

# Solenoid valves

**Model 50910** Electrovalve (NC) with direct drive, BSP female threaded, FPM diaphragm - I.4408 stainless steel



## Specifications

**Dimensions:** DN15 to DN20 (1/2" to 3/4")

**Connection:** BSP female thread in accordance with ISO 7/1

**Pressure:** 1/2" - 7 bar (AC) / 6 bar (DC)

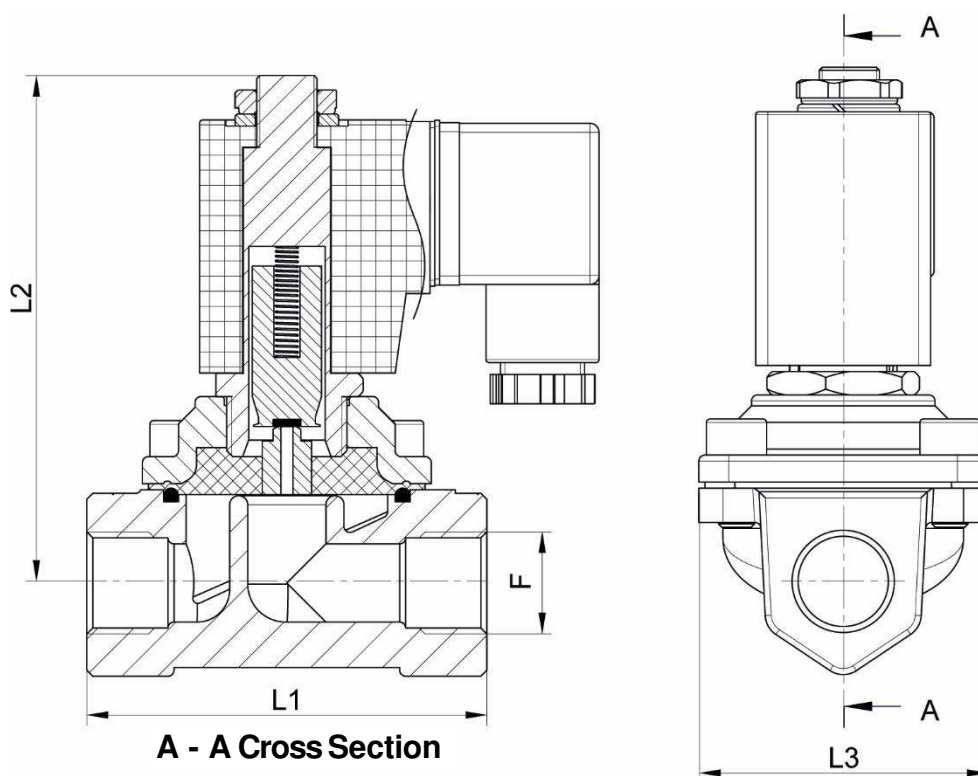
**Pressure:** 3/4" - 7 bar (AC) / 5 bar (DC)

**Fluid temperature:** -10°C to +90°C

**Ambient temperature:** -10°C to +60°C

**Coil protection:** IP65

**Material:** I.4408 body / FPM membrane



### 230V 50/60 Hz

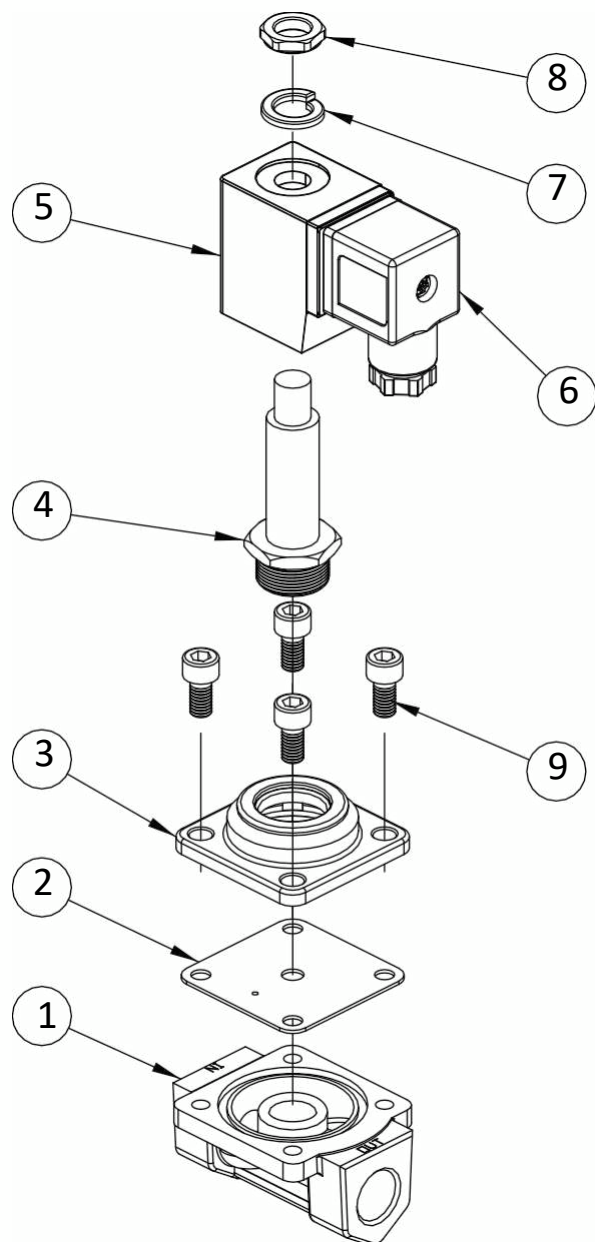
DN (mm)	NB (inches)	F (inches)	L1 (mm)	L2 (mm)	L3 (mm)	$\Delta P$ max. (bar)	Kv (m <sup>3</sup> /h)	Opening/ closing time (ms)	Power	Weight (kg)	Part number
15	1/2"	1/2"	66.5	86	48	7	3.2	20 - 60	18.1 VA	0.72	450910-15A
20	3/4"	3/4"	71	91	58	7	6.9	20 - 60	18.1 VA	0.92	450910-20A

### 24V 50/60 Hz

DN (mm)	NB (inches)	F (inches)	L1 (mm)	L2 (mm)	L3 (mm)	$\Delta P$ max. (bar)	Kv (m <sup>3</sup> /h)	Opening/ closing time (ms)	Power	Weight (kg)	Part number
15	1/2"	1/2"	66.5	86	48	7	3.2	20 - 60	18.1 VA	0.72	450910-15B
20	3/4"	3/4"	71	91	58	7	6.9	20 - 60	18.1 VA	0.92	450910-20B

### 24VDC

DN (mm)	NB (inches)	F (inches)	L1 (mm)	L2 (mm)	L3 (mm)	$\Delta P$ max. (bar)	Kv (m <sup>3</sup> /h)	Opening/ closing time (ms)	Power	Weight (kg)	Part number
15	1/2"	1/2"	66.5	86	48	6	3.2	20 - 60	15 W	0.72	450910-15C
20	3/4"	3/4"	71	91	58	5	6.9	20 - 60	15 W	0.92	450910-20C



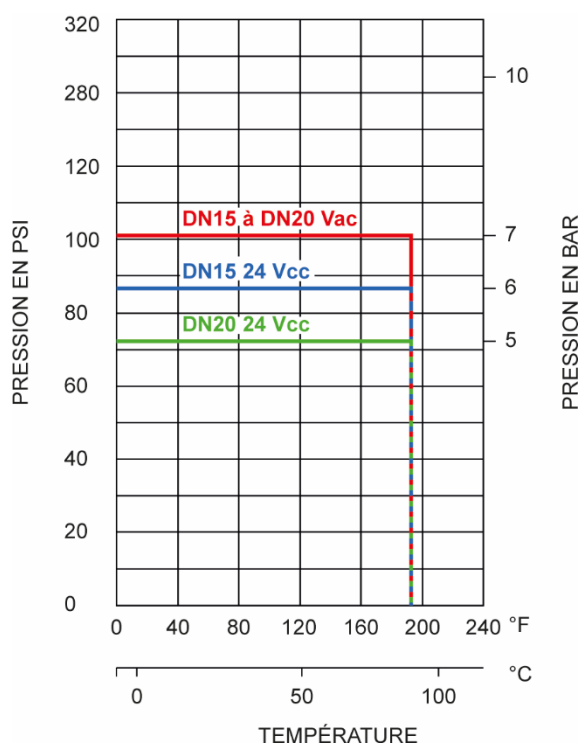
N°	Part Name	Material
1	BODY	1.4408
2	DIAPHRAGM	FPM
3	CAP	1.4408
4	ELECTROVALVE SHAFT	1.4301
5	ELECTROVALVE COIL	PLASTIC
6	CONNECTOR	PLASTIC
7	FRICTION WASHER	GALVANISED STEEL
8	NUT	GALVANISED STEEL
9	SCREW	1.4301

## Use

The electrovalve is a valve that is normally closed. It is opened when power is supplied to the coil.

## Pressure and temperature

For pressure/temperature ratings, see the graph below.



**Warning:** If the electrovalve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch the electrovalve.

## Fluids

This electrovalve is suitable for non-abrasive and non-coagulable fluids, as long as the fluids are chemically compatible with the valve parts that they can come into contact with.

## Assembly and maintenance instructions

### Installation



When you install the electrovalve make sure that the arrow on its body is pointing in the direction in which fluids will pass through it. Do not install the coil head facing downwards.

The solenoid valve must be installed on horizontal piping with the coil positioned on top.

Check that there is enough space to wire the electrovalve and to carry out maintenance operations where you are planning to install it.

Check that the installation is clean and free from foreign bodies that could damage the electrovalve.

Check that all piping is perfectly aligned and that the piping support structure is dimensioned so that the electrovalve is not subject to any external stresses. The piping support structure must only support the pipes, not the electrovalve's body.

#### How to install an electrovalve:

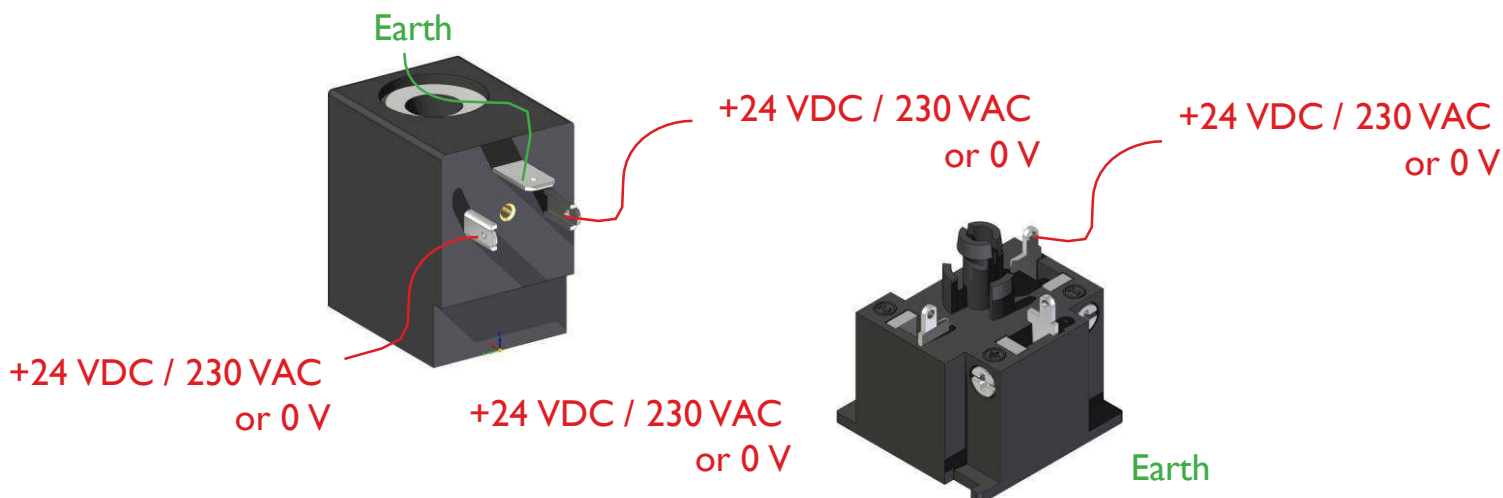
You must not use the electrovalve's body or coil when you are tightening the assembly (this could damage the electrovalve). You must use a product that is suitable for the working conditions (e.g. PTFE tape or pipe sealant model 5291) to make sure the electrovalve's threaded connections are sealed correctly.

Before you connect the coil, check the service conditions and the electrovalve's supply voltage (see its information panel).

If you need to, you can pivot the coil **5** on its axis by loosening the nut **8**.

### Wiring

The coils used in the electrovalve are not polarised.



## Maintenance

The electrovalve does not require any specific maintenance if it is used in normal operating conditions.

You may need to change some of the electrovalve's parts due to wear and tear, or if a fluid has damaged the valve and caused a leak or malfunction.

If this is the case see the "Assembly / Disassembly" section below.

The diaphragm is a wear part that can be worn down mechanically or chemically.

## Assembly / Disassembly

*The maintenance and removal/installation of the electrovalve must be carried out by personnel who are qualified and trained for this type of intervention.*



Warning: Before you work on the electrovalve, check that the installation has been stopped, the piping is empty and is not pressurised and the power supply has been turned off.

Warning: If the electrovalve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch the electrovalve.

Warning: Beware of hazardous materials - follow the instructions provided by the suppliers.

Unscrew the upper nut **8** on the coil **5** to remove it from the rest of the electrovalve.

Unscrew the four screws **9** from the body **1** and remove the upper part.

Remove the diaphragm **2**.

Clean and inspect all of the parts of the valve. Replace any worn parts.

Follow the disassembly steps in reverse order to reassemble the electrovalve.

Pressure test the valve and check that it can be opened and closed before you put the installation back into service.

## Standards and compliance

- Connection: BSP female thread in accordance with EN ISO 7/1
- Leak testing according to EN 12266
- This valve complies with European Pressure Equipment Directive (PED) 2014/68/EU (formerly 97/23/EC)
- Low voltage directive 2014/35/UE