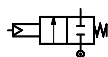


Solenoid valves
2/2-way servo-operated
Type EV220B
DN 65-100

2/2-way servo-operated solenoid valves



De-energized closed

Type EV220B FL
for neutral liquids and gases
DN 65 - 100 CI

Flange
2 1/2, 3, 4"



- For robust industrial application, such as supply
- For water and similar neutral media
- Flow range for water: 25 to 400 m³/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

Technical data

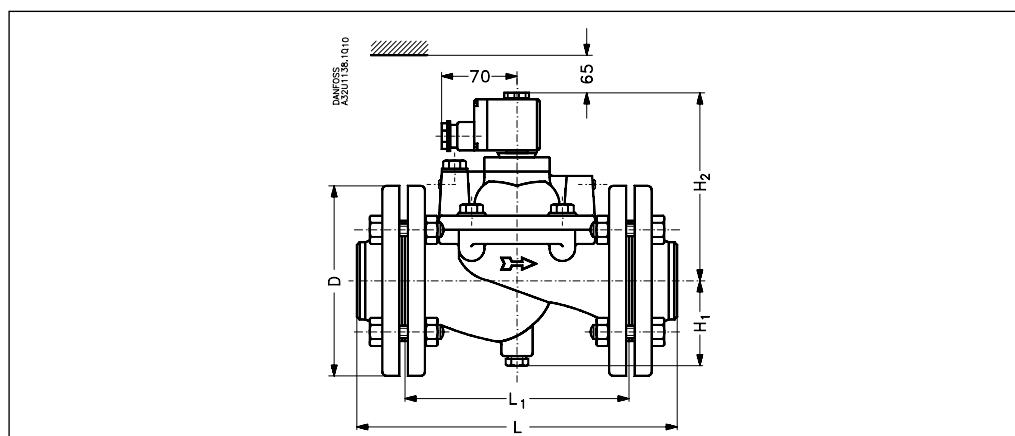
Installation	Optional, but vertical solenoid system is recommended (see PT.600.A)																				
Pressure range	0.25 - 10 bar																				
Max. test pressure	15 bar																				
Time to open ¹⁾	DN 65: approx. 5 s	DN 80: approx. 5 s	DN 100: approx. 5 s																		
Time to close ¹⁾	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	<table border="0"> <tr> <td>Valve body:</td> <td>Cast iron (GG 20),</td> <td>W.no. 0.6020</td> </tr> <tr> <td>Armature/tube stop:</td> <td>Stainless steel,</td> <td>W.no. 1.4105 / AISI 430FR</td> </tr> <tr> <td>Armature tube:</td> <td>Stainless steel,</td> <td>W.no. 1.4306 / AISI 304L</td> </tr> <tr> <td>Springs:</td> <td>Stainless steel,</td> <td>W.no. 1.4310 / AISI 301</td> </tr> <tr> <td>Sleeve, etc.:</td> <td>EPDM, NBR, PTFE</td> <td>(EPDM versions)</td> </tr> <tr> <td></td> <td>NBR, PTFE</td> <td>(NBR versions)</td> </tr> </table>			Valve body:	Cast iron (GG 20),	W.no. 0.6020	Armature/tube stop:	Stainless steel,	W.no. 1.4105 / AISI 430FR	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)
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	NBR, PTFE	(NBR versions)																			

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

Coil options

 Type: BB 10 W ac 18 W dc	 Type: BE (IP67) 10 W ac 18 W dc	 Type: BG 12 W ac 20 W dc	<i>Danfoss also offers hum-free coils for noise sensitive applications and EEx m II T4 coils for use in explosion risk areas - please see coil data sheet DKACV.PD.600.A</i>
See DKACV.PD.600.A			

Dimensions and weight



Main type	L [mm]	L ₁ [mm]	Coil width [mm]		∅D [mm]	H ₁ [mm]	H ₂ [mm]	Weight without coil [kg]
			10 W ac	20 W dc				
EV220B 65 CI	320	224	46	66	185	85	180	24
EV220B 80 CI	370	265	46	66	200	93	210	34
EV220B 100 CI	430	315	46	66	220	103	235	44

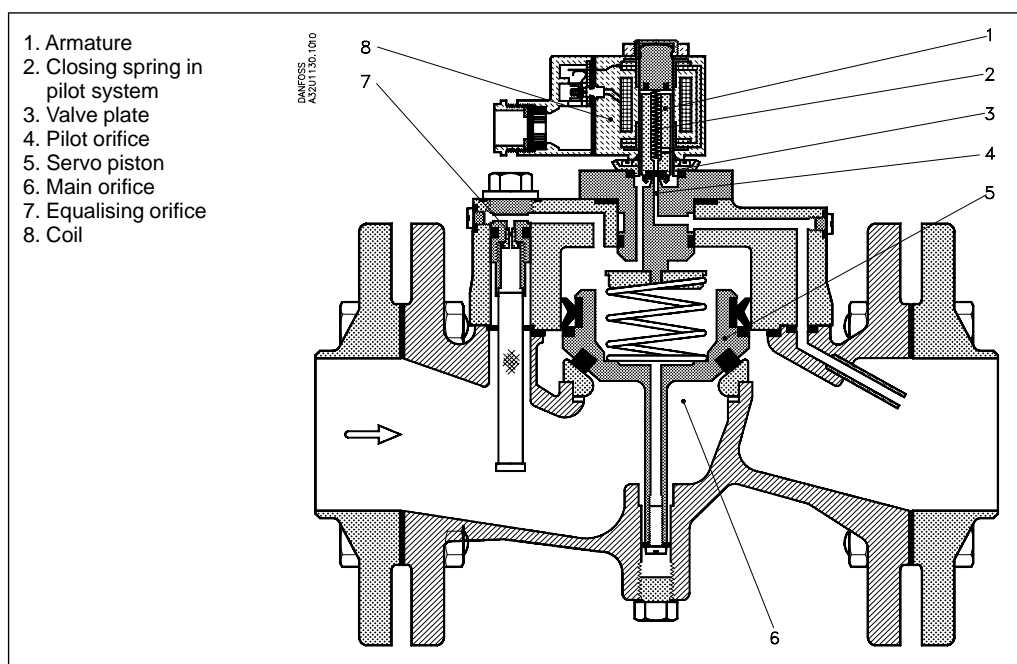
2/2-way servo-operated solenoid valves

Flange
2½, 3, 4"

Type EV220B FL
for neutral liquids and gases
DN 65 - 100 CI

De-energized closed

Function



1. Armature
2. Closing spring in pilot system
3. Valve plate
4. Pilot orifice
5. Servo piston
6. Main orifice
7. Equalising orifice
8. Coil

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 _v -value [m³/h]	Seal material	Valve type		Code no. without coil	Permissible differential pressure		Suitable coil types
			Main type	Specification		min. [bar]	max. [bar]	
2½	50	EPDM	EV220B 65 CI	FL 10E NC000	016D6065	0.25	10	BB, BE and BG
2½	50	NBR	EV220B 65 CI	FL 10N NC000	016D3330	0.25	10	BB, BE and BG
3	75	EPDM	EV220B 80 CI	FL 10E NC000	016D6080	0.25	10	BB, BE and BG
3	75	NBR	EV220B 80 CI	FL 10N NC000	016D3331	0.25	10	BB, BE and BG
4	130	EPDM	EV220B 100 CI	FL 10E NC000	016D6100	0.25	10	BB, BE and BG
4	130	NBR	EV220B 100 CI	FL 10N NC000	016D3332	0.25	10	BB, BE and BG

Ordering - coils

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

Ordering of flange set

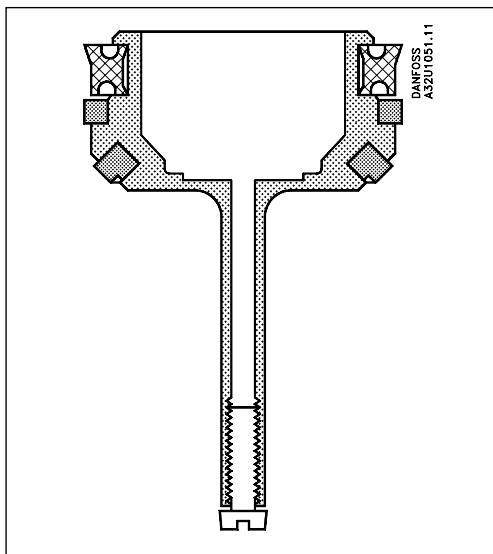
	Connection	Type	Code no.
	2½ weld according to DIN 2633	EV220B 65 CI	027N3065
G 2½, according to DIN 2566	EV220B 65 CI	027G3065	
3 weld according to DIN 2633	EV220B 80 CI	027N3080	
G 3, according to DIN 2566	EV220B 80 CI	027G3080	
4 weld, according to DIN 2633	EV220B 100 CI	027N3100	
G 4, according to DIN 2566	EV220B 100 CI	027G3100	

Each set contains two flanges

Spare parts

**for solenoid valves
2/2-way servo-operated
Type EV 220B FL**

**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	016D0078	016D0095
EV220B 80	016D0079	016D0096
EV220B 100	016D0080	016D0097

Seal kit

Comprises all relevant seals.

Valve	Code no.
EV220B 65	016D0075
EV220B 80	016D0076
EV220B 100	016D0077

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