



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

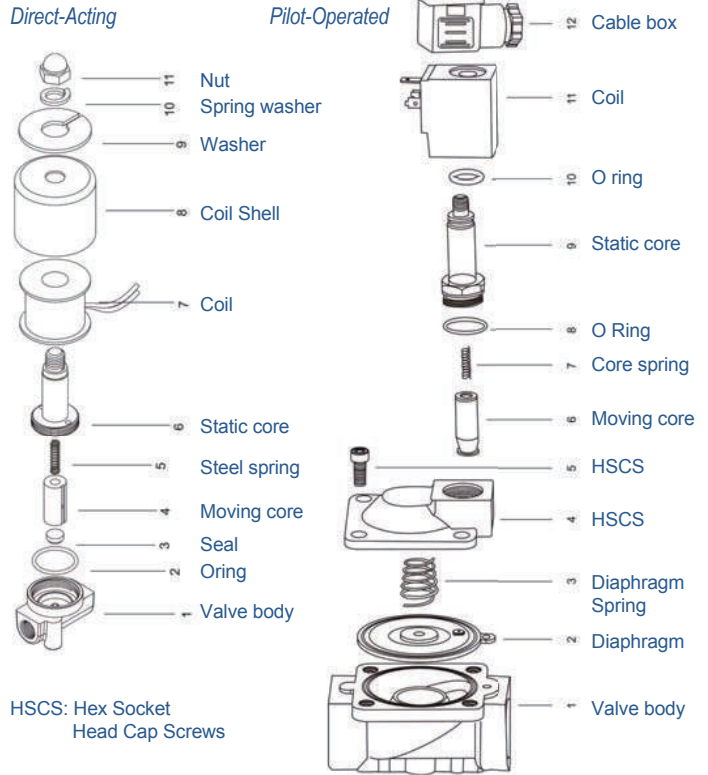


GENERAL KNOWLEDGE

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.

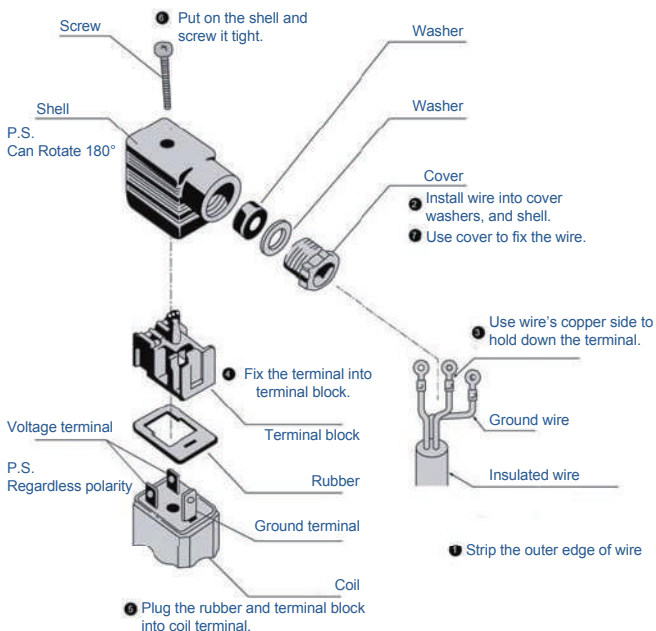
Exploded view



Cable box connection

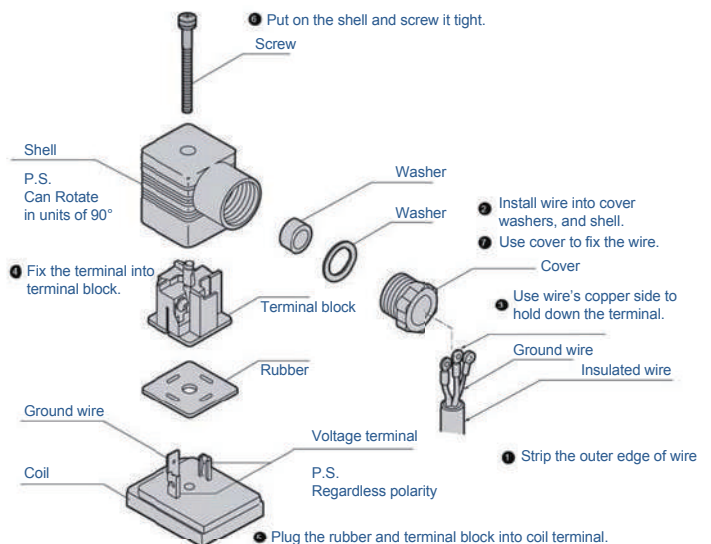
DIN Cable box (Pg9)

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

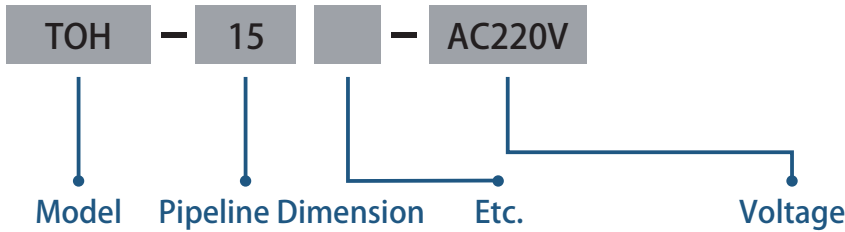
TOH Series 2 Port Solenoid Valve



Specifications Characteristics

Model	TOH Series
Structure	Diaphragm, 2/2 way N. C. (Normal Close)
Fluid	High temperature oil, Steam
Temperature	5°C - 225°C (Sealed Teflon+)
Caliber	Thread 3/8" - 2" PT / NPT, Flange DN25 - DN50
Pressure	0 - 16 kgf/cm ²
Min. pressure difference	1 kgf/cm ²
Withstand pressure	25 kgf/cm ²
Material	Stainless steel SUS304
Power consumption	AC: 33VA (19.5W) DC: 24W
Coil Level	High Temperature H Level coil (Metal shell, Direct Cable)
Install	According to the fluid flow direction. Horizontal installation

How to select model



Diameter	Thread	Flange
3/8"	10	
1/2"	15	
3/4"	20	
1"	25	25F
1-1/4"	32	32F
1-1/2"	40	40F
2"	50	50F

Thread Spec.	Code
G	
NPT	N

Voltage
AC110V
AC220V
AC380V
DC12V
DC24V



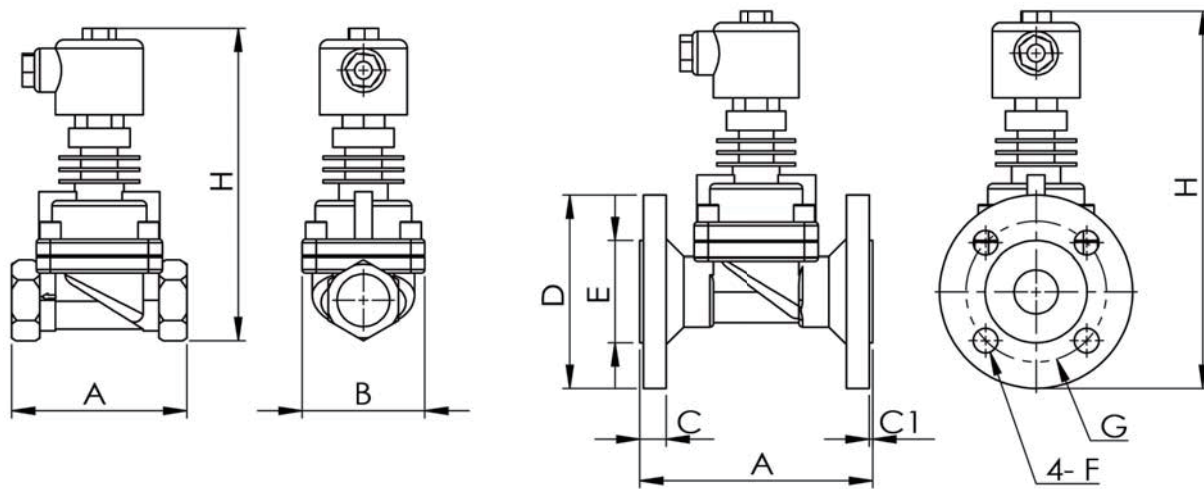


PRODUCT/ SOLENOID VALVE

Specifications list

Spec. Dimension	Flow Path mm	CV	Pressure Range (kgf/ cm ²)			Maximum Pressure °C	Weight Kg
			Minimum Pressure	Maximum Pressure			
				High temp. oil	Steam		
3/8"	15	4.5	1	16	16	225	1.4
1/2"	15	4.5	1	16	16	225	1.36
3/4"	20	8	1	16	16	225	1.66
1"	25	12	1	16	16	225	2.06
1-1/4"	35	22	1	16	16	225	3.76
1-1/2"	35	22	1	16	16	225	3.66
2"	50	45	1	16	16	225	4.36
Flange 25F	25	12	1	16	16	225	3.56
Flange 32F	35	22	1	16	16	225	6.16
Flange 40F	35	22	1	16	16	225	6.66
Flange 50F	50	45	1	16	16	225	7.46

Dimensions (mm)



Thread Dimension	A	B	H
3/8"	75	52	159
1/2"	75	52	159
3/4"	85	60	171
1"	100	70	178
1-1/4"	120	90	198
1-1/2"	120	90	198
2"	150	110	220

Flange Dimension	A	C	C1	D	E	F	G	H
25F	134	13	2	110	58	14	80	215
32F	160	15	2	135	76	18	100	230
40F	160	15	2	145	84	18	110	235
50F	200	16	2	155	88	18	125	280