



### Pneumatic Zone Valve Actuators MP5100, MP5300 & MP5400

Spartan Peripheral Devices pneumatic 4sq" actuators are available in high, medium, and low spring ranges and have a compact design with minimum profile suitable for tight space requirements.

Each actuator is equipped with a neoprene diaphragm and biasing spring to aid the return spring built into the respective valve. Normally the return spring within the valve and the biasing spring within the actuator act together to open the valve.

Air pressure opposes the two springs forcing the valve closed when the air pressure is greater than the nominal spring ranges. Further air pressure opposes the pressure of the fluid within the system, closing the valve flow.

Based on the control requirements, the MP5xxx actuators can be used with a matching Spartan Peripheral Devices valve body:

**2 way Normally Open operation:**

Any 2 way Normally Open Spartan Valve Body

**2 way Normally Closed operation:**

Normally Closed Spartan Valve Body: V222

**3 way Normally Open AB-A operation:**

Diverting Spartan Valve Bodies: V320, V325, V345

**3 way Normally Open B-AB operation:**

Mixing Spartan Valve Body: V321

**GENERAL ACTUATOR SPECIFICATIONS**

Construction .....Zinc plated steel housing  
 Diaphragm..... Heavy duty molded neoprene  
 Dimensions..... Working area 4sq"  
 Stroke ..... 0.197" (5mm)  
 Spring..... Stainless steel retracts actuator shaft and allows the valve stem to rise up on loss of air pressure.

Choose from MP5100 barb fitting connection or MP5100N with compression fitting

Nominal Spring Range:

- MP5100/MP5100N, 3-6PSI (21Kpa-41Kpa)
  - MP5300/MP5300N, 8-12PSI (55Kpa-82Kpa)
  - MP5400/MP5400N, 5-11PSI (34Kpa-76Kpa)
- Nominal no load spring range is based on maximum 5mm stroke.

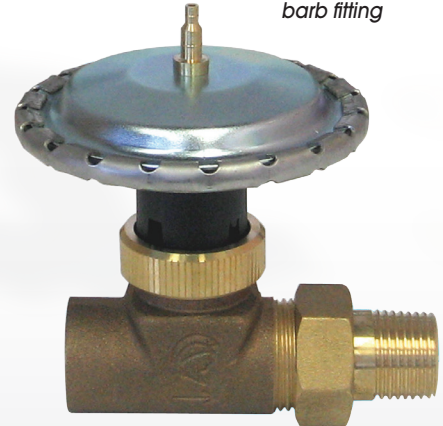
Starting point ..... Non adjustable  
 Maximum air pressure.....30PSI (207Kpa)  
 Operating temperature ..... -20 to 220°F, ..... (-29 to 104°C)  
 Air Connection ..... Combination 5/32" & 1/4" barb fitting for plastic tubing or compression fitting for copper tubing  
 Pilot Positioner ..... Not applicable  
 Maintenance free

MP5100N with compression fitting



**Interchangeable** with the complete range of Spartan valve bodies. See Spartan Selection Guide.

MP5300 with barb fitting



Actuator No	Valve Differential Pressure (PSI)	5	10	15	20	25	30	35	40	45	50
<b>MP5100</b> <b>MP5100N</b>	<b>3-6 PSI Range</b> Installed on normally open valve body	6.4	6.75	7.12	7.5	7.87	8.25	8.62	9.0	9.37	9.75
<b>MP5300</b> <b>MP5300N</b>	<b>8-12 PSI Range</b> Installed on normally open valve body	12.4	12.75	13.12	13.5	13.87	14.25	14.62	15.0	15.37	15.75
<b>MP5400</b> <b>MP5400N</b>	<b>5-11 PSI Range</b> Installed on normally open valve body	11.4	11.75	12.12	12.5	12.87	13.25	13.62	14.0	14.37	14.75
<b>MP5100</b> <b>MP5100N</b>	<b>3-6 PSI Range</b> Installed on normally closed V222 valve body	Note: Actual range with load will be 9-12 PSI. Maximum close off pressure is 80psi									

### INSTALLATION INSTRUCTIONS

The actuator can be installed vertically or horizontally; it cannot be installed upside down. The Actuator mounting thumbnut is to be tightened by hand only, using tools may result in over-tightening.

