

Instruction for operation

Operating conditions should correspond with valve technical data. Temperature and medium type should correspond with seals and material of valve. By valve running it is necessary to check function rightness, seals and joints tightness.

Frozen medium causes a damage of valve and coil. Valves are not frost-proof. Valve should be used inside, without any atmospheric precipitation, solar radiation and moisture condensation.

Operating ambient temperature is $-10\text{ }^{\circ}\text{C}$ up to $+50\text{ }^{\circ}\text{C}$.

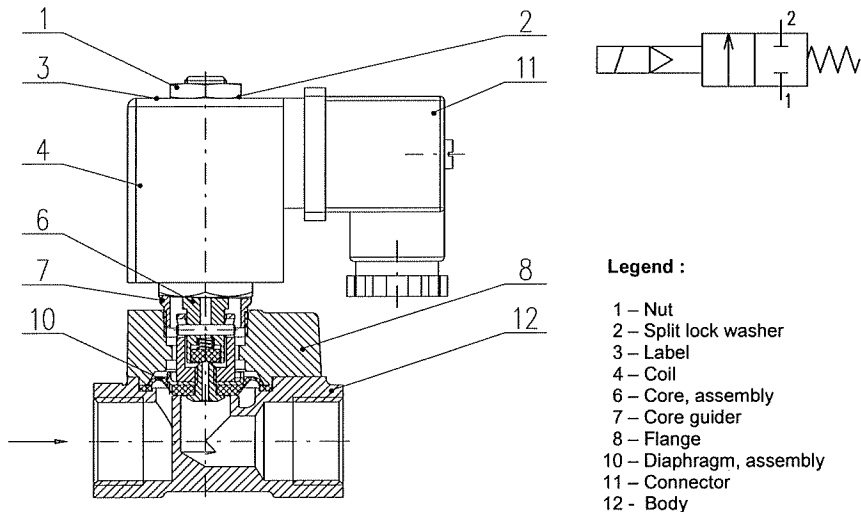
Maintenance

Maintenance is necessary in case of valve failure only (no function rightness, no tightness). Preventive maintenance is advised in case of worse operating conditions, often initializing of valve or by medium pollution.

Maintenance work must be carried out only by the absence of pressure in the pipeline and with solenoid disconnected from the voltage supply. After valve repair or replacing test the valve with 1,5 multiple of maximum operating pressure. Valve should be not initializing by testing, valve could be opened or closed by testing.

Upon request, manufacturer is able to supply some kinds of spare parts and brochures with sectional drawing and assembly instructions. By coil ordering is it necessary to set number and kind of voltage (AC or DC).

Valve cut



Legend :

- 1 – Nut
- 2 – Split lock washer
- 3 – Label
- 4 – Coil
- 6 – Core, assembly
- 7 – Core guider
- 8 – Flange
- 10 – Diaphragm, assembly
- 11 – Connector
- 12 - Body

Guarantee and Service

The manufacturer is responsible for the solenoid valve properties during 12 months since delivery. In case of any claim it is required to present the solenoid valve, a document about buying (payment receipt) and this Installation, Service and Maintenance Instructions. The guarantee is not approved if the damages are caused by inappropriate impact to the regulator or with not following these Instructions.

Under-and-out-of –guarantee repairs can be performed by the manufactures.

Product liquidation

Components and pack can be used as source of secondary raw material.
Product is not source of environmental pollution and doesn't include danger scrap.

INSTALLATION, SERVICE AND MAINTENANCE INSTRUCTION

2-way solenoid valves indirect operating with forced lifting

**Type: 2VE10DC(J) , 2VE12DC(J)
2VE13DC(J), 2VE16DC(J)
2VE25DC(J), 2VE32DC(J)
2VE40DC(J)**

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Application

Two-way solenoid valves 2VE10DC(J) up to 2VE40DC(J) are electromagnetic shut-off valves with on-off function which can be used for flow control of gas or liquid medium suitable for applied materials. Valve is closed at the basic position without voltage. After bringing of voltage to the coil the valve is open.

Operation description

Valve consists of body (12), flange (8) and solenoid. Valve body has two necks with internal thread for connection to pipeline. There is a diaphragm (10) inside of body which closes in on medium flow passing through. Control solenoid consists of coil (4), core guider (7) and core with seal (6). Core of electromagnet at valves 2VE10, 12, 13 and 16DC (J) is connected to the diaphragm by coupling. Core of valves 2VE25, 32 a 40DC (J) is connected with diaphragm by shell which form a part of diaphragm subassembly.

At the basic position, without voltage on coil, medium is flowing in the space over the diaphragm and core and force the diaphragm on seat. Valve is closed. After voltage bringing core open seat in diaphragm subassembly. In next phase the core, using coupling or shell, lifts diaphragm to the open position. For opening and correct action of valve there is no pressure difference between input and output needed.

Applied materials:

Body, flange brass
 Internal parts (core, core guider, springs)..... stainless steel
 Seal, diaphragm..... rubber NBR - standard or rubber EPDM, FPM – based on special request
 Coil..... insulation class F according to STN IEC 60085

Installation

Clean thoroughly pipeline system before valve installing. Dirt causes malfunction. Necessary fit filter with 0, 2 mm filtration softness of valve inlet. The valve will not open or close if the control ducts or the armature are blocked by dirt. Electromagnet may not be used to capture the torque when fitting into the pipe. Operating position of valve 2VE10DC (J) up to 2VE16DC (J) is optional. Valves 2VE25DC (J) up-to 2VE40DC (J) can be mounted into the pipe in basic position $\pm 15^\circ$. For the basic position is considered to be vertical position with coil over the body. Medium has to flow through in direction of arrow as marked on the body. Valve is running correctly only in marked flow direction.

Electrical connection

Connect the coil in accordance with National electrical Engineering Standards. Before coil connection, check electric data on coil and mains voltage. Electric cable is safety connected to connector and together with connector it is a part of solenoid. Connector provides enclosure IP 65. Coil is mounted to valve rotated in 360°. Coil has to be mounted to valve before voltage bringing; otherwise, it can be damaged.
 Coil duty rating is 100%. Coil warming up by permanent operation without media flow can be not higher than 105°C by 10% voltage increasing.

Max. valve switching on frequency:

- 2VE10DC(J) up to 2VE16DC(J) for air 120 switching on / min.
- 2VE10DC(J) up to 2VE16DC(J) for liquids..... 40 switching on / min.
- 2VE25DC(J) up to 2VE40DC(J) for air 90 switching on / min.
- 2VE25DC(J) up to 2VE40DC(J) for liquids..... 20 switching on / min.

Coil voltage (NASS MAGNET):

- standard version 230 V~ ; 50 Hz
- possible version 24, 110 V~ ; 50 Hz
- voltage deviation..... $\pm 10\%$

Technical valve data according to TP 75 0327/01

Type	Version	Flow factor [m ³ /h]	Connection Diameter DN [mm]	Operating pressure [MPa]		Medium temperature [°C]	Seal	Weight [kg]	Voltage	Power consumption	
				Min	Max.						
2VE10DC	N1	1,6	G 3/8 10	0	1,0	90	NBR	0,6	~U	21VA	
	E1					110	EPDM			14VA	
	E2					0,6	130				
2VE10DCJ	N1	1,6	G 3/8 10	0	1,0	90	NBR	0,7	=U	18,5W	
	E1					110	EPDM			11,5W	
	E2					0,6	130				
2VE12DC	N1	2,2	G 1/2 12	0	1,0	90	NBR	0,6	~U	21VA	
	E1					110	EPDM			14VA	
	E2					0,6	130				
2VE12DCJ	N1	2,2	G 1/2 12	0	1,0	90	NBR	0,7	=U	18,5W	
	E1					110	EPDM			11,5W	
	F1					0,6	130			EPDM	
	E2					0,6	130			EPDM	
2VE13DC	N1	3	G 1/2 13	0	1,0	90	NBR	0,9	~U	21VA	
	E1					110	EPDM			14VA	
	E2					0,6	130				
2VE13DCJ	N1	3	G 1/2 13	0	0,6	90	NBR	1,0	=U	18,5W	
	E1					110	EPDM			11,5W	
	E2					0,4	130				
2VE16DC	N1	4,0	G 3/4 18	0	1,0	90	NBR	0,9	~U	21VA	
	E1					110	EPDM			14VA	
	E2					0,5	130				
2VE16DCJ	N1	4,0	G 3/4 18	0	0,7	90	NBR	1,0	=U	18,5W	
	E1					110	EPDM			11,5W	
	E2					0,5	130				
2VE25DC	N1	8,5	G 1 25	0	1,0	90	NBR	2,2	~U	33VA	
	E1					130	EPDM				
2VE25DCJ	N1	8,5	G 1 25	0	0,6	90	NBR	4,1	=U	25W	
	E1					130	EPDM				
2VE32DC	N1	13	G 1 ¼ 32	0	0,5	90	NBR	4,1	~U	33VA	
	E1					130	EPDM				
2VE32DCJ	N1	13	G 1 ¼ 32	0	0,5	90	NBR	4,1	=U	25W	
	E1					130	EPDM				
2VE40DC	N1	15	G 1 ½ 40	0	0,5	90	NBR	4,1	~U	33VA	
	E1					130	EPDM				
2VE40DCJ	N1	15	G 1 ½ 40	0	0,5	90	NBR	4,1	=U	25W	
	E1					130	EPDM				