

Type 710 Diaphragm Valves



pneumatically actuated

SERIES: Type 710

SIZES: 3/8", 1/2"

ENDS: True Union Socket, Threaded or ChemFlare™¹ Spigot² bodies with Plain, Socket, Threaded or Flanged ends

DIAPHRAGMS: EPDM³, FKM-B (Viton®) or PTFE

CONTROL FUNCTIONS: Normally Closed
Normally Open
Double Acting



True Union Body

The **Type 710** Pneumatically Actuated Diaphragm Valve features a plastic piston actuator designed for long cycling life and corrosion resistance. Compared to a 1/2" pneumatically actuated ball valve it is a fraction of the size and cost.

Type 710 is part of the 700 Series of diaphragm valves featuring modular construction which minimizes spare parts requirements. Being a diaphragm valve, it is suitable for sanitary or slurry applications. With a PTFE diaphragm, it has corrosion resistance superior to a ball valve.

Features

Pressure rated to 90 psi

- 90 psi at 20°C for all materials

Long Cycling Life

- Valves normally operate well over one million cycles maintenance free⁴

Solid Plastic Body & Actuator

- High strength "Ixef"⁵ plastic actuator
- Lightweight
- Corrosion Resistant

Epoxy Coated Spring Steel Springs

- Spring steel springs have longer life and are stronger than stainless steel springs. Epoxy coating resists corrosive environments.

Safety Spring Cartridge

- Contained spring set allows for safe removal of actuator
- Spring cartridge may be easily reversed to change between Normally Closed and Normally Open functions

Direct Mount Accessories

- Accessories (travel stop, position indicator, manual override, limit switch box) thread into the top of the actuator and are easily installed in the field



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¹ For ChemFlare™ end connectors, consult JJ DOWNS INDUSTRIAL PLASTICS INC.

² PP and PVDF spigot ends have metric dimensions and will butt fuse directly to PP and PVDF piping systems. PVC spigots are ANSI.

³ Epoxy cured EPDM

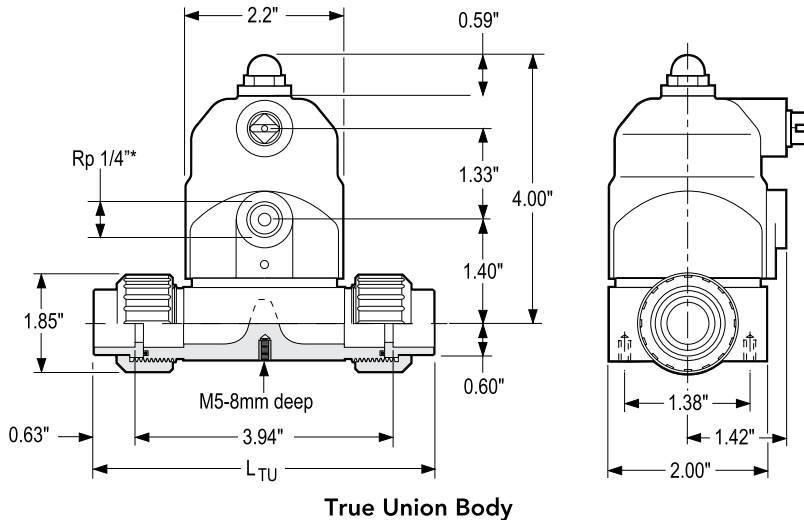
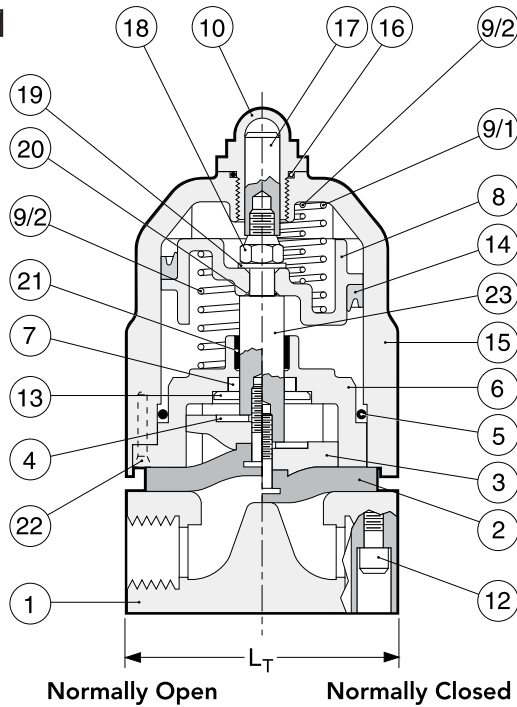
⁴ With EPDM or FKM-B (Viton®) diaphragm.

⁵ "Ixef" = Polyaramide

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True Union Body

* Air connections for all control functions are Rp 1/4" (BSP 1/4") as standard.
Air consumption for all sizes is 1.65 cubic inches.

ORDERING EXAMPLE

Diaphragm Valves		710	NC	005	A	E	U
Control Function	NC – Normally Closed NO – Normally Open DA – Double Acting						
Size	003 – 3/8" 005 – 1/2"						
Body Material	A – PVC B – PP C – CPVC K – PVDF						
Diaphragm	E – EPDM B – Nitrile V – FKM-B (Viton®) P – PTFE						
Ends	Blank – Spigot (Butt) T – Threaded U – Union Socket CFx – ChemFlare™						

Example: Type 710 Pneumatically Actuated Diaphragm Valve.
 Normally Closed, 1/2" diameter, PVC body, EPDM diaphragm, socket union ends.
 x = 4 for 1/4", 6 for 3/8", 8 for 1/2" ID tube connections.

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PARTS

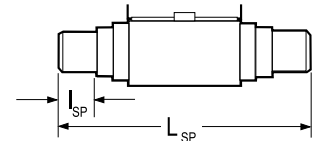
No.	Part	Pcs.	Materials
1	Body	1	PVC, CPVC, PP, PVDF
2	Diaphragm	1	EPDM, FKM-B (Viton®), PTFE
3	Compressor	1	PBTP ¹
4	Thrust Ring	1	Cad. Plated Steel
5	O-Ring	1	Nitrile
6	Guide	1	Ixef ²
7	Quad Ring	1	Nitrile
8	Piston	1	Ixef ²
9x	Spring	1	Epoxy Coated Spring Steel
10	Indicator Cover	1	Polycarbonate
12	Socket Head Bolt	4	304 SS
13	Circle Clip	1	Brass
14	Lip Ring	1	Nitrile
15	Actuator Housing	1	Ixef ²
16	O-Ring	1	Nitrile
17	Position Indicator	1	Polypropylene
18	Lock Nut	1	Cad. Plated Steel
19	Washer	1	Cad. Plated Steel
20	O-Ring	1	Nitrile
21	Shaft Bearing	1	Carbon/PTFE ³
22	Bolt Inserts	2	Steel
23	Stem	1	304 SS

¹PBTP = Polybutylene Terephthalate
²Ixef = Polyaramide ³25% carbon filled PTFE

DIMENSIONS INCHES Cv VALUES

Size	Union Soc L _{TU}	Spig L _{SP}	Thd L _T	USGPM at 1 psi ΔP
3/8"	5.12	4.88	2.91	3.3
1/2"	5.12	4.88	2.91	4.1

Spigot Body



MINIMUM CONTROL PRESSURES⁴PSI

Line Pressure	Min. Required Control Pressure	
	Normally Closed	Normally Open
0	62	32
15	60	35
30	57	38
45	56	41
60	53	44
75	51	47
90	48	50

⁴Air or clean water are acceptable control media.

ACCESSORIES

- Travel Stop
- Travel Stop/Position Indicator
- Travel Stop/Position Indicator/Manual Override
- Solenoid Valve
- Limit Switches

700 Series Accessories

for all 700 series valves

Accessories are supplied mounted to actuators and bench tested, or separately.

SOLENOID VALVES

Pilot solenoid valves control air supply air in and out of pneumatic actuators to open and close the valve and are electrically actuated. They are usually but not always mounted directly to the actuator. SOL Series Solenoid Valves are CSA/UL approved and designed for multi-million cycle life. These mount flush to 700-Series pneumatic actuators. They are robust, reliable and corrosion resistant, offering high air flows and fast response. The valve functions as 3/2 way (for spring return actuators) and a second solenoid is added for 5/2 way (for double acting actuators). A screw type manual override is standard. Construction is brass body, nitrile seals, nickel plated ports and screws, and epoxy encapsulated coil. The electrical connection is a 3-pin DIN plug with 1/2" NPT for conduit connection. Grommet (cable gripper) and LED grommet (glows to indicate power) version plugs are also available. Versions are available in different voltages, also in intrinsically safe and explosion proof designs.



Solenoid Valves



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