

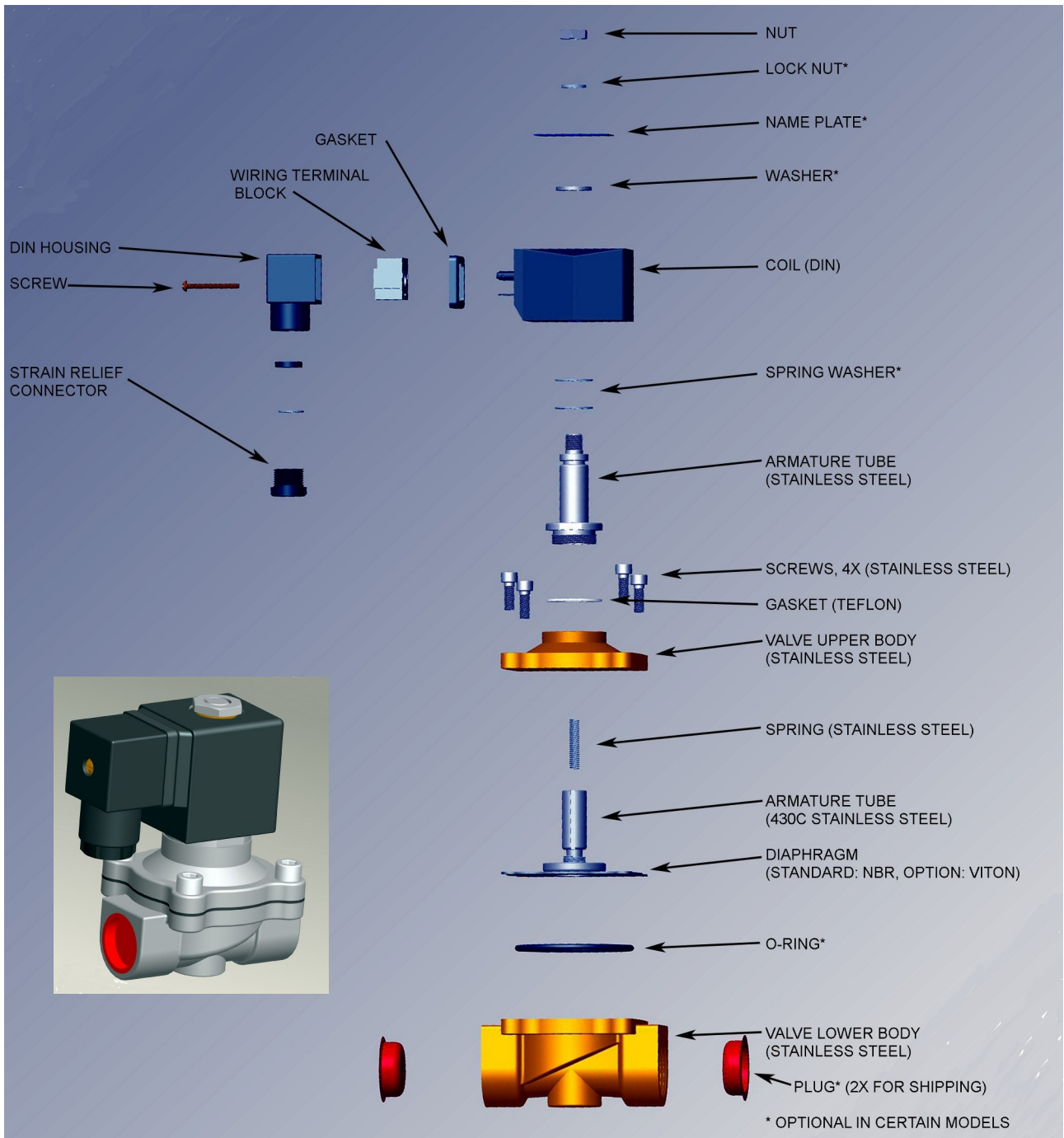
# STC 2SO160-500 Series Solenoid Valves



## 2SO160-500 Series Solenoid Valve Specifications

Valve Model	2SO160-3/8	2SO160-1/2	2SO200-1/2	2SO250-1	2SO350-1 1/4	2SO400-1 1/2	2SO500-2
Valve Type	2 Way, Normally Open (NO)						
Action	Direct Lift Diaphragm, Uni-Directional						
Orifice (mm)	16	16	20	25	35	40	50
Operating Pressure	0 to 90 PSI						
Proof Pressure	300 PSI						
Operating Temperature	Media: -5 to 80°C; Ambient: -5 to 45°C						
Port Size (NPT)	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Body Materials	STAINLESS STEEL						
Seal Materials	NBR (Buna N), Options: Viton						
Coil Duty	Class H, IP65, 100% ED (Continuous Duty)						
Voltage	Voltage Options: 12, 24VDC; 24, 110/120, 220/240 VAC, 50/60Hz						
Voltage Tolerance	10% of Specified Voltage						
Coil Power (Coil Shape)	30-35W (Rectangular)				35-40W (Round)		
Electrical Connections	DIN 43650, Form A						
Installation	No Orientation Requirement (Optimum Position: Flow Horizontal and Solenoid Vertical)						
Service	Air, Inert Gas, Liquid, Vacuum						

# 2S160-500 SERIES SOLENOID VALVE COMPONENTS



## Installation and Operation:

### To connect the valve Inlet and Outlet:

Connect the inlet and outlet in the direction of the arrow marked on the valve.

### To install coil:

Put the coil onto the armature tube of the valve. Put the lock-washer and nut onto the armature tube. Hand tighten the nut, then use a wrench to tighten the nut to a quarter turn; **do not over-tighten the nut, it may cause the armature tube to fail pre-maturely.**

### To connect DIN coil:

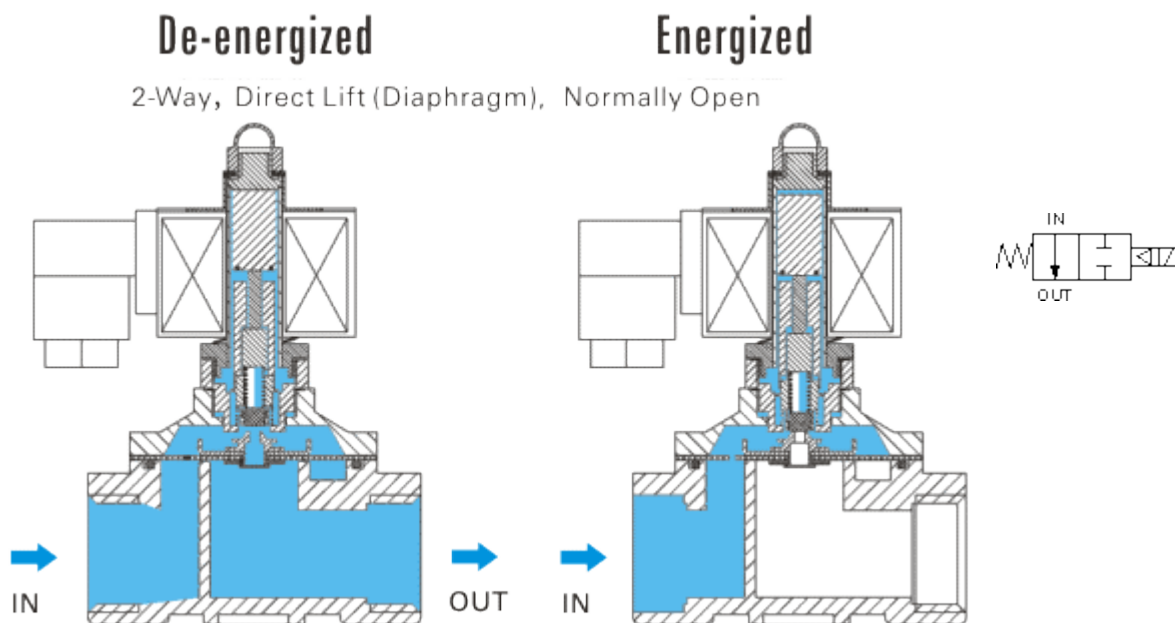
1. Remove the Philip screw from the plastic housing and unplug it from the DIN coil.
2. From the screw opening, push the terminal block out from the plastic housing.
3. Note the 1, 2 and ground markings on underside of DIN enclosure.
4. For DC DIN Coil, Connect 1 to Positive, 2 to Negative.
5. For AC DIN Coil, connect 1 to HOT wire, 2 to Neutral wire, and if required connect
6. **Do not energize the coil without installing it onto the valve, it will burn the coil and create fire hazards.**

**Safety Note:** Standard valves are supplied with continuous duty coils. The proper class of insulation for the service is indicated on the coil. The coil temperature may become hot after being energized for extended periods, but it is normal. Do not energize the coil without installing it onto the valve or connect the coil to a wrong voltage, as it may overheat and damage the coil; although the coil is made of flame retarded material, misuse of the coil in this manner could create fire hazards and generate smoke or burning odor which indicates excessive coil temperature and should disconnect the power to the coil immediately.

**Operation:** 2SO160-500 series valve is a 2/2 Direct Lift Diaphragm Normally Open, zero differential, solenoid valve.

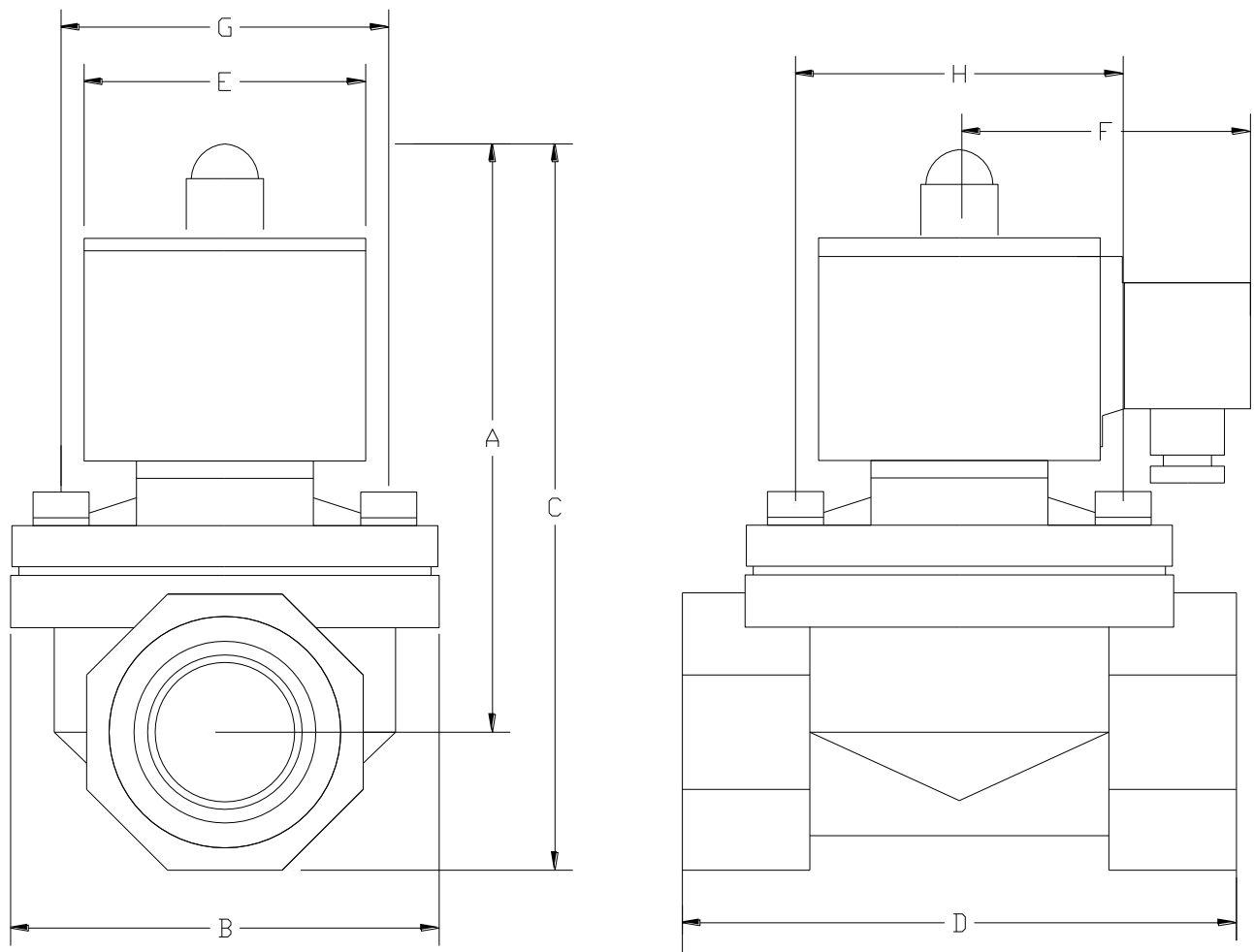
**To close:** when the valve is energized, the coil repels the plunger. Then the plunger covers the main orifice. The system pressure builds up on the top of the diaphragm/piston through the bleed orifice, forcing the diaphragm/piston down until it covers the main orifice and stops media flow through the valve. When the system pressure is 0 PSI, the valve also can be operated.

**To open:** when the valve is de-energized, the coil releases the plunger. The plunger uncovers the pilot orifice causing system pressure holding the diaphragm/piston closed to drop. As system pressure on the top of the diaphragm/piston is reduced, full system pressure on the opposite side of the diaphragm/piston acts to lift the diaphragm/piston away from the main orifice, which allows the full media flow through the valve. When the system pressure is 0 PSI, the valve also can be operated.



## 2S160-500 Series Solenoid Valve Installation Dimensions

2W160-500 SERIES SOLENOID VALVE DIMENSIONS (MM)									
PORT (NPT)	A	B	C	D	E	F	G	H	WT. (LB)
3/8"	86.6	57	101	69	36	56	43	43	1.6
1/2"	86.6	57	101	69	36	56	43	43	1.8
3/4"	91.8	57	111	73	36	56	43	43	1.8
1"	98	71	118	99	36	56	60	60	3.2
1 1/4"	131	94	162	123	63.5	66.5	70	70	5.7
1 1/2"	142.0	95	172	123	63.5	66.5	70	70	5.7
2"	172.0	123	209	168	63.5	66.5	91	91	9.9



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Sizto Tech Corporation, 892 Commercial Street, Palo Alto, CA 94303, USA

Credit Card Payments: Visa, MasterCard, Discover, or American Express Accepted

**International Customers:** Advance Payment Required via Bank Wire, Cashier's Check or Approved Credit Card.

**Credit Application:** To establish a net 30 day account, please mail or fax three trade references with complete mailing addresses and account numbers.

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### OBLIGATIONS

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