B410 & A420 Series Pneumatic Actuators for Gemini Ball Valves

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FEATURES

- **Compact, Lightweight Aluminum Body and Bracket featuring both Internal and External Teflon®-Impregnated Hard Anodized Surfaces**
- **Stainless Steel External Trim & Viton® O-rings Standard**
- **Direct Valve Stem Coupling to Actuator Shaft Minimizes Backlash**
- **Manual Override**
- **Available with Integral NAMUR Pilot Valve or can be Remotely Piloted**
- **Available with Limit Switches**
- **Easily Visible Open / Shut Position Read Out**

Gemini Pneumatically Actuated Ball Valves offer a unique combination of three elements required for long trouble free life - a premium quality ball valve, a quality actuator designed to meet the torque requirements of the valve and a mounting bracket and connection which assures alignment and rigidity.

Gemini Pneumatic Actuator's simple rack and pinion design, made possible through unique manufacturing techniques, results in a bar stock actuator which is compact, efficient and trouble free.

A spring return option extends the capability of the design to meet the needs of those services requiring a spring action to either open or close the valve. Conversion from double acting to spring return simply requires the replacement of the end cap with a spring module.

All actuators are factory lubricated so that there is no need for lubricated air.

All threaded bolt holes in the aluminum components have self locking stainless steel inserts to assure strong, positive fastening.

Gemini Actuator mounting is the key element of our pneumatically actuated ball valves. A good valve and actuator, poorly mounted, results in an inferior actuated valve. The Gemini coupling eliminates this possibility with the 'missing link' i.e., the actuator shaft is precisely coupled directly to the valve stem, thereby eliminating misalignment and backlash often found with the commonly used torque and groove connecting linkage. The valve stem nut is fixed within the actuator shaft These features, combined with a rigid mounting bracket, result in a pneumatically actuated ball valve which minimizes backlash, assures optimum stem seal life and prevents any possibility of stem nut back off.

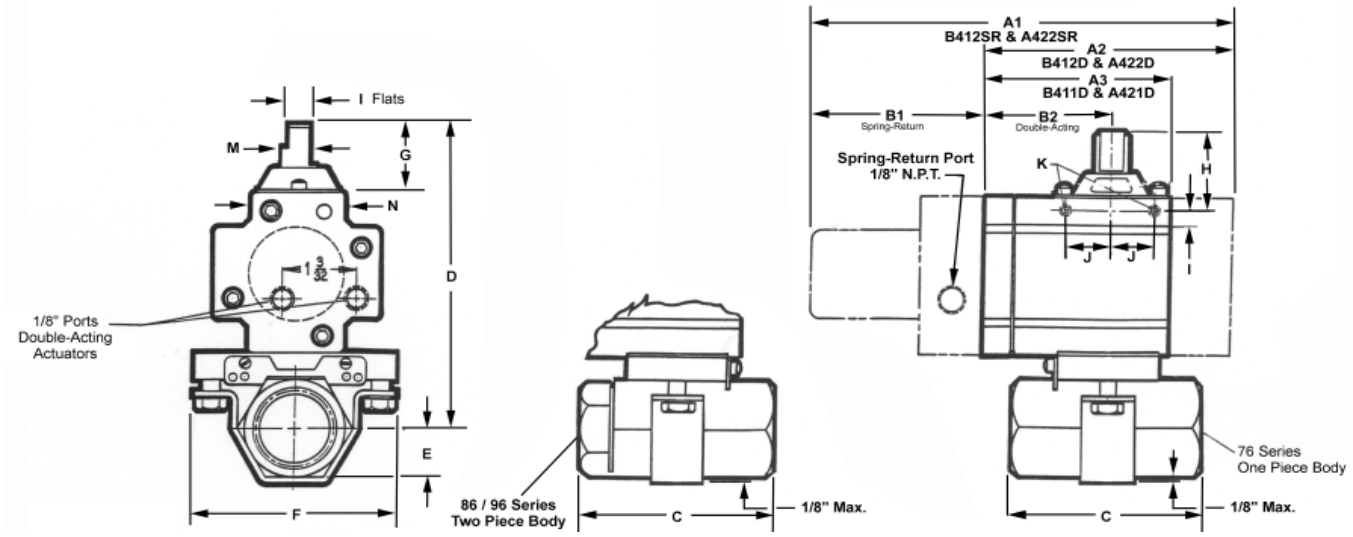
Available with pilot valves and limit switches.

Actuator Selection and Specifications

Use the chart below to find the actuator recommended for the valve you wish to operate and the air supply you have available. To use the chart, first find the line on which the valve size and series is entered, then find the corresponding actuator model designation in the column under the air supply pressure which you have available. Sizing recommendations apply to applications where the pressure differential across the valve is less than 400 psi.

Valve Size & Series			Actuator Model			Approximate Dimensions (Inches)															
76	86	96	Spring-Return 75 - 125 psi	Double-Acting 75 - 125 psi	Double-Acting 50-125 psi	A1	A2	A3	B1	B2	C 76	C 86	D	E	F	G	H	I	J	K	L	M	N
1/2	1/4 & 3/8	-	B412SR	B411D	B412D	7.64	3.64	2.73	5.85	1.85	2.18	2.18	4.26	.50	3.00	1.01	1.25	.19	.66	#10-24	.31	.47	1.31
3/4	1/2	-									2.22	2.61	4.35	.59									
1	3/4	1/2									2.76	2.94	4.51	.75									
1-1/4	1	3/4	A422SR	A421D	A422D	12.20	5.70	4.34	9.11	2.92	3.02	3.32	7.05	.97	4.80	1.59	1.96	.27	1.06	#10-24	.50	.81	2.12
1-1/2	1-1/4	1									3.45	3.70	7.14	1.06									
2	1-1/2	1-1/4									4.04	4.25	7.39	1.31									
-	2	1-1/2									-	4.57	7.58	1.50									

Specifications subject to change without notice and without obligation on the part of the manufacturer.



Temperature

Pneumatic Actuators are designed to operate in ambient temperatures between -20°F (-28.0 C) and +350° F (+175°C). Care must be taken to assure that the moisture content of the air supply is sufficiently low to prevent icing within the actuator.

Air Supply

Sufficient air delivery must be available at the actuator to ensure dependable operation. The following precautions should be observed:

- Air supply should be clean and dry. When dirty or wet air is a problem; a filter / separator should be specified; these units are most effective when installed as closely as possible to the actuator. A filter, when used, should permit a minimum flow of 4 scfm at an upstream pressure of 60 psi.
- Eliminate severe restrictions to air flow (certain solenoid valves & fittings). The most restricted passage must have an area no smaller than .003" square, the area of 1/16" diameter orifice. If more than a single actuator is to be supplied by an individual pilot, the minimum passage requirement applies per actuator.
- Tubing: For short runs up to 5 feet 5/32" I.D. is suitable, 1/4" I.D. will serve up to 30 feet. For longer runs, use 3/8" I.D. or larger.

Accessories

Solenoid pilot valves and limit switches are available. Please see our literature or contact us direct.

Port Connections: 1/8" N.P.T.

gemini valve

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