



GENERAL KNOWLEDGE

General Instruction for Solenoid

For your own safety, please read the instruction below before you inquiring / using our products.

Application

- Fluid in the pipeline MUST BE same as instruction shows on a solenoid.
- The fluid's temperature needs to be lower than valve's standard temperature.
- Our products normally allowed fluid's viscosity under 20 CST.
- If the highest working pressure difference lower than 0.05 MPa, please select Direct-Acting type. If the difference higher than 0.05 Mpa, please select Pilot-Operated type (Diaphragm type).
- Originally our products are working ONE DIRECTION, please install by fluid flow direction to avoid the reverse pressure. Could install stop-check valve if the counter current shows.
- Please install filter before installing Solenoid valve if the fluid isn't clean, to reduce any wastes and impurities from the pipeline.
- Please check your available flow aperture and nozzle diameter.
- Normally our products only have ON / OFF two switches, if its available, please install side-manual switch for your maintenance convenience.
- When there's water hammer phenomenon, please aware of valve switching time adjustment and choose the suitable product.
- Be aware of the effect caused by environmental temperature.

- Power voltage can allowed about $\pm 10\%$ fluctuation, volt-ampere is higher while using AC starts.
- The solenoid valve can be divided into two types. N.C. (Normal Closed) and N.O. (Normal Open), please select your suitable type.

Security

- Solenoids are not suitable for power on for a long time because of its design principles. If it powered on too long, metal coil will overheat cause shortened life and malfunction.
- Regular-type solenoid is not waterproof, please select waterproof type if the environment not allowed.
- Solenoid's highest standard pressure must exceed the highest pressure in the pipeline or it will cause shortened life and other malfunction.
- Please select full-stainless steel type if its corrosive fluid. High acid and alkaline fluids are suitable for PTFE valve body style.
- Dangerous environment that may cause explosion needs to select corresponding explosion-proof products.

Install Caution

- Clean the pipeline with fluids, make sure it already removed any dusts, impurities, rust and stop tapes.
- Please keep 1.5~2 turns screw thread while wrapping stop tapes.
- Sealant might be easily flow into the product, and may cause malfunction if using too much sealant while installing.

- It's better install with horizontal direction and coil face up.
- Make sure you have enough space for maintenance.
- Do not press coil parts while installing.
- Check the pipeline direction, leak or not, wire connection after the installment.

(Aluminum alloy)

Caliber	Tightening torque suggest
Rc 1/8	7~9 N·m
Rc 1/4	12~14 N·m
Rc 3/8	22~24 N·m
Rc 1/2	28~30 N·m
Rc 3/4	31~33 N·m
Rc 1	36~38 N·m
Rc 1-1/4	40~42 N·m
Rc 1-1/2	48~50 N·m
Rc 2	57~56 N·m

(Brass, Stainless steel)

Caliber	Tightening torque suggest
Rc 1/8	18~20 N·m
Rc 1/4	23~25 N·m
Rc 3/8	31~33 N·m
Rc 1/2	41~43 N·m
Rc 3/4	62~65 N·m
Rc 1	83~86 N·m
Rc 1-1/4	97~100 N·m
Rc 1-1/2	104~108 N·m
Rc 2	132~136 N·m

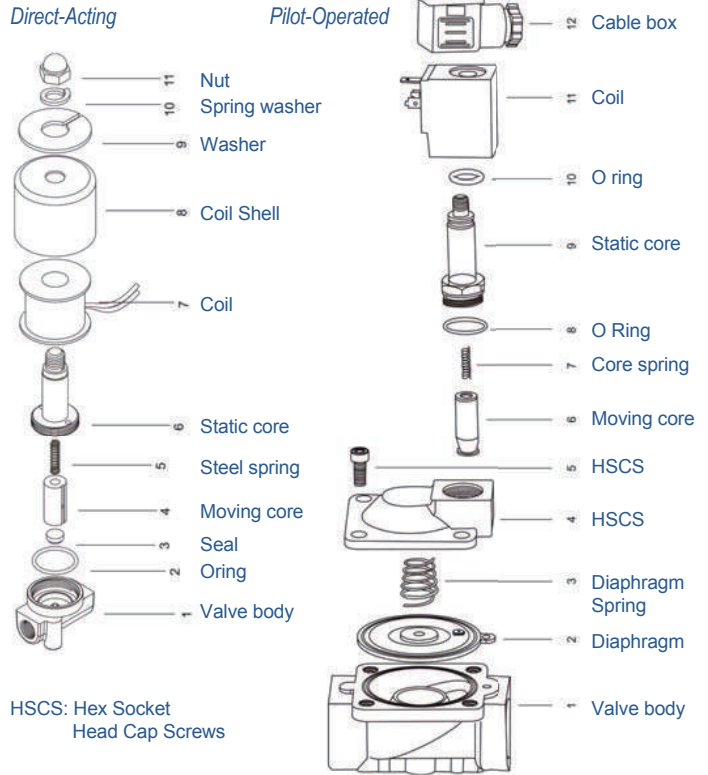


GENERAL KNOWLEDGE

Precautions in maintenance

- Solenoid coil and its drive element will heat after power on, please **DO NOT** touch or it will cause scald.
- If you need to decompose our product to inspect, please remove the power, and release the rest of the pressure in the pipeline. Make sure you are safe then continue the progress.
- To avoid rubber parts in the valve expansion or deformation, Please use neutral cleaner when you are cleaning the parts of valve.
- If you are not going to use our product of a long time after you used, please completely remove the rest of the fluid in the valve. If there's any fluid residue, it will get rusty in the next time you use and cause poor product performance.
- To keep its best situation, please arrange regular inspect and change parts by its usage frequency.

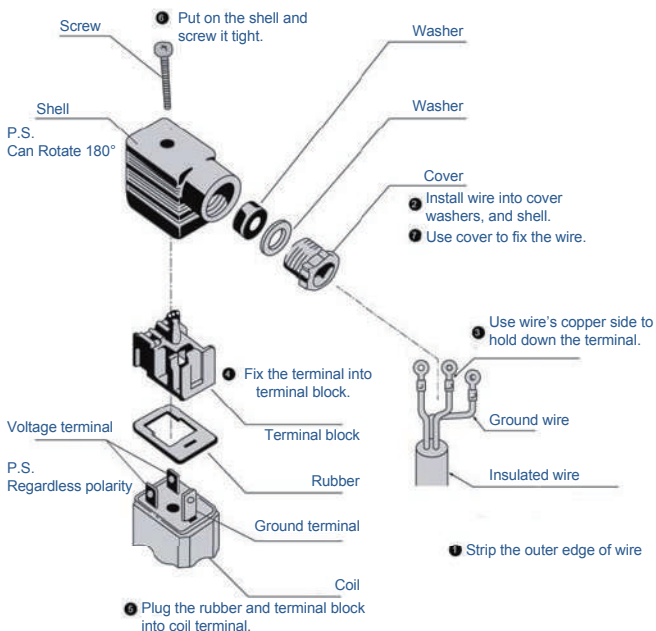
Exploded view



Cable box connection

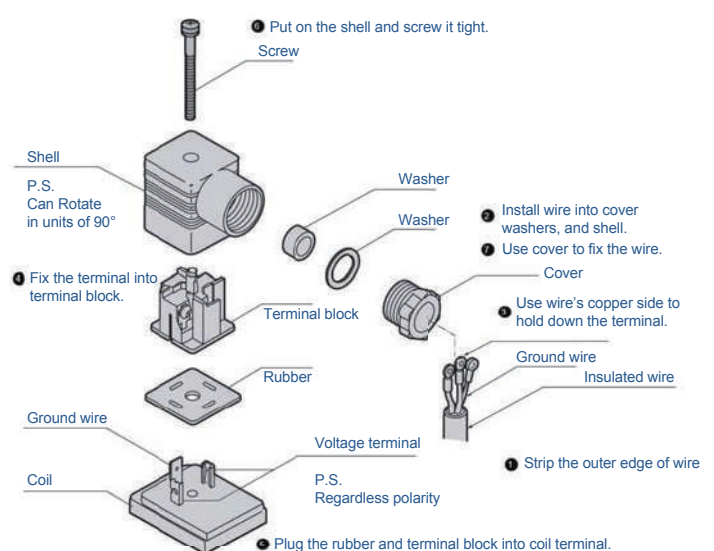
DIN Cable box (Pg9)

1. Please use insulated wire, Outer diameter $\varnothing 6 \sim \varnothing 10$ mm, section area $0.5 \sim 1.5 \text{ mm}^2$.
2. Tightening torque suggest $0.5 \text{ N} \cdot \text{m}$
3. If you need to change wire direction, take out cable box from shell, rotate 180 degrees then press into shell again.
4. Follow instruction from step 1 to step 7.



DIN Cable box (Pg11)

1. Please use insulated wire, Outer diameter $\varnothing 6 \sim \varnothing 10$ mm, section area $0.5 \sim 1.5 \text{ mm}^2$.
2. Tightening torque suggest $0.5 \text{ N} \cdot \text{m}$
3. If you need to change wire direction, take out cable box from shell, rotate 90 degrees then press into shell again.
4. Follow instruction from step 1 to step 7.





PRODUCT/ SOLENOID VALVE

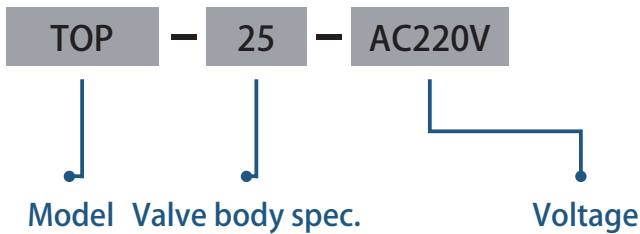
TOP Series 2 Port Solenoid Valve



Specifications Characteristics

Model	TOP Series
Structure	Diaphragm, 2/2 way N. C. (Normal Close)
Fluid	Sea water, Sulfuric acid, Hydrochloric acid (Concentration < 10% / Temperature < 50°C)
Temperature	-5°C - 60°C
Caliber	Thread 1/2" - 2" G / DIN16 Flange DN15 - 50
Pressure	0.5 - 5 kgf/cm ²
Material	UPVC
Diaphragm	VITON
Voltage	Reference below, Allowed voltage flow range ± 10%
Coil Level	Standard Coil
Install	According to the fluid flow direction. Horizontal installation

How to select model



Diameter	Flow Path (mm)	UPVC Thread	UPVC Flange
1/2"	15	15	15F
3/4"	20	20	20F
1"	25	25	25F
1-1/4"	35	35	35F
1-1/2"	40	40	40F
2"	50	50	50F

Voltage
AC110V
AC220V
DC24V

Coil parameters list

Coil Spec.	Voltage	Power	
		Activate	Hold
DIN15 DIN20 DIN25	AC	30W	15W
	DC	30W	16W
DIN32 DIN40	AC	200W	15W
	DC	100W	28W
DIN50	AC	350W	10W
	DC	75W	25W



PRODUCT/ SOLENOID VALVE

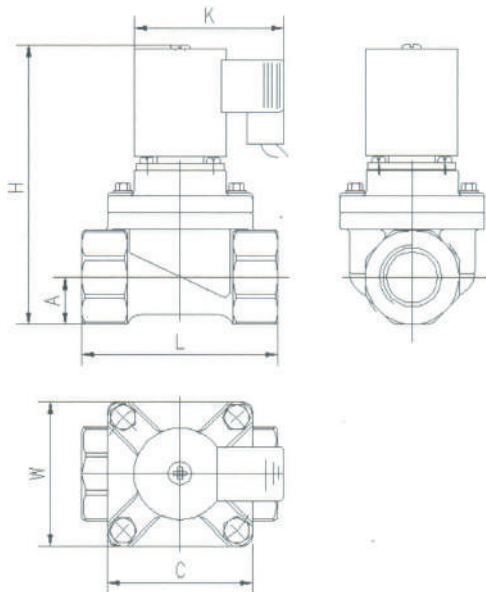
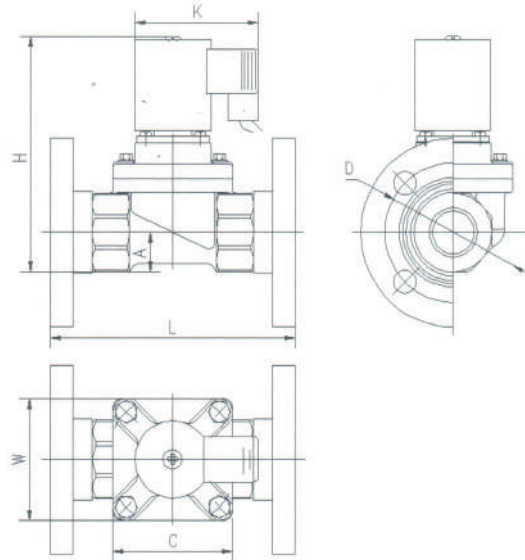
Specifications List

Spec.	Flow path mm	CV	Pressure Range (kgf/ cm ²)						Max Temp. °C	
			Min. Pressure	Maximum Pressure						
				Sea water		Sulfuric acid		Hydrochloric acid		
				AC	DC	AC	DC	AC		DC
DN20	15	9.3	0.5	5	5	5	5	5	5	50
DN25	25	12	0.5	5	5	5	5	5	5	50
DN32	35	24	0.5	5	5	5	5	5	5	50
DN40	40	29	0.5	5	5	5	5	5	5	50
DN50	50	48	0.5	5	5	5	5	5	5	50
Flange20	15	9.3	0.5	5	5	5	5	5	5	50
Flange25	20	12	0.5	5	5	5	5	5	5	50
Flange32	35	24	0.5	5	5	5	5	5	5	50
Flange40	40	29	0.5	5	5	5	5	5	5	50
Flange50	50	48	0.5	5	5	5	5	5	5	50

Dimensions (mm)

Thread

Spec.	A	C	L	H	K	W
DN20	19	63.5	80	137	92	63.5
DN25	26	74	100	147	92	74
DN32	30	94	120	194	94	94
DN40	32.5	94	130	200	94	94
DN50	50	155	172	225	94	155



Flange

Spec.	A	C	D	L	H	K	W
Flange20	19	63.5	Φ75	140	137	92	63.5
Flange25	26	74	Φ85	169	147	92	74
Flange32	30	94	Φ100	195	194	94	94
Flange40	32.5	94	Φ110	205	200	94	94
Flange50	50	155	Φ155	268	225	94	155