

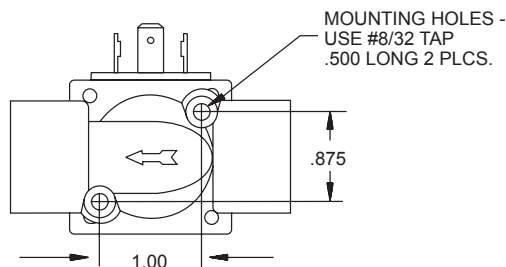
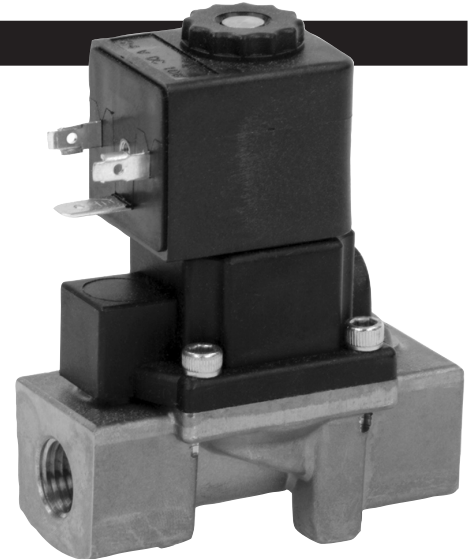
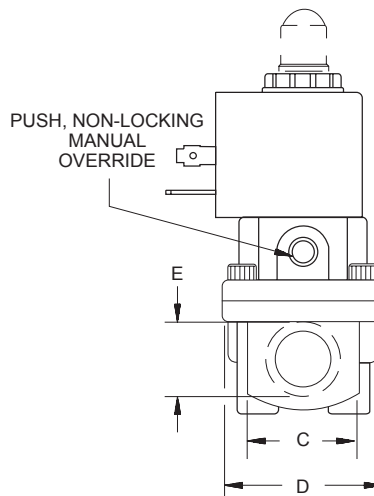
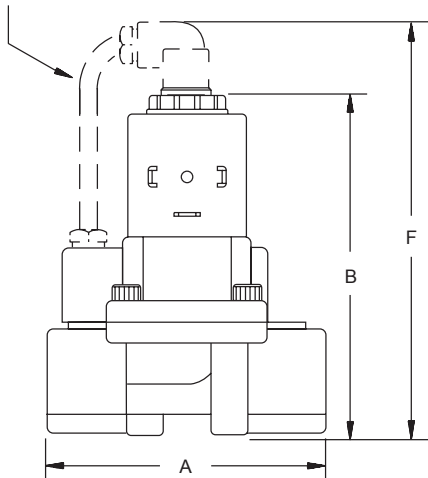


The Spartan Scientific Series 3500 2-way, 2-position solenoid/air operated pilot valve uses the latest combinations of technologies for materials and function. This combination provides the user with the highest quality, smallest size per Cv of flow and most competitive pricing of any valve on the market. The 3500 utilizes the latest injection molding and forging technologies available which garner the highest quality yields of components. When coupled with the Spartan 3000 series solenoid operator, and used as a direct acting/pilot operated valve, the 3500 gives full flow throughout the pressure range starting with an MOPD of 0 psi. The forged body section gives strength and robustness to the valve, and is available in 1/4", 3/8" and 1/2" NPT sizes. The molded pilot section features a push, non-locking manual override, high cycle life solenoid parts and quick connect DIN 43650 "A" or "flying lead" electrical connection options. Typical applications include air control, inert gas control, water, inert fluids, condensate drainage, hot water plumbing and sprinkler systems.

Dimensional Data

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

TUBE AND FITTING INSTALLED WITH NORMALLY OPEN VERSION ONLY



FLOW DATA	
PORT SIZE	FLOW RATE
1/4"	8.2 gpm
3/8"	9.3 gpm
1/2"	11.2 gpm
120 psi Δ p 25 psi	

DIMENSIONAL TABLE	
PORTS	1/4" - 3/8" - 1/2"
A	2.75"
B	3.50"
C	1.10"
D	1.50"
E	1/4" - 3/8" - 1/2" NPT
F	4.45"

Technical Data

Function: 2-way, 2-position normally closed or normally open internal pilot diaphragm

Port Sizes: 1/4", 3/8", 1/2" NPT

Orifice Sizes: 1/2"

Pressure Range: 0 - 230 psi 1/4" to 1/2" NPT (Valve requires 1.5 psi differential to fully open.)

Flow Factors:
1/4" NPT 1.55 Cv
3/8" NPT 1.95 Cv
1/2" NPT 2.45 Cv

Temperature Range: (Fluid max. 90°C) Ambient -10° to +50°C

Response Time: 20 to 80 ms complete cycle

Materials:
Operator: AISI 400 and 300 Series Stainless Steel or Brass
Shading Ring: Copper standard
Valve Body: Forged brass and glass filled nylon
Seals: Viton, Nitrile, EPDM

Manual Override: Push non-locking

Media: Air, oil, water, emulsion, inert gases

Coil Data:
Glass filled nylon encapsulation (Class F, continuous duty)
10 watt VDC, 8 watt VAC
Volts: 6, 12, 24 VDC
24, 120, 220 VAC 50/60 Hz
Voltage tolerance: +/- 10%

FUNCTION	VOLTAGE	
	AC	DC
	2/2 NC	230
2/2 NO	185	150

MAX. PRESSURE RANGE (psi)



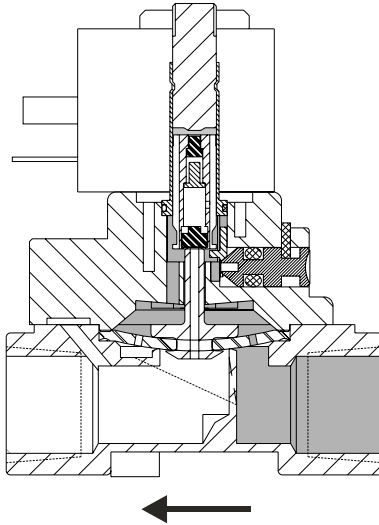
Series 3500

Air-Sol 2-Way
Process Solenoid Valves

Principle of Operation

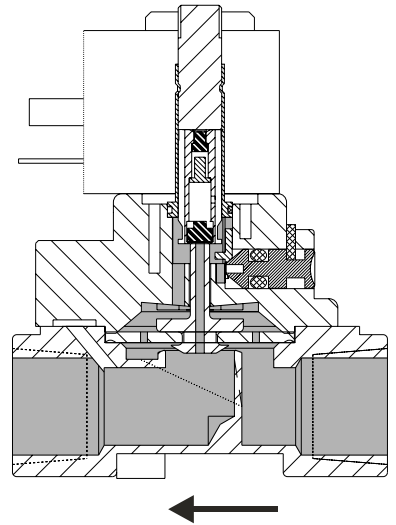
Closed Position

With no supply pressure and the valve de-energized, spring force from the armature holds the valve closed. As the supply pressure is increased, pressure builds up on top of the diaphragm via the bleed hole. This force, acting on the larger effective area, holds the valve closed (in conjunction with the armature spring).

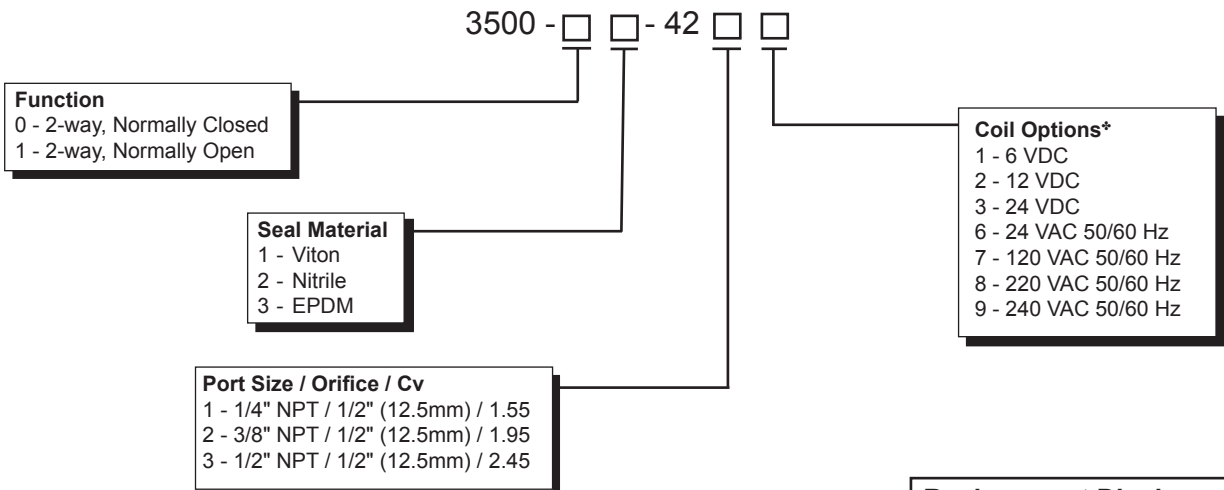


Open Position

When energized with no supply pressure, the armature lifts allowing the pre-loaded diaphragm to lift, opening the valve. When supply pressure is applied, pressure above the diaphragm is relieved via the open pilot gallery. The fluid pressure below assists in holding the diaphragm open.



How To Order



Order Example: 3500-01-4237
Series 3500, 2-way, normally closed,
1/2" NPT, 120 VAC 50/60 Hz

Replacement Diaphragm Kits		
Kit includes: Diaphragm and Orifice insert		
Specify Part Number		
Viton	3500-01-0001	Normally Closed
Nitrile	3500-B1-0001	
EPDM	3500-E1-0001	
Viton	3500-01-0003	Normally Open
Nitrile	3500-B1-0003	
EPDM	3500-E1-0003	

*For more coil options see page 7.