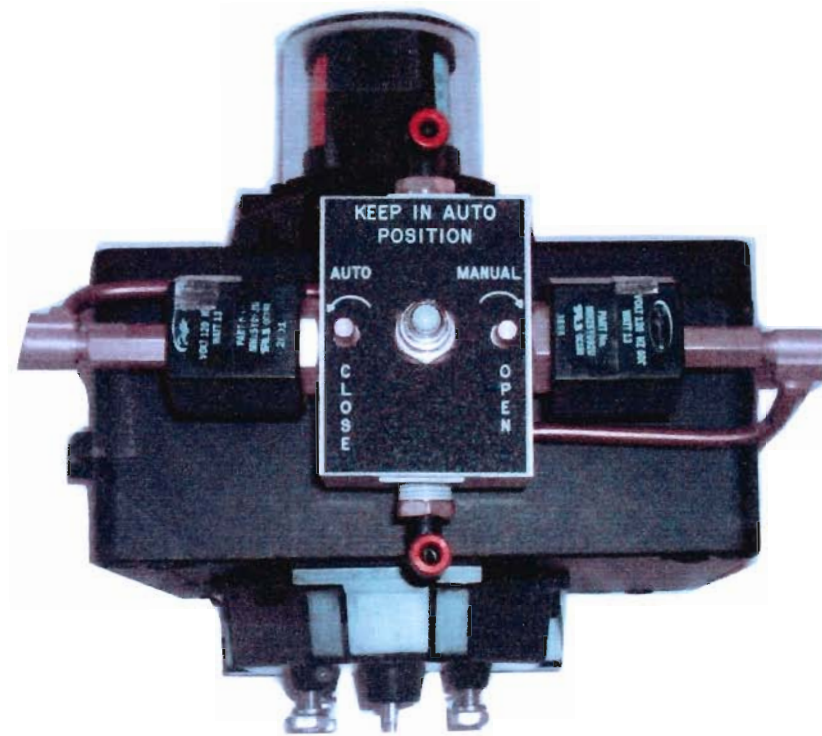


# DOMINION CONTROLS



## DRAGON VALVE POSITONER

**INSTRUMENT AIR NOT REQUIRED**

**Zero energy consumption when in a steady state**

**Manual override standard in case you lose your control signal**

**Use water – oil – air as the drive media to your valve actuators**

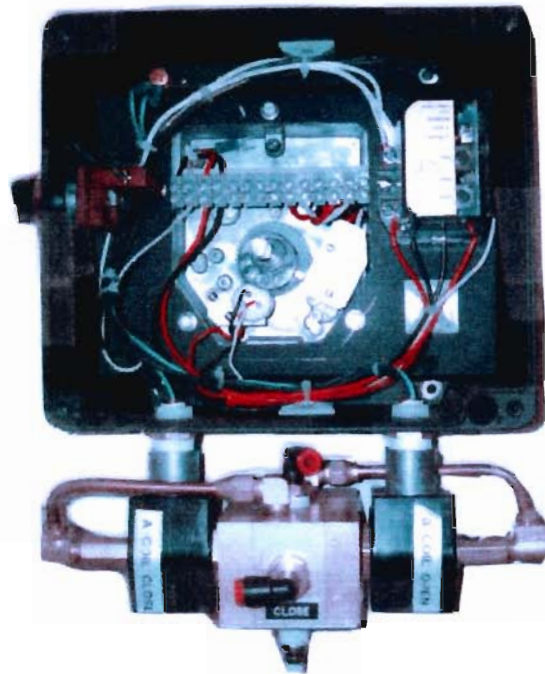
**QUALITY**

**RELIABILITY**

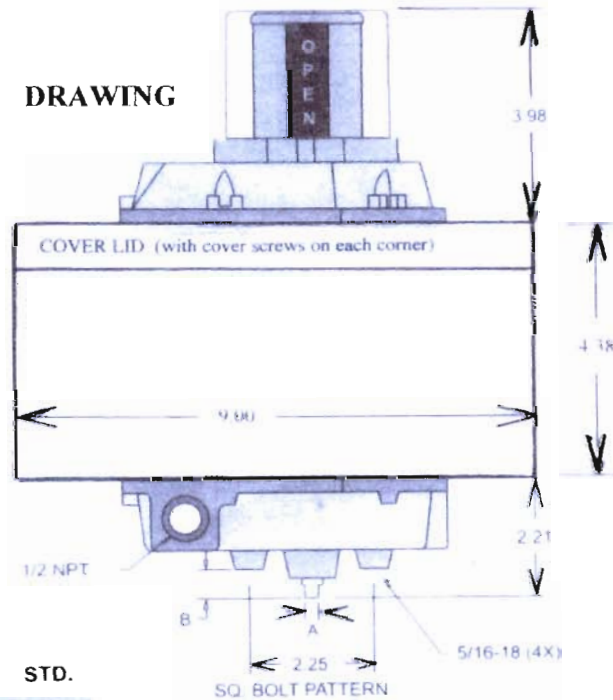
**PERFORMANCE**

The Dragon Valve Positioner incorporates a microprocessor which uses a PID loop to control relay outputs proportionally in response to the remote input control signal (4-20 mA). The relay outputs energize solenoid valves that deliver pressurized media (air, water or oil) to the actuator as required to set the valve actuator at the desired valve position based on the remote input signal. On loss of the remote input signal, the microprocessor can be used to maintain a predetermined fail safe position. On loss of electrical power, the manual override controls on the solenoid valve can be used to position the control valve as long as there is sufficient media pressure. The Dragon Valve Positioner is mounted directly to the valve actuator like any standard electro-pneumatic positioner.

INSIDE TOP VIEW



SIDE VIEW DRAWING



	NAMUR	STD.
A	0.156	0.249
B	0.62**	0.53

\*\* - LONG NAMUR = 1.28"

## DRAGON POSTIONER MODEL NUMBER:

Base Model	Drive Media	Input PSI Pressure	Input Power	Remote Input Signal	Valve Position Feedback Signal
A	1 = Air	A = 40-150	1 = 120 VAC	A = 4-20 mA	1 = 4-20 mA
B	2 = Water 3 = Oil	B = 150-250 C = 250-3,000	2 = 24 VDC 3 = Special	B = 3-15 PSI C = Special	2 = None 3 = Special

**Model Example: Model A-1-A-1-A-1 = Micro-processor controlled unit with standard air at 150 PSI, 120 volt AC current to power unit and 4-20 m input control signal with 4-20 mA feedback showing valve position.**

**Note: BASE MODEL A = Micro-processor Unit (PID control loop – feedback position – processor controls)**

**BASE MODEL B = Comparator Switch (drive to remote set point only) non-micro-processor control – Zero & Span set up with screw driver – no feedback position**

**STANDARD EQUIPMENT – NEMA 4X IP-66 – die cast aluminum enclosure with s.s. lid screws**  
**Qty 2 – Limit switches**  
**Dome position indicator showing valve position**  
**Exhaust control valve for speed control**  
**Complete set of fittings & tubing for air units**  
**Qty 2 – ½" NPT electrical connections**  
**Manual override if control signal is lost**  
**NAMUR mounting dimensions**

General Electrical Performance Characteristics	MODEL A	MODEL B
<b>Hysteresis: Maximum position error of the input valve when approached from opposite ends of the input scale. Full Scale.</b>	.125 %	.5 %
<b>Repeatability: Maximum variation in position for the same input value, when approached from the same direction. Full Scale.</b>	.09 %	.36 %
<b>Response Level: Maximum change in input signal necessary to cause change in the actuator position in one direction. Full Scale.</b>	.15 %	.6 %
<b>Deadband: The change in input signal required to cause the actuator to move, when the direction of movement is reversed.</b>	.3 %	1.2 %
<b>Resolution: The smallest possible change in the actuator's position. Full Scale.</b>	.15 %	.6 %
<b>Steady-State Air Consumption: When the actuator has reached the position of the command input signal.</b>	0.0 SCFM @ any PSIG	

## SIZING GUIDE

1. What is the actuator pressure media? Air \_\_\_\_\_ Water \_\_\_\_\_ Oil \_\_\_\_\_
2. Maximum system operating pressure? PSIG \_\_\_\_\_
3. Actuator manufacturer and model? (for mounting bracket and coupling)  
\_\_\_\_\_
4. What is the remote control input signal? \_\_\_\_\_
5. What is the desired action on loss of remote input signal? \_\_\_\_\_
6. Electrical power input? \_\_\_\_\_
7. List options required by customer: \_\_\_\_\_

## AIR FLOW

A typical pressure of 100 PSI inlet with a 10% pressure drop will equal a flow of 25 SCFM in our standard positioner which has a .79 CV. Upon request, the positioner can be supplied with a CV of 1.48 that will provide a flow of 49 SCFM with a 100 PSI inlet pressure and a 10% pressure drop. These flows are based on an ambient temperature of 70 degree F. For any pressures above 150 PSI or larger CV flows, please contact the factory.

## WATER OR OIL FLOW

A typical pressure of 60 PSI inlet with a 10% pressure drop will equal a flow of 2 GPM in our standard positioner which has a .79 CV. Upon request, the positioner can be supplied with a CV of 1.48 that will provide a flow of 4 GPM with a 60 PSI inlet pressure and a 10% pressure drop. For any pressures above 150 PSI or larger CV flows, please contact the factory.

**The Dominion Controls Dragon Valve Positioner combines state-of-the-art technology and experienced, hand-finished craftsmanship with refined innovation, performance, durability and reliability for the customer.**

**Representative:**

## **DOMINION CONTROLS**

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**PATENT PENDING**

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