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Miniature Solenoid Valves

BECO manufacturing TEQCOM



Our **IPS Miniature Solenoid Valves** offer precision performance under extreme conditions. Offered as 2-Way and 3-Way Valves with four internal body configurations and five seat sealing methods, our IPS Miniature Solenoid Valves are suitable for a wide range of ultra clean to highly corrosive media applications.

Our all virgin PTFE wetted surface design is ideally suited for semiconductor, pharmaceutical, bio-medical and chemical process applications. Configurable with a PTFE Hard Seat, FKM-Viton O-Ring Seat, FFKM-Kalrez O-Ring Seat, EPDM O-Ring Seat, or Aflas O-Ring Seat the IPS Miniature Series Solenoid Valve line provides unsurpassed chemical compatibility with a wide range of flow media. The all wetted PTFE body, valve stem and one piece diaphragm maintain a material inert boundary for ultra clean applications.

HIGHLIGHTS:

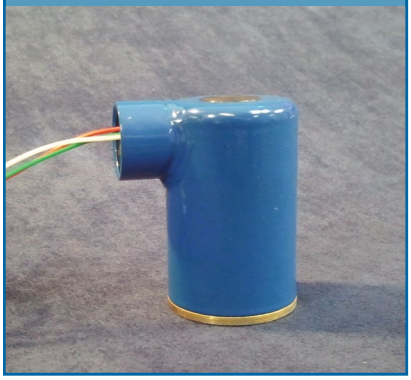
- PTFE design optimized for ultra clean and chemical compatibility.
- Configurations available for various DC & AC voltages.
- Continuous Duty Cycle Rated at controlled ambient temperatures and reduced pressures.
- Valve seat and diaphragm designed for positive flushing and bubble-tight shut off.
- Non porous diaphragm configured to completely isolate solenoid coil from media.
- 100% coil driven – does not require energizing pressure or vacuum to operate.
- O-ring seat configurations for vacuum and complex media applications.
- Designed for aggressive media and elevated temperature.

General Valve Parameters	
1/8 Orifice Cv (2-Way / 3-Way)	0.35 / 0.18
1/4 Orifice Cv (2-Way / 3-Way)	0.70 / 0.45
3/8 Orifice Cv (2-Way / 3-Way)	0.90 / 0.60
Common Port Vacuum in-Hg (max gauge)*	25 2-Way / 23 3-Way
Typical Response Time (msec)	20 - 30
Media Temperature (range)	0 - 100°C / 32 - 212°F
Ambient Temperature (range)	0 - 50°C / 32 - 122°F
Wattage Range (std)	11 -13 W
Voltage Tolerance	+/-10%
Coil Lead Length (3 Wire) (Red is Hot / White is Neutral / Green is Ground)	24" - 22 gauge

RoHS Compliant

Maximum Port Pressure Rating (psi)*	O-Ring Seat 3-Way	PTFE Seat 3-Way
Common Port	60	60
Normally Closed Port	35	30
Normally Open Port	60	60
	2-Way NC	**2-Way NC**
Inlet Port	60	60
Outlet Port	35	30
	2-Way NO	**2-Way NO**
Inlet Port	60	60
Outlet Port	60	60

Conduit Connector Coil available. *Call Customer Service.*



**Referenced values based on opposing ports open to atmosphere. Vacuum Rating assumes O-Ring Seal and opposing ports open to atmosphere.*

Other Options Available on Request:

- Valves with special port connections such as combinations of pipe, tube and flared ends.
- Extra long wire leads (36" or 48").
- Valves without mounting studs or valves with 4 mounting studs (2 are standard).
- Manifolded valve assemblies.



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Solenoid Valves: ORDERING FORMAT

M 6 6 2C 1A F S – H T – 123 – AP

Valve Series

See Porting chart below

Valve Configuration
2C = 2 Way Normally Closed
2O = 2 Way Normally Open
3W = 3 Way (See Port Arrangements)

Coil Voltage
1A = 115 VAC
2A = 230 VAC
3A = 24 VAC
1D = 12 VDC
2D = 24 VDC

Body Shape
S = Square

Port Selection
F = Female NPT
T = Tube Compression
FF = Flare Connection

Coil Wattage
H = Standard Coil

Valve Seat
E = EPDM
A = Aflas
V = Viton (FKM)
K = Kalrez eq. (FFKM)
T = PTFE (Hard Seat)

See Below 3-Way Valve Only

Auxiliary Plate (optional see below)

Consult Factory For Custom Configurations.

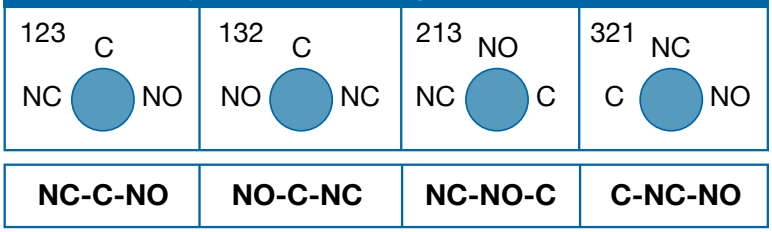
Porting w/ Max Orifice

PIPE	
22	1/8” FNPT & 0.125” Orifice
44	1/4” FNPT & 0.250” Orifice
66	3/8” FNPT & 0.375” Orifice
86	1/2” FNPT & 0.375” Orifice
TUBE	
21	1/8” TUBE & 0.063” Orifice
43	1/4” TUBE & 0.188” Orifice
65	3/8” TUBE & 0.313” Orifice
86	1/2” TUBE & 0.375” Orifice
FLARE	
42	1/4” FLARE & 0.125” Orifice
64	3/8” FLARE & 0.250” Orifice
86	1/2” FLARE & 0.375” Orifice

Port Arrangements

The port orientation can be arranged in four possible patterns on our 3-Way Solenoid Valves. Please select one of the four arrangements.

Looking Down at the Top of the Coil



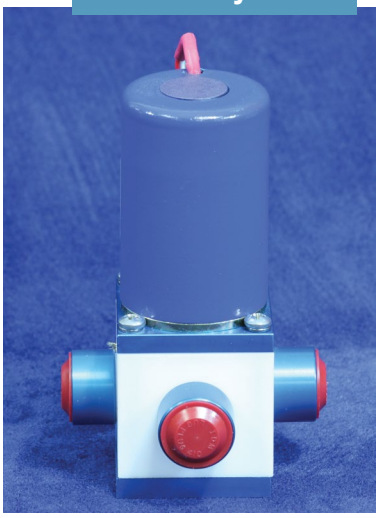
NC-C-NO	NO-C-NC	NC-NO-C	C-NC-NO

STD = 132 is our standard Port Arrangement.

Auxiliary Plate (“AP”): For highly corrosive or caustic gas applications, such as Chlorine Gas, our Auxiliary Plate Option (“-AP”) give an extra line of protection. The valve is configured with an auxiliary plate between the upper diaphragm and solenoid coil. The AP (Auxiliary Plate) is O-Ring sealed on the Stem of the diaphragm and supported at the outer body-to-coil interface.

Miniature Solenoid Valve

3/8” 3-Way FNPT



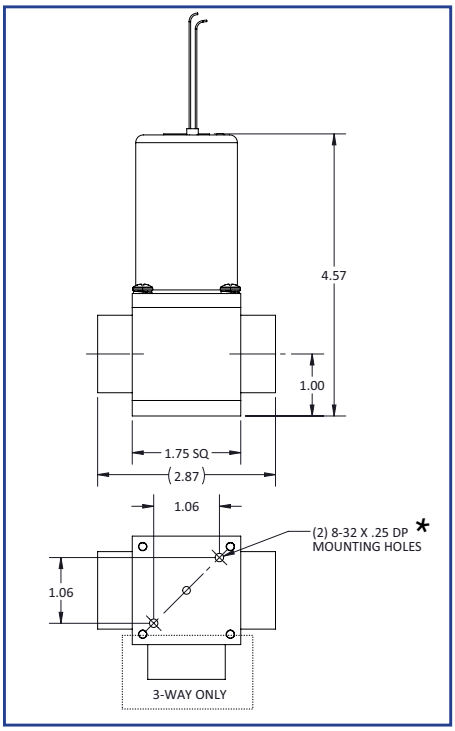
1/8” 2-Way FNPT
(Round Body)



1/8” 2-Way FNPT

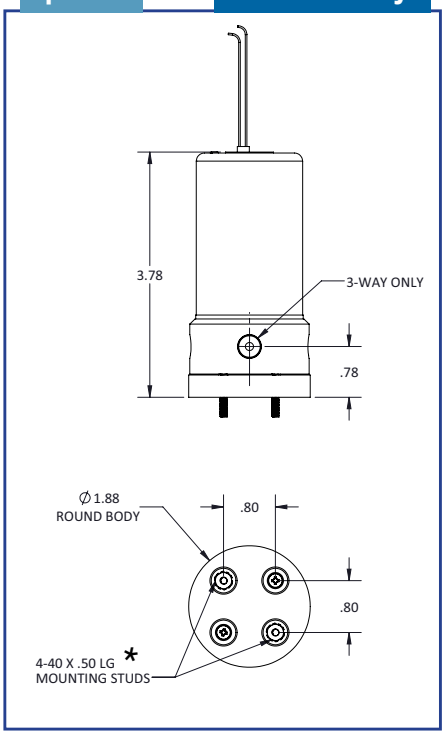


Typical for 3/8” and 1/2” Models

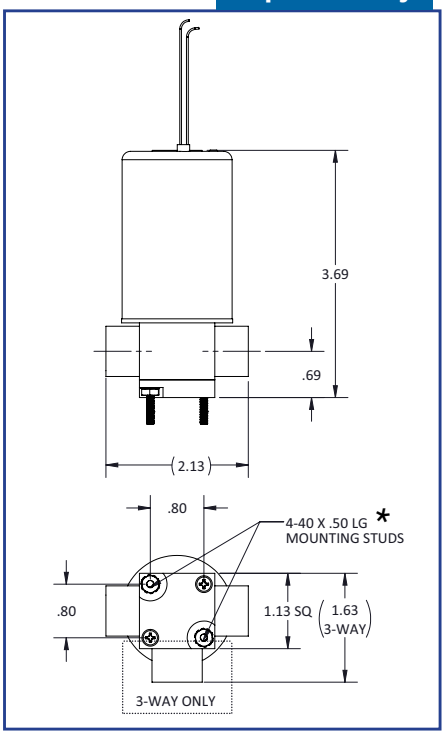


Typical for 1/8” and 1/4” Models

Special Round Body



Square Body



** Two Mounting Studs are supplied (standard). Call factory for alternate mounting options.*
Care must be taken to limit the applied torque on the Mounting Studs: 7 - 9 in-lbs max

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperature ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

140804

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