

# SOL Series

## Industrial Solenoid Valves



- For liquid or gas\* use
- Full range of sizes from 3/8" to 2" (BSP)
- 2 port, normally open (NO) and normally closed (NC) versions
- Pilot operated
- Brass body
- 24Vdc, 110Vac and 230Vac operations available

The SOL Series is a range of 2-way solenoid valves which are pilot-operated and are available in a choice of 110Vac, 230Vac or 24Vdc coils to suit the required voltage.

Ideal for use in a wide range of industrial and commercial applications such as autoclaves, cooling plant and equipment, watering plant, fire extinguishing systems, hygienic & sanitary applications as well as water jet machinery and many other fluid control uses.

### General Features

The electro-pilot of the pilot-operated solenoid valves is not directly responsible for opening (closing) the solenoid valve. The solenoid valve presents three sequential chambers :

- inlet chamber Ci (upstream of the diaphragm)
- compensating chamber Cc (downstream of the diaphragm and upstream of the electro-pilot)
- outlet chamber Cu (downstream of the electro-pilot).

In the 2/2-way normally closed (NC) solenoid valve, Ci & Cc are communicating by means of a compensating hole when the coil is de-energised. Therefore, the diaphragm is in a condition of balanced pressure level and DN tightness is ensured by the retaining spring load from the same diaphragm.

When the coil is energised by acting on the electro-pilot, there is an immediate communication between Cc and Cu; the sudden increase in volume of the pressurised fluid over the diaphragm ( $Cc + Cu > Ci$ ) causes a pressure drop.

The diaphragm is no longer in a condition of balanced pressure level and it swells up in the higher pressure direction thus raising up and opening the DN to let the fluid flow.

\* Group 2 gases.

Mechanical Characteristics		Electrical Characteristics	
Body material	Forged brass	Electrical insulation class	I
Plunger	Magnetic stainless steel	Temperature class	H
Gaskets	NBR	Protection Class (with connector)	IP65
T <sub>room</sub> Maximum	80°C	Type of service	Continuous
T <sub>fluid</sub> Minimum	-20°C	Coil approval	VDE
T <sub>fluid</sub> Maximum	90°C		



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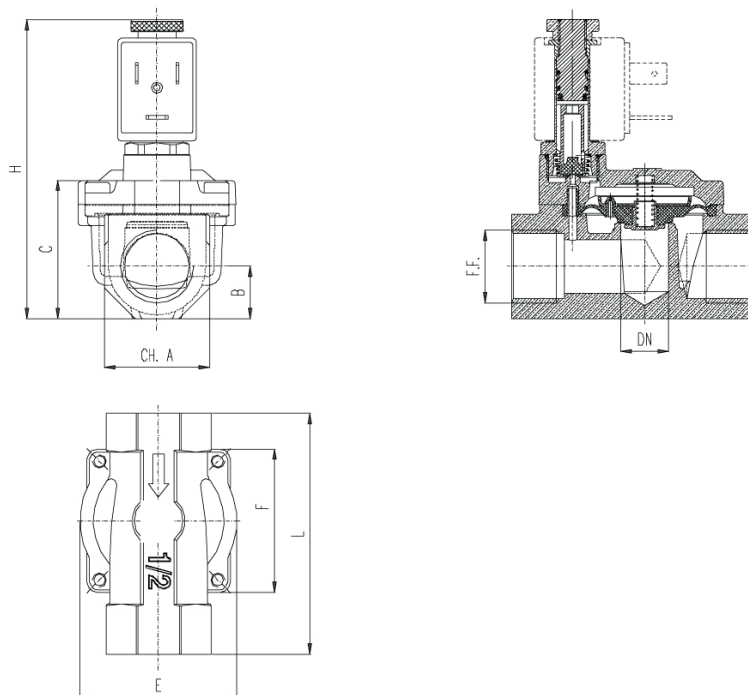
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Part No.	Operating Voltage	Operation	Size	Dimension (mm)								Pressure (bar)		Max Flow (m3/hr)	Operating Temp													
				DN	CH.A	B	C	E	F	L	H	Min	Max															
SOL1A1	24Vdc	NO	G3/8"	11.5	24	12	32.5	42	38	57	93.5	0.1	15	1.7	-20 to +90 Deg C													
SOL1B1		NC																										
SOL1A3	110Vac	NO																										
SOL1B3		NC																										
SOL1A4	230Vac	NO																										
SOL1B4		NC																										
SOL2A1	24Vdc	NO														G1/2"	13.5	30	15	40	45	41	69	101	0.1	15	3.8	-20 to +90 Deg C
SOL2B1		NC																										
SOL2A3	110Vac	NO																										
SOL2B3		NC																										
SOL2A4	230Vac	NO																										
SOL2B4		NC																										
SOL3A1	24Vdc	NO	G3/4"	18	36	18	46.6	54	50	74	108	0.2	15	5	-20 to +90 Deg C													
SOL3B1		NC																										
SOL3A3	110Vac	NO																										
SOL3B3		NC																										
SOL3A4	230Vac	NO																										
SOL3B4		NC																										
SOL4A1	24Vdc	NO														G1"	26	45	22.5	60	71	67	93	120	0.2	12	11	-20 to +90 Deg C
SOL4B1		NC																										
SOL4A3	110Vac	NO																										
SOL4B3		NC																										
SOL4A4	230Vac	NO																										
SOL4B4		NC																										
SOL5A1	24Vdc	NO	G1-1/4"	32	55	27.5	73.5	87	79	111	146	0.4	12	17	-20 to +90 Deg C													
SOL5B1		NC																										
SOL5A3	110Vac	NO																										
SOL5B3		NC																										
SOL5A4	230Vac	NO																										
SOL5B4		NC																										
SOL6B1	24Vdc	NC														G1-1/2"	45	62	31	85	110	100	138	154	0.4	10	27	-20 to +90 Deg C
SOL6B3	110Vac	NC																										
SOL6A4	230Vac	NO																										
SOL6B4	230Vac	NC																										
SOL7B1	24Vdc	NC	G2"	50	75	37.5	99	110	100	145	168	0.4	10	26	-20 to +90 Deg C													
SOL7B3	110Vac	NC																										
SOL7A4	230Vac	NO																										
SOL7B4		NC																										



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