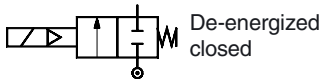


Solenoid valves
2/2-way assisted lift operated
Type EV250B

2/2-way assisted lift operated solenoid valves



Type EV250B NC
for neutral liquids and gases
DN 10 - 22 BD

3/8 in. - 1 in.

Features



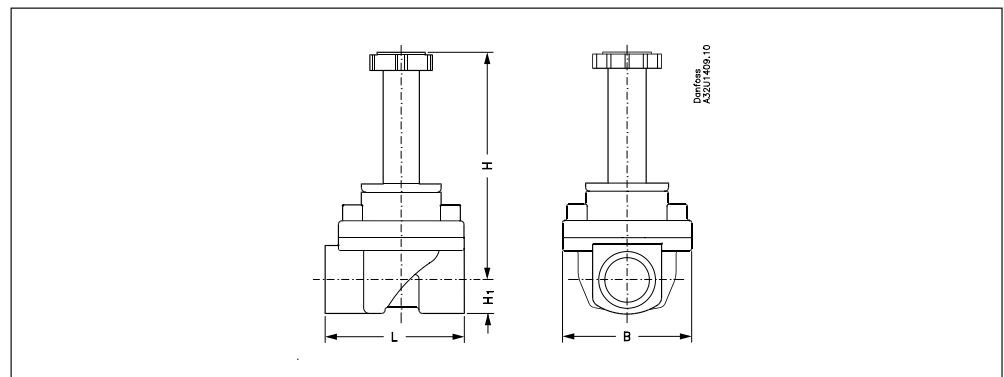
- For heating systems and other systems with low and strongly fluctuating pressure conditions
- For water, oil, compressed air and similar neutral media
- C_v value: Up to 8.1 gal/min
- Differential pressure: Up to 145 psi
- Viscosity: Up to 50 cSt
- Ambient temperature: Up to 140°F
- Media temperature from -22 to 248°F
- Coil enclosure: Up to IP 67
- Thread connections: From 3/8 to 1 in. NPT

Technical data

Main type	EV250B 10BD	EV250B 12BD	EV250B 18BD	EV250B 22BD
Pressure range	See Ordering (page 3)			
Max. test pressure	367 PSI			
Time to open ¹⁾	100 ms	100 ms	150 ms	150 ms
Time to close ¹⁾	100 ms	100 ms	100 ms	100 ms
Ambient temperature	Max. +176°F (depending on coil type, see data for the coil selected)			
Media temperature	EPDM: +22°F - +248°F: 0 - 145 Psi FKM: 32°F - +212°F (water: Max. +140°F)			
Viscosity	max. 50 cSt			
Materials	Valve body: Cover: Armature: Armature tube: Armature stop: Springs: O-rings: Valve plate: Diaphragm:	DZR brass ²⁾ , Brass Stainless steel, Stainless steel, Stainless steel, Stainless steel, EPDM or FKM EPDM or FKM EPDM or FKM	CuZn36Pb2As/CZ132 W.no. 2.0402 W.no. 1.4105/AISI 430 FR W.no. 1.4306/AISI 304 L W.no. 1.4105/AISI 430 FR W.no. 1.4310/AISI 301	

- 1) The times are indicative and apply to water. The exact times will depend on the pressure conditions.
2) Dezincification resistant brass

Dimensions and weight



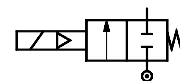
Type	L		B		H ₁		H		Weight without coil	
	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	Lbs	[kg]
3/8 in.	2 9/32	58	2 1/6	52.5	1/2	13	3 11/16	93.5	1.3	0.6
1/2 in.	2 9/32	58	2 1/6	52.5	1/2	13	3 11/16	93.5	1.3	0.6
1/4 in.	3 17/32	90	2 9/32	58	11/16	18	3 11/16	93.5	1.8	0.8
1	3 17/32	90	2 9/32	58	11/16	23	4	100	2.4	1.1

2/2-way assisted lift operated solenoid valves

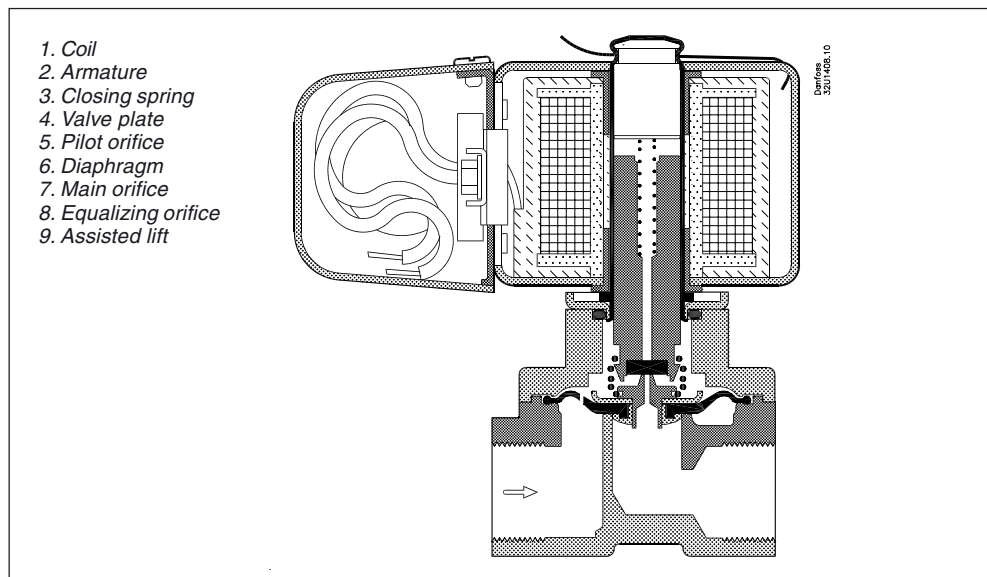
3/8 in. - 1 in.

Type EV250B NC
for neutral liquids and gases
DN 10 - 22 BD

De-energized
closed



Function



Coil voltage disconnected (closed):
When the supply voltage to the coil (1) is disconnected, the valve plate (4) is pressed down against the pilot orifice (5) by the closing spring (3). The pressure across the diaphragm (6) is built up via the equalizing orifice (8). The diaphragm closes the main orifice (7) as soon as the pressure across the diaphragm is equivalent to the inlet pressure below, due to the larger diameter of the upper side and/or the tension of the closing spring (3). The valve will be closed as long as the voltage to the coil is disconnected.

Coil voltage connected (open):
When voltage is applied to the coil, the armature (2) and the valve plate (4) are lifted clear of the pilot orifice (5). If there is a differential pressure across the valve, the pressure above the diaphragm (6) drops as the pilot orifice is larger than the equalizing orifice. Therefore the diaphragm is lifted clear of the main orifice (7). If there is no differential pressure across the valve, the armature (2) draws the diaphragm (6) clear of the main orifice (7) using the assisted lift (9). The valve will be open for as long as there is voltage to the coil.

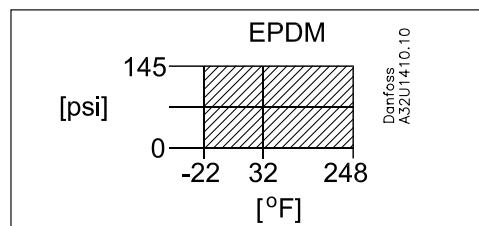
Ordering - valve body

Con- nection NPT in.	Seal material	C _v value [Gh/min.]	Media temp. ¹⁾		Type designation		Code no without coil	Permissible differential pressure (Psi)	
			Min. [°F]	Max. [°F]	Main type	Specification		Min.	Max.
3/8	EPDM ²⁾ FKM ³⁾	2.9	-22 +32	+284 ²⁾ +212 ³⁾	EV250B 10BD	38E NC000	032U5260	0	145
					EV250B 10BD	38F NC000			
1/2	EPDM ²⁾ FKM ³⁾	4.6	-22 +32	+284 ²⁾ +212 ³⁾	EV250B 12BD	12E NC000	032U5262	0	145
					EV250B 12BD	12F NC000			
3/4	EPDM ²⁾ FKM ³⁾	6.9	-22 +32	+284 ²⁾ +212 ³⁾	EV250B 18BD	34E NC000	032U5264	0	145
					EV250B 18BD	34F NC000			
1	EPDM ²⁾ FKM ³⁾	8.1	-22 +32	+284 ²⁾ +212 ³⁾	EV250B 22BD	1E NC000	032U5266	0	145
					EV250B 22BD	1F NC000			

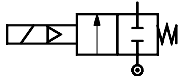
¹⁾ 18 W dc coil: Max. +194°F

²⁾ EPDM is suitable for water and steam (see illustration to the right):
-22 - +248°F: 0 - 145 psi

³⁾ FKM is suitable for oil, water and air 32°F - +212°F (water: Max. +140°F)



2-way solenoid valves



De-energized closed

EV250B
For natural liquids and gases

³/₈ in. - 1in.

Coils for valves

☞ certified, Ⓢ-listed



- Class: General purpose, indoor
- Junction box c/w leads
- Voltage tolerance = +10% / -15%
- Ambient temperature: -40°F (-40°C) to 120°F (50°C)
- Power consumption: 17.5W

Voltage V	Frequency Hz	Cut-in VA	Holding VA	Code Number
24	50 / 60	76	40	018Z7613
110 / 120	50 / 60	76	45	018Z7612
208 / 204	50 / 60	76	45	081Z7611



- Class: Rainproof "NEMA 3R"
- 1/2" Conduit hub
- 18" leads
- Voltage tolerance = +10% / -15%
- Ambient temperature: -40°F (-40°C) to 120°F (50°C)
- Power consumption: 17.5W

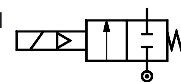
Voltage V	Frequency Hz	Cut-in VA	Holding VA	Code Number
24	50 / 60	76	40	018Z7623
110 / 120	50 / 60	76	45	018Z7622
208 / 204	50 / 60	76	45	081Z7621

2/2-way assisted lift operated solenoid valves

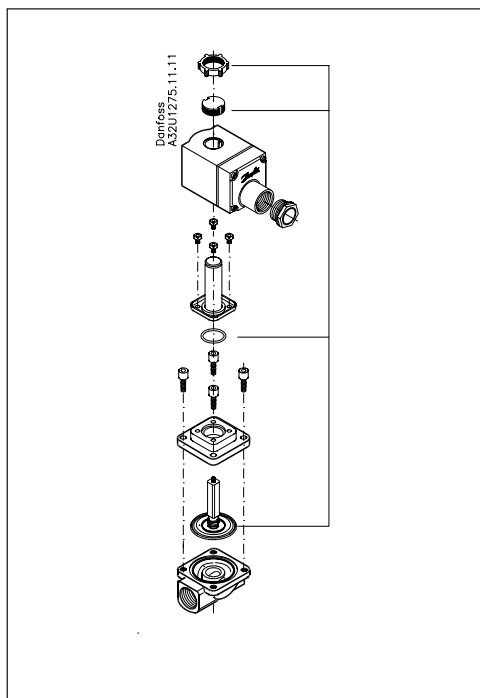
3/8 in. - 1 in.

Type EV250B NC
for neutral liquids and gases
DN 10 - 22 BD

De-energized
closed



Spare parts kit for
EV250B



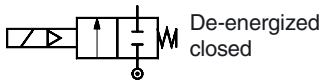
The spare parts kit comprises a locking button and nut for the coil, and a service element consisting of an armature with valve plate and spring fitted on the diaphragm.

For valve type	Seal material	Code no.
EV250B 10-12BD	EPDM ¹⁾	032U5270
EV250B 10-12BD	FKM ²⁾	032U5271
EV250B 18-22BD	EPDM ¹⁾	032U5272
EV250B 18-22BD	FKM ²⁾	032U5273

¹⁾ EPDM is suitable for water and steam:
-22 - +248°F: 0 - 145 psi

²⁾ FKM is suitable for oil, water and air
32°F - +212°F(water: Max. +140°F)

2-way solenoid valves

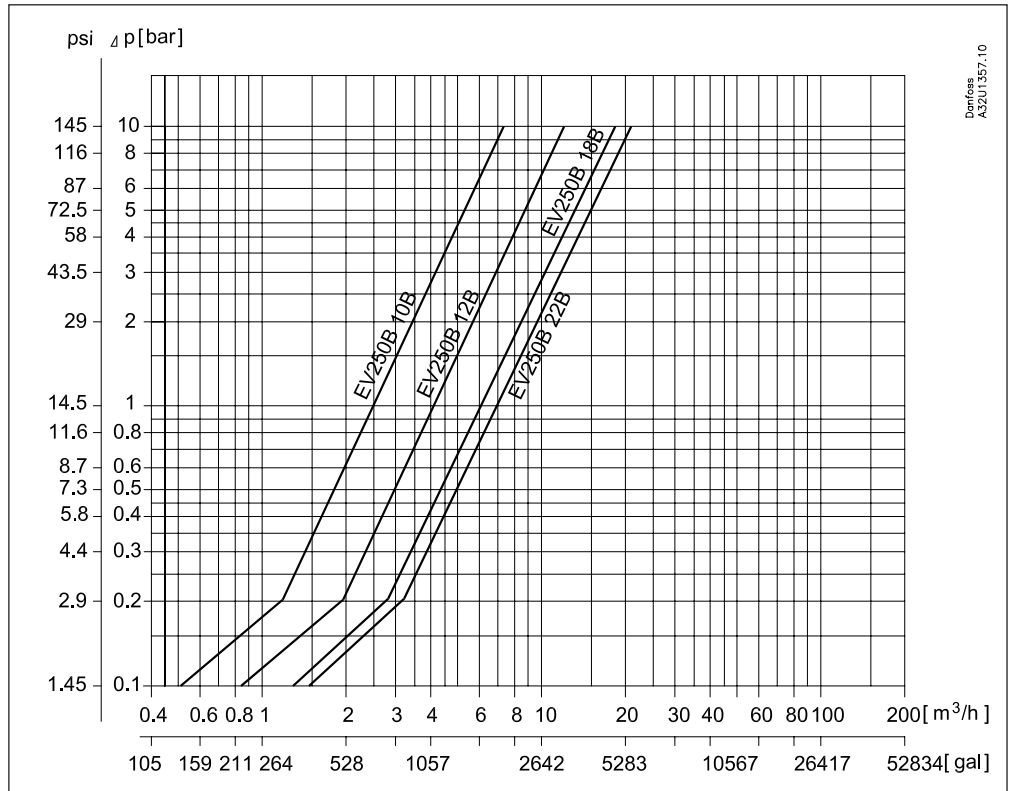


EV250B NC
For natural liquids and gases
DN 10 - 22 BD

³/₈ in. - 1 in.

Capacity diagram for solenoid valve type EV250B

Example
 Capacity diagram for solenoid valve EV 250B 12 B @ differential pressure of 43 psi approx. 30 gal/min



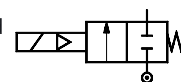
Water at higher pressure

2/2-way assisted lift operated solenoid valves

Type EV250B

$\frac{3}{8}$ in. - 1 in.

De-energized
closed



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