

## 2 Position 2 Way Solenoid Valves

This kind of valve widely used in wide different industry, you can find the valve with different material like brass, stainless steel, engineering plastic, and they are used for pressure range from 0 to 50 bar, temperature from -10 °C to 180°C. If there is no current models with your meet, please contact us, we are available to provide specialized valves according to your requirement.



## General Information About Solenoid Valve

Inner structure and categories of two way solenoid valves 

### Direct acting solenoid valves

Including normal close style (N.C.) and normal open style(N.O.). The N.C. style solenoid valve stay close at power off condition. When power on, the coil yields electricity-magnetic force, which exceed the spring force and hence pulls active armature approaching to static armature, the valve becomes open; when power off, the electricity-magnetic force disappear and the active armature go back to its original place by the spring force, the valve close. The N.O. style is just opposite. These valve are normally simple structure, dependable action, fast response, high, frequency and with  $\leq 6\text{mm}$  small orifice size(N.O. style  $\leq 4\text{mm}$  ).

### Diaphragm pilot solenoid valves

This style valve makes main valve and pilot valve together, when power on, the coil yields electricity-magnetic force pulls active armature approaching to static armature, the pilot valve open and control the main valve to open; when power off, the electricity-magnetic force disappear and with the gravity and spring force, the active armature close the pilot valve, which control the main valve to close. The N.O. style is just opposite. These valve are normally with bigger orifice size and  $\leq 10\text{Bar}$  working pressure and with zero differential working pressure.

### Piston pilot solenoid valves

Similar with piston pilot solenoid valves, but supports for higher pressure and temperature, with  $\geq 1\text{ Bar}$  differential working pressure.

Seal Features 

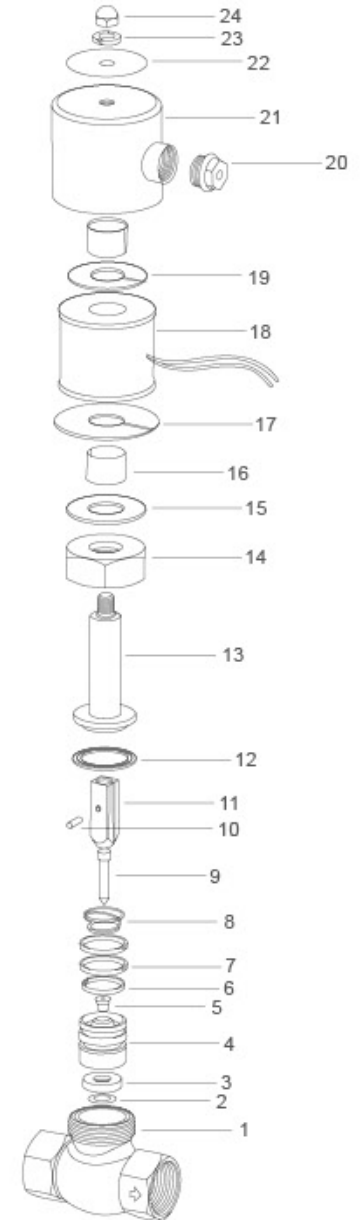
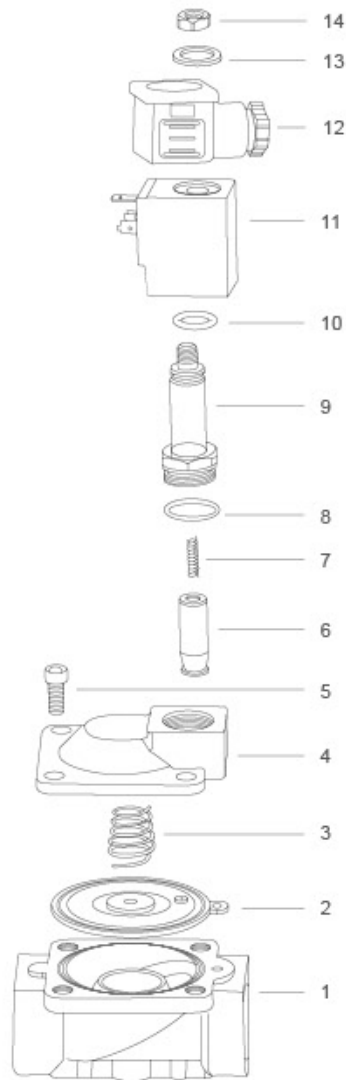
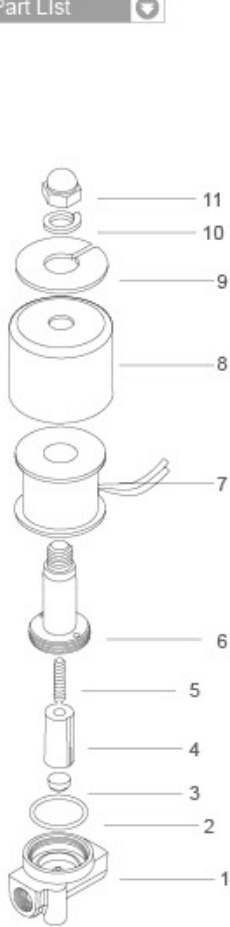
Material	NBR	HNBR	EPDM	VMQ	FKM	PTFE	PU
Highest working temperature	80℃	120℃	120℃	180℃	120℃	200℃	80℃
Lowest working temperature	-5℃	-10℃	-20℃	-40℃	-20℃	-50℃	-20℃
Anti-burning	×	×	×	△	◎	◎	△
Steam	×	△	◎	○	△	○	×
Oil	◎	◎	×	△	◎	◎	◎
O <sub>3</sub>	△	◎	◎	◎	◎	◎	◎
Chemical	△	○	◎	◎	◎	◎	◎
Acid	△	○	◎	△	◎	◎	×
Alkalinity	○	◎	◎	△	◎	◎	×
Water	○	○	◎	○	○	◎	◎
Wearing	○	◎	○	×	○	◎	◎
Anti distortion	○	○	○	◎	○	×	×
Tension	◎	◎	◎	×	○	×	◎

Description of the symbol: ◎ Very good ○ Good △ Normal level × Not OK



## General Information About Solenoid Valve

Part List



No	Designation
1	Valve body
2	O-ring
3	Seal pad
4	Pilot
5	Spring
6	Armature
7	Coil
8	Steel washer
9	Washer
10	Spring washer
11	Nut

No	Designation
1	Valve body
2	Diaphragm
3	Diaphragm spring
4	Valve cover
5	Hexagon screw
6	Pilot units
7	Plunger Spring
8	O-ring
9	Plunger tube assembly
10	O-ring
11	Coil
12	Connector
13	Gasket
14	Lock Nut

No	Designation	No	Designation
1	Valve body	13	Static armature
2	Washer	14	Nut
3	Seal pad	15	Gasket
4	Valve core	16	Bushing
5	Seal	17	Steel plate
6	Gasket	18	Coil
7	Guide ring	19	Steel plate
8	Spring	20	Nut
9	Valve needle	21	Steel cover
10	Pin	22	Min plate
11	Armature	23	Spring washer
12	Seal ring	24	Nut



E

## 2S Series Stainless Steel Solenoid Valve



Graphic Symbol



### Ordering Code

**2S**

#### Specification Code

2S:Two-position  
two-way solenoid  
valve (Stainless steel  
direct drive type)

**025**

#### Aperture of Flow Rate

025:2.5mm  
040:4.0mm  
160:16mm  
200:20mm  
250:25mm  
350:35mm  
400:40mm  
500:50mm

**08**

#### Port Size

08:G1/4"  
10:G3/8"  
15:G1/2"  
20:G3/4"  
25:G1"  
35:G1 1/4"  
40:G1 1/2"  
50:G2"

**F**

#### Initial Estate

Blank:Pipe Joint type  
F: Flange Type

**AC220V**

#### Standard Voltage

DC12V DC24V  
AC24V 50Hz/60Hz  
AC36V 50Hz/60Hz  
AC110V 50Hz/60Hz  
AC220V 50Hz/60Hz  
AC380V 50Hz/60Hz

**□**

#### Wiring Form

Blank:Lead Wire Type  
D:Joint Connector  
E:Blast-proof Coil  
G:Water-proof Coil

### Specification

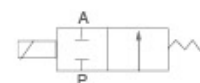
Model	2S025-06(08)	2S040-10	2S160-10(15)	2S200-20(08)	2S250-25	2S350-35(40)	2S500-50
Working Medium	Air,Water,Oil,Gas						
Motion Pattern	Direct Drive Type						
Type	Normal Close Type						
Aperture of Flow Rate(mm)	2.5	5	16	20	35	40	50
CV Value	0.23	0.60	4.8	7.6	24	29	48
Port Size	G1/8" G1/4"	G3/8"	G3/8" G1/2"	G3/4"	G1"	G1 1/4" G1 1/2"	G2"
Operation Fluid Viscosity	20 CST (Below)						
Working-pressure	Air:0~0.7MPa Water:0~0.5MPa, Air:0~0.7MPa, Oil:0~0.5MPa, Gas:0~0.7MPa						
Max. Pressure Resistance	1.05MPa						
Operating Temperature Range	-5~+80℃						
Voltage Range	±10%						
Material of Body	Stainless steel						
Material of Oil Seal	NBR EPDM or VITON						

Note:2S Series Solenoid Valve's Overall Dimension, Flow Chart and Inner Structure all Same as 2W Series.

## 2W/2S Normal Open Series Solenoid Valve



Graphic Symbol



### Ordering Code

**2W**

**160**

**10**

**NO**

**AC220V**

**□**

### Specification Code

2W:Two-position  
two-way solenoid  
valve (direct drive type)  
2S:Stainless steel two  
position two way solenoid  
valve(direct drive type)

### Aperture of Flow Rate

040:4.0mm  
160:16mm  
200:20mm  
250:25mm

### Port Size

10:G3/8"  
15:G1/2"  
20:G3/4"  
25:G1"

### Initial Estate

NO: Normal Open

### Standard Voltage

DC12V DC24V  
AC24V 50Hz/60Hz  
AC36V 50Hz/60Hz  
AC110V 50Hz/60Hz  
AC220V 50Hz/60Hz  
AC380V 50Hz/60Hz

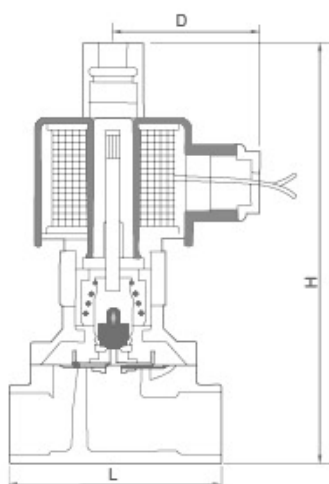
### Wiring Form

Blank:Lead Wire Type  
D:Joint Connector  
E:Blast-proof Coil  
G:Water-proof Coil

### Specification

Model	2W/2S(040-10NO)	2W/2S(160-10NO)	2W/2S(160-15NO)	2W/2S(200-20NO)	2W/2S(250-25NO)
Working Medium	Air,Water,Oil,Gas				
Motion Pattern	Direct Drive Type				
Type	Normal Open Type				
Aperture of Flow Rate(mm)	4	16	16	20	25
CV Value	0.6	4.8	4.8	7.6	12
Port Size	G3/8"	G3/8"	G1/2"	G3/4"	G1
Operation Fluid Viscosity	20 CST (Below)				
Working-pressure	Water:0~0.5MPa Air:0~0.7MPa Oil:0~0.5MPa Gas: 0~0.7MPa				
Max. Pressure Resistance	1.05MPa				
Operating Temperature Range	-5~+80℃				
Voltage Range	±10%				
Material of Body	2W: Brass; 2S: Stainless steel				
Material of Oil Seal	NBR EPDM or VITON				

### Overall Dimensions



### Dimension Sheet

Model	L	H	D
2W040-10NO	53	105	54
2W160-10NO	69	116	62
2W160-15NO	69	116	62
2W200-20NO	73	127	62
2W250-25NO	99	135	62