

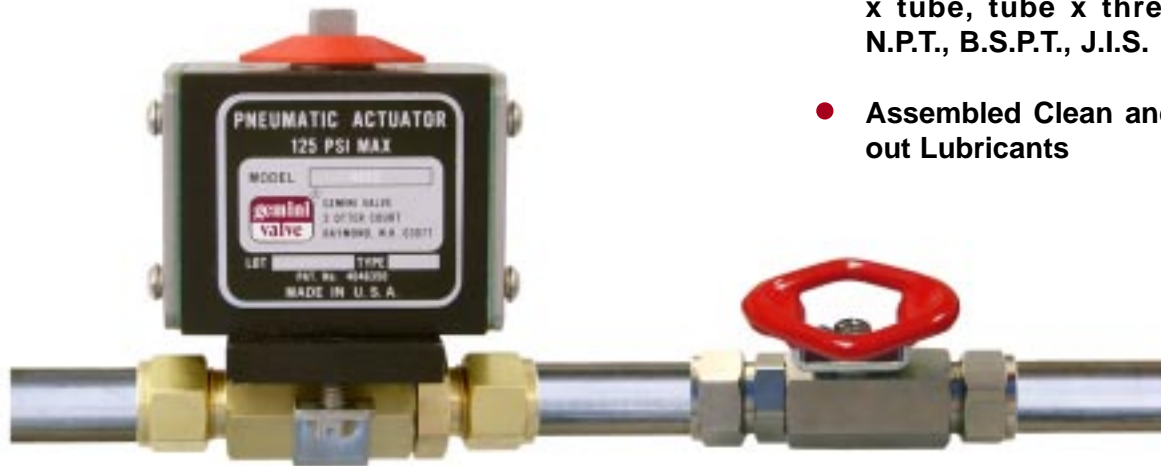


## 82 Series 1/4" - 1" Premium Quality, Tube Compression Bar Stock Ball Valves

2 Otter Court, Raymond, New Hampshire 03077 • Tel. (603) 895-4761 • FAX (603) 895-6785 • www.geminivalve.com

### FEATURES

- Materials of 316 Stainless Steel and Brass Barstock
- 1,000 p.s.i. (68.9 bars) Rating
- Proven Twin Ferrule Design Ensures Positive Two Point Sealing
- Pneumatic & Electric Actuators and Variety of Handles Available
- Self Compensating Valve Stem Seal Design Ensures Long, Leak-Tight Maintenance Free Service
- Variety of Connections; tube x tube, tube x threaded - N.P.T., B.S.P.T., J.I.S.
- Assembled Clean and Without Lubricants



**G**emini Valve 82 Series tube compression valves offer an excellent alternative to high pressure models for those applications where a pressure rating of 1,000 p.s.i. or less is required. The 82 Series is offered in both brass and 316 stainless steel barstock construction in sizes of 1/4" – 1" OD tube and comes equipped standard with reinforced P.T.F.E. seats and stem seal and stainless steel balls and stems. The compression joint uses the proven twin ferrule design to ensure positive two point sealing between the tube and fitting.

In addition to tube x tube connec-

tions, the 82 Series also offers tube x threaded including N.P.T, B.S.P.T. and J.I.S. thread standards.

Each 82 Series valve is carefully cleaned, assembled without lubricants and then thoroughly tested to ensure leak-tight performance. This process minimizes contamination of the media and helps to protect delicate system instrumentation.

As with all Gemini Valve products the 82 Series utilizes our superior self-compensating stem seal design. This proven design automatically compensates for wear as well as thermal expansion and contraction resulting in a leaktight, maintenance free, service life.

The 82 Series is offered with oval, lever, wing and 'C' manual operators but can be easily automated by directly mounting the Gemini 500 Series pneumatic or 600 Series electric actuators. Both compact automation packages feature rigid, precise mounting systems to reduce wear and ensure long trouble-free service.



Made In The U.S.A.

# Materials

Brass and 316 Stainless Steel. 316 Stainless Steel Ball and Stem Standard. Seats and Stem Seal P.T.F.E. (Glass Reinforced Teflon®)

CAUTION: Care must be taken to assure that the internal media and external environment are compatible with the valve materials.

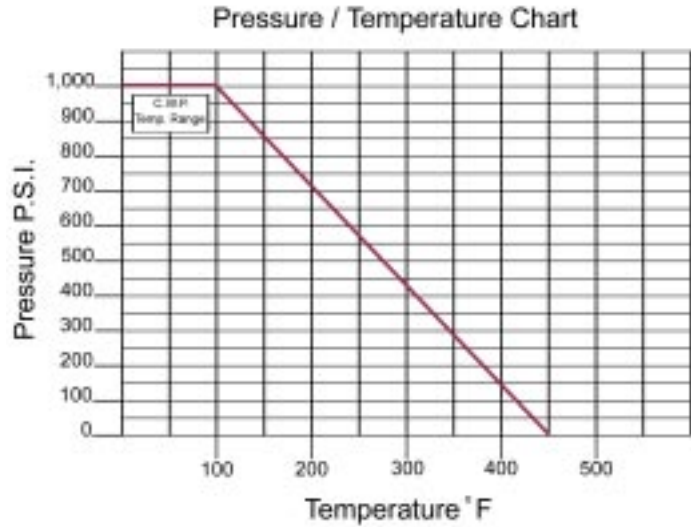
# Ratings

### Pressure:

20 Micron Vacuum to 1,000 psi (68.9 bars)  
C.W.P. (Cold Working Pressure) Non-Shock Service. To 150 psi (10.3 bars) for Saturated Steam.

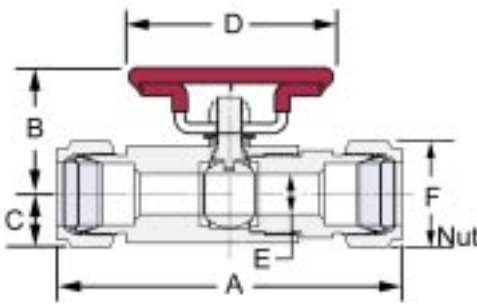
### Temperature:

-50°F to +450°F (-45°C to +232°C)

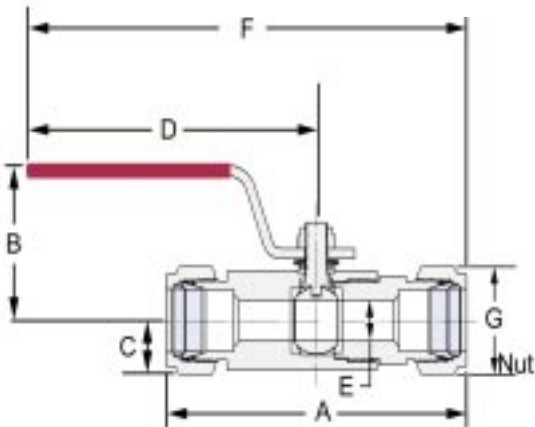


# Dimensions and Specifications

## Manual\*



Tube Size OD	Dimensions - Inches					
	A	B	C	D	E	F
1/4	3.72	1.58	.50	2.31	.19	9/16
3/8	3.70	1.58	.50	2.31	.28	11/16
1/2	3.94	1.58	.50	2.31	.36	7/8
3/4	4.17	1.67	.59	3.41	.49	1-1/8
1	4.92	1.91	.75	3.41	.62	1-1/2



Tube Size OD	Dimensions - Inches						
	A	B	C	D	E	F	G
1/4	3.72	1.77	.50	4.00	.19	5.86	9/16
3/8	3.70	1.77	.50	4.00	.28	5.86	11/16
1/2	3.94	1.77	.50	4.00	.36	5.97	7/8
3/4	4.17	1.87	.59	4.00	.49	6.08	1-1/8
1	4.92	2.08	.75	5.38	.62	7.83	1-1/2

\*Dimensions reflect tube x tube end connections. For other tube x threaded etc... consult factory.

## Automated - Pneumatic



Spring-Return

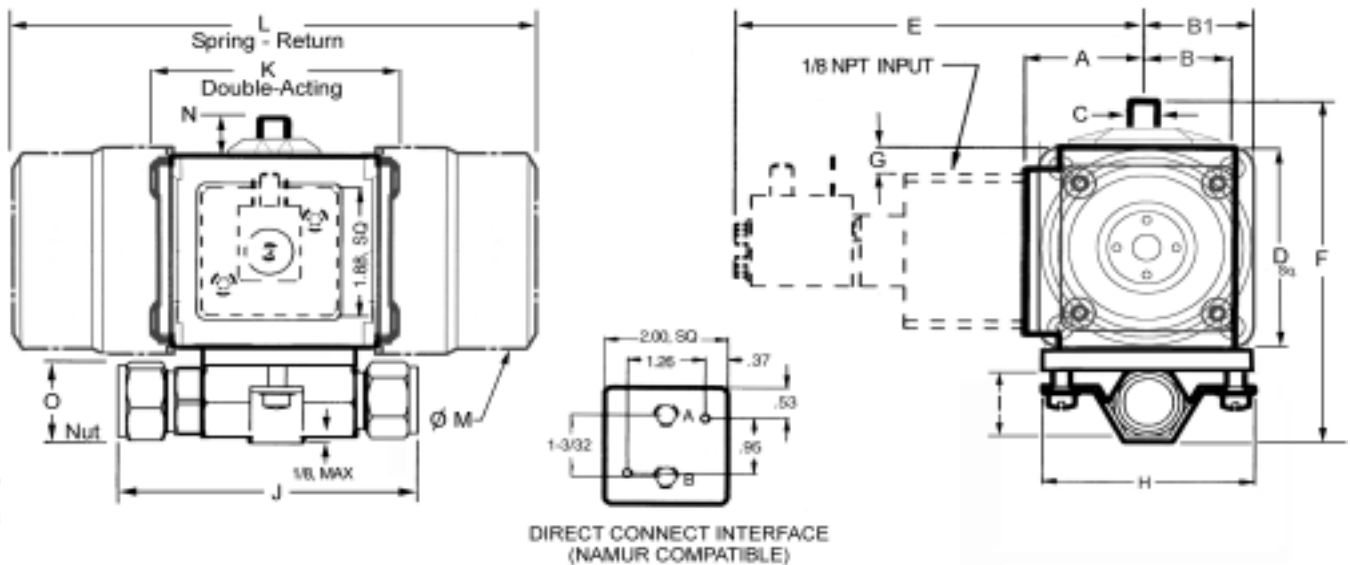


Double-Acting

- Direct Valve Stem Coupling to Actuator Shaft Minimizes Backlash and Misalignment

- Compact, Lightweight Aluminum Body and Bracket featuring Teflon®-Impregnated Hard Anodized Surfaces

- Lightweight Zytel® Housed Spring-Return Design Accommodates Air Supply as Low as 50 psi



Tube Size	Actuator Model		Approximate Dimensions - Inches															
	Spring Return	Double Acting	A	B	B1	C	D	E	F	G	H	I	J	K	L	M	N	O
1/4	A512SR	A512D	1.46	1.00	1.53	.31	3.06	4.67	4.51	.32	3.00	1.00	3.72	3.62	8.31	2.81	.57	9/16
3/8									4.51			1.00	3.70					11/16
1/2									4.61			1.00	3.94					7/8
3/4									4.91			1.19	4.17					1-1/8
1									5.37			1.50	4.92					1-1/2

### Air Supply

An air supply pressure of 50 - 125 psi. 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 free of moisture. Eliminate severe restrictions to air flow (certain

solenoid valves & fittings). The most restricted passage must have an area no smaller than .012 inches square, the area of 1/8" diameter orifice.

• 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.

### 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.

**Port Connections:** 1/8" NPT

## Automated - Pneumatic - Accessories

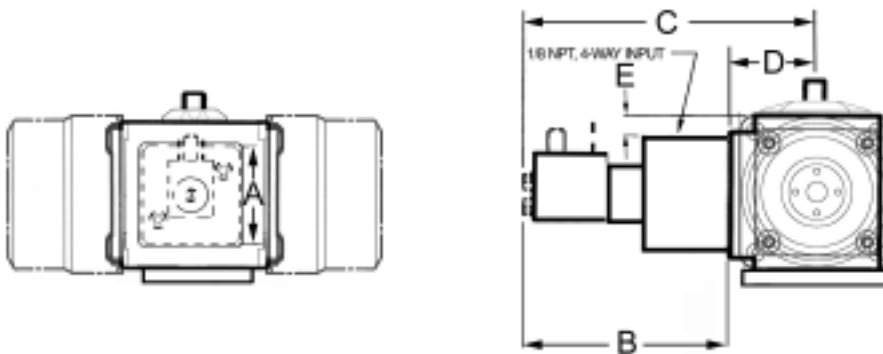
### GP Series NAMUR Pilot Valves for Gemini Pneumatic Actuators



- **NAMUR Compatible Interface Mounts to all Double Acting, & Spring Return NAMUR Style Gemini Pneumatic Actuators**

- **Compact Design Occupies Minimal Space in Restricted Applications**

- **DIN Style Operating Coil Available in Many of the Popular AC and DC Voltages**



Series	Actuator Model	A	B	C	D	E	Cv	
4GP	A512D	1.94	3.31	5.23	1.46	.32	.075	
	A522D			5.64	1.87	1.10		
3GP	A512SR		3.77	3.77	5.05	1.46	.32	.10
	A522SR				5.46	1.87	1.10	

#### Materials

Body: PTFE / Anodized Aluminum  
 Spool: 18-8 Stainless Steel  
 Seals: Nitrile / Viton  
 Hardware: 18-8 Stainless Steel  
 Coil/Body: GF Nylon/GF Zytel<sup>®</sup>

#### Air Supply

The 4GP will operate between 50 and 125 psi (3.44 and 8.62 Bar).

#### Air Delivery

A single 1/8" NPT female connection is provided for supply.

#### Operating Coil

Operating coil technical data is dependent on the specific model selected, however, all standard coils as designated by the 'SC' code and conform to the following:

Wattage: 5 Watts  
 Class: F, continuous duty  
 Protection: IP65 (with connector)  
 dusttight, water resistant  
 Connection: Mini-DIN Standard

#### Temperature

Designed to operate in ambient temperatures between -20°F and 140°F (-28.89 C and 60°C)

**Note:** high temperature coils available for ambient temperatures to 350°F. Consult factory for details.

**Other Accessories** including limit switches, proximity switches, remote mount pilot valves are available, contact Gemini Valve for details.

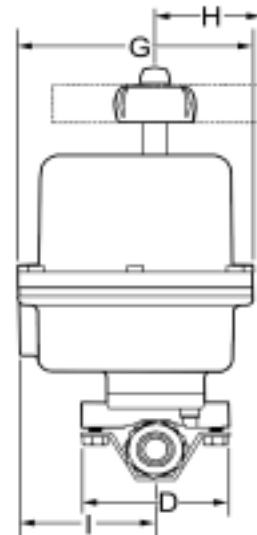
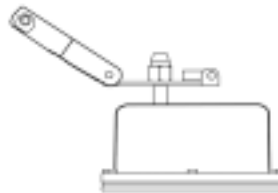
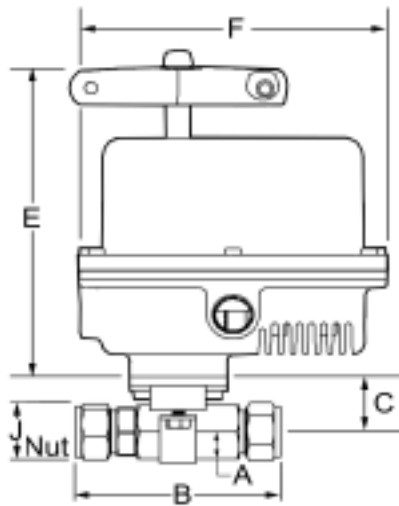
## Automated - Electric



- **Die Cast Aluminum Base** for exceptional rigidity and excellent heat dissipation properties for improved duty cycle.

- **Machined, PTFE impregnated, hard anodized mounting system** assures precise alignment and rigid valve mounting.

- **Simple, effective override** with fold-out lever handle providing easy manual operation on all valve sizes.



Tube Size	Actuator Model	Approximate Dimensions - Inches									
		A	B	C	D	E	F	G	H	I	J
1/4	615	.50	3.72	1.15	3.00	6.74	6.25	4.75	2.23	2.78	9/16
3/8		.50	3.70	1.15							11/16
1/2		.50	3.94	1.15							7/8
3/4		.59	4.17	1.24							1-1/8
1		.75	4.92	1.40							1-1/2

### Options

Up To Four Limit Switches

Heater and Thermostat

120VAC Voltage Standard, optional 24, 120, 220 VAC and 12 & 24VDC

### Specifications

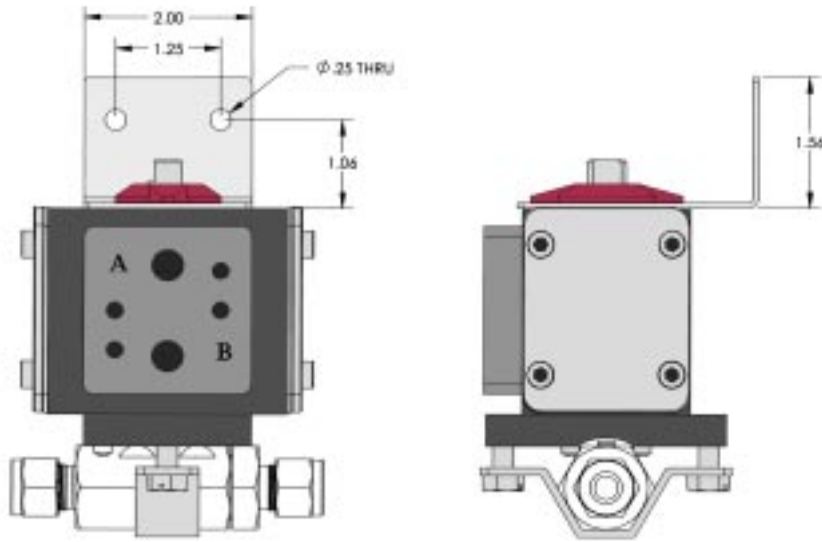
Motor: Reversing, Brushless, Capacitor-Run Motors (AC Models) Integral Thermal Overload Protection with Auto-Reset (AC Models) 115VAC 50/60 Hz, Single Phase Maintenance-free Permanently Lubricated Gear Train. Output: Model 615 150 inch lbs, 100% duty cycle.

Enclosure: Two 1/2" NPT Conduit Ports Prevent Interference Between Control and Power Signals. Cover is made from Fire Resistant, Impact Resistant, UL Approved Dupont® FR50.

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# Actuated Assembly Optional Mounting

## Pneumatic



### Notes:

Pneumatic Double-Acting shown. Mounting bracket is same for Spring-Return model.  
Custom designs available to meet your specific mounting requirements. Consult Gemini Valve.

## Electric

Custom designs available to meet your specific mounting requirements. Consult Gemini Valve.

## Optional Handles

Beyond the Lever and Oval versions we also offer Latching-Lockable, 'C', and Wing handle options.

