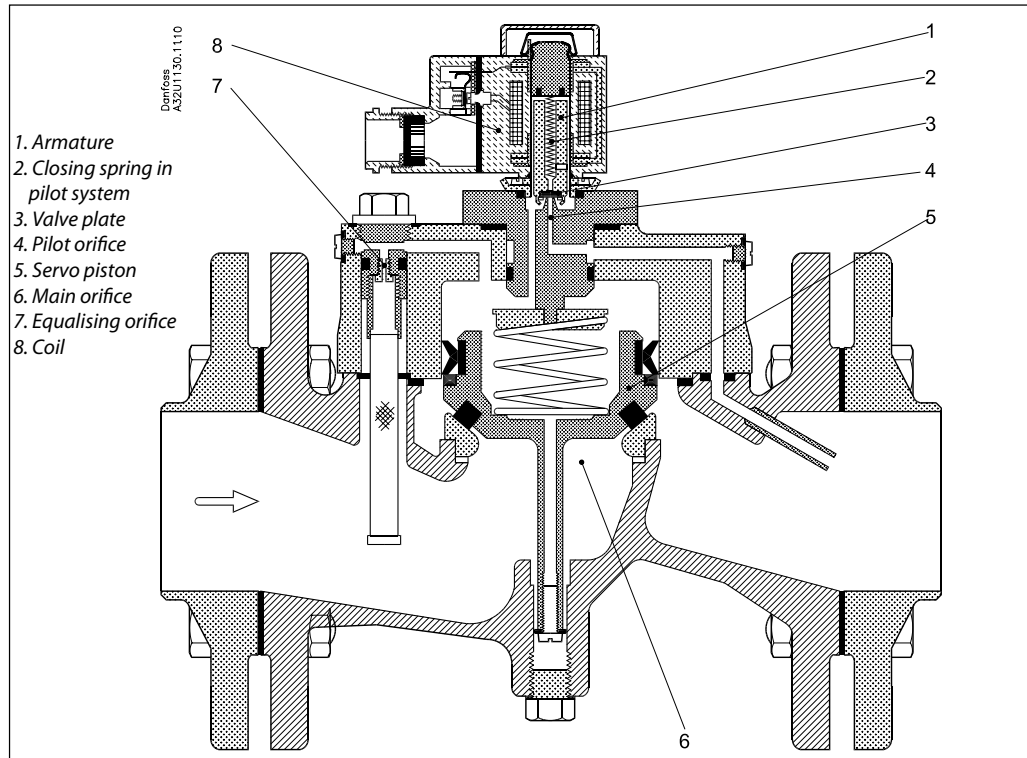
### EV220B CI

- For robust industrial application, such as supply
- For water and similar neutral media
- Flow range for water: 25 to 400 m<sup>3</sup>/h
- Differential pressure: Up to 10 bar
- Viscosity: Up to 50 cSt
- Ambient temperature: Up to +80°C
- Coil enclosure: Up to IP 67
- Flange connections: 2 1/2, 3 and 4"
- Water hammer damped
- Built-in filter for protection of pilot system

Installation	Optional, but vertical solenoid system is recommended.		
Pressure range	0.25 - 10 bar		
Max. test pressure	15 bar		
Time to open <sup>1)</sup>	DN 65: approx. 5 s	DN 80: approx. 5 s	DN 100: approx. 5 s
Time to close <sup>1)</sup>	DN 65: approx. 7 s	DN 80: approx. 15 s	DN 100: approx. 29 s
Ambient temperature	max. +80°C (depending on coil type, see data for the coil selected)		
Medium temperature	-25 to +90°C		
Viscosity	max. 50 cSt		
Materials	Valve body: Cast iron (GG 20), W.no. 0.6020 Armature/tube stop: Stainless steel, W.no. 1.4105/ AISI 430L Armature tube: Stainless steel, W. no. 1.4306/ AISI 304L Springs: Stainless steel, W. no. 1.4310/ AISI 301 Sleeve, etc.: EPDM, NBR, PTFE (EPDM versions) NBR, PTFE (NBR versions)		

<sup>1)</sup> The times are indicative and apply to water.  
The exact times will depend on the pressure conditions.

Function



**Coil voltage disconnected (closed):**  
 When the voltage is disconnected, the valve plate (3) is pressed down against the pilot orifice (4) by the pilot system's closing spring (2). The pressure across the servo piston (5) is built up via the equalising orifice (7). The servo piston closes the main orifice (6) as soon as the pressure across the piston is equivalent to the inlet pressure. The valve will be closed for as long as the voltage to the coil is disconnected.

**Coil voltage connected (open):**  
 When voltage is applied to the coil (8), the armature (1) and the valve plate (3) are lifted clear of the pilot orifice (4). As the pilot orifice is larger than the equalising orifice (7), the pressure across the servo piston (5) drops and therefore it is lifted clear of the main orifice (6). The valve will be open for as long as the minimum differential pressure across the valve is maintained, and for as long as there is voltage to the coil.

Ordering - valve body with flange bolts and gaskets

Flange connection	k <sub>v</sub> -value [m <sup>3</sup> /h]	Seal material	Valve type		Code no. without coil	Permissible differential pressure		Suitable coil types
			Main type	Specification		min. [bar]	max. [bar]	
2 1/2	50	EPDM	EV220B 65 CI	FL 10E NC000	<b>016D6065</b>	0.25	10	BB, BE and BG
2 1/2	50	NBR	EV220B 65 CI	FL 10N NC000	<b>016D3330</b>	0.25	10	BB, BE and BG
3	75	EPDM	EV220B 80 CI	FL 10E NC000	<b>016D6080</b>	0.25	10	BB, BE and BG
3	75	NBR	EV220B 80 CI	FL 10N NC000	<b>016D3331</b>	0.25	10	BB, BE and BG
4	130	EPDM	EV220B 100 CI	FL 10E NC000	<b>016D6100</b>	0.25	10	BB, BE and BG

Ordering of flange set

	Connection	Type	Code no.
	2 1/2 weld type 11 according to DIN EN 1092-1	EV220B 65 CI	<b>027N3065</b>
	G 2 1/2 type 13 according to DIN EN 1092-1	EV220B 65 CI	<b>027G3065</b>
	3 weld type 11 according to DIN EN 1092-1	EV220B 80 CI	<b>027N3080</b>
	G 3 type 13 according to DIN EN 1092-1	EV220B 80 CI	<b>027G3080</b>
	4 weld type 11 according to DIN EN 1092-1	EV220B 100 CI	<b>027N3100</b>
	G 4 type 13 according to DIN EN 1092-1	EV220B 100 CI	<b>027G3100</b>

Each set contains two flanges

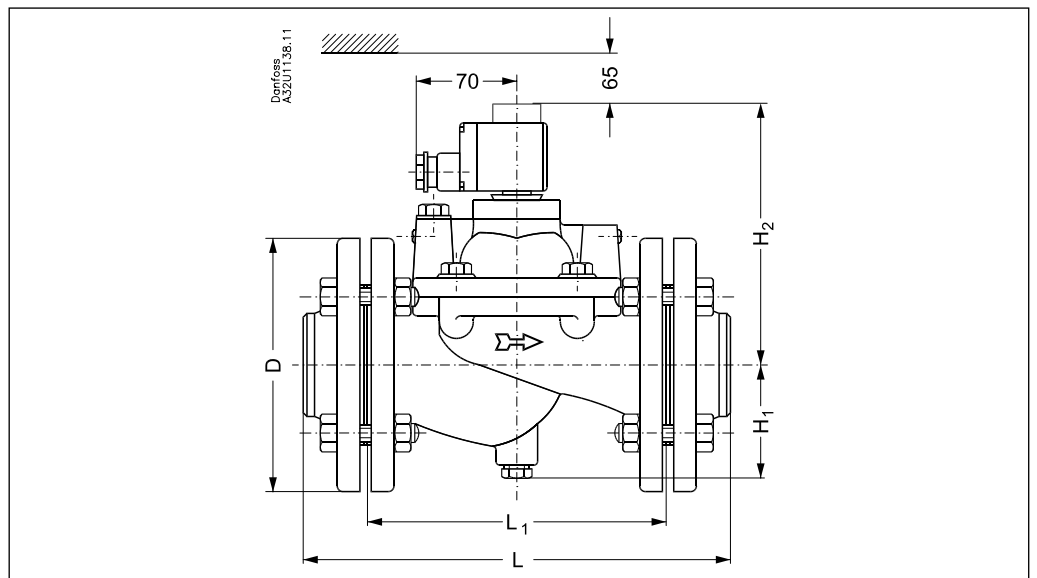
Coil options

Type: BB 10 W ac 18W dc	Type: BE (IP67) 10 W ac 18W dc	Type: BG 12 W ac 20W dc

Ordering coils

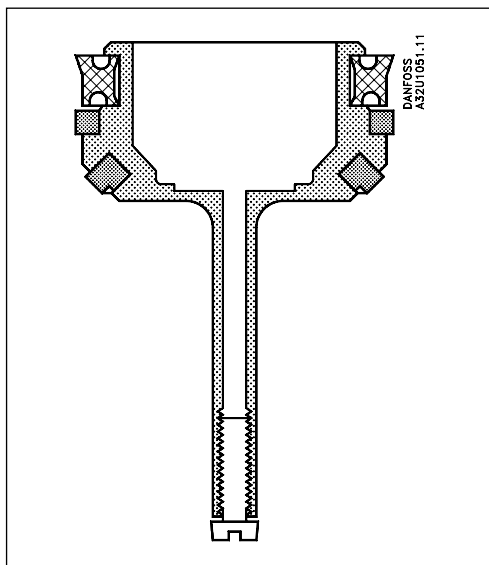
See separate data sheet for coils IC.PD. 600.A

Dimensions and weight



Main type	L [mm]	L <sub>1</sub> [mm]	Coil width [mm]		ØD [mm]	H <sub>1</sub> [mm]	H <sub>2</sub> [mm]	Weight without coil [kg]
			10 W ac	20 W dc				
EV220B 65 CI	320	224	46	66	185	85	185	24
EV220B 80 CI	370	265	46	66	200	93	215	34
EV220B 100 CI	430	315	46	66	220	103	240	44

**Spare parts kit and seal kit**



*Spare parts kit*

The spare parts kit comprises an assembled servo piston, assembled armature and various seals.

Valve	Code no.	
	Seal material	
	EPDM	NBR
EV220B 65	<b>016D0078</b>	<b>016D0095</b>
EV220B 80	<b>016D0079</b>	<b>016D0096</b>
EV220B 100	<b>016D0080</b>	<b>016D0097</b>

*Seal kit*

Comprises all relevant seals.

Valve	Code no.	
	Seal material	
	EPDM	NBR
EV220B 65	<b>016D0075</b>	<b>016D0084</b>
EV220B 80	<b>016D0076</b>	<b>016D0085</b>
EV220B 100	<b>016D0077</b>	<b>016D0086</b>

*Filter kit*

Comprises a complete filter kit and relevant seals.

Valve	Code no.
EV220B 65	<b>016D0092</b>
EV220B 80/100	<b>016D0093</b>