

# MP8000 Series Pneumatic Valve Actuators

## Description

MP8000 Series Pneumatic Valve Actuators are designed to accurately position hot-water, chilled-water, and steam-control valves in response to a pneumatic signal from a controller. A pneumatic or electric valve positioner can be ordered separately for use in applications where sequential operation is desired or additional positioning power is necessary. MP8000 Series Actuators have a molded, synthetic rubber diaphragm contained in a sturdy, corrosion-resistant housing that protects against dirt and damage. This molded diaphragm provides a constant effective area throughout the actuator stroke.

Refer to the *MP8000 Series Pneumatic Valve Actuators Product Bulletin (LIT-977257)* for important product application information.

## Features

- universal-application design allows for use in hot water, chilled water, and steam
- field-reversible action allows for selectable spring-return-up or spring-return-down action on N.O. valves
- strong, corrosion-resistant housing ensures long life
- position indicator, included with every actuator, provides visual indication of valve stem position



**MP8000 Series  
Pneumatic Valve Actuators**

## Repair Information

If the MP8000 Series Pneumatic Actuator fails to operate within its specifications, replace the unit. For a replacement actuator, contact the nearest Johnson Controls® representative.

## Selection Charts

### MP8000 Series Pneumatic Valve Actuators

Actuator Size, sq. in.	Stroke, in.	Included Mounting Kit	Actuator Model					
			Spring Return Up			Spring Return Down		
			3 to 7 psig	4 to 8 psig	9 to 13 psig	3 to 7 psig	4 to 8 psig	9 to 13 psig
25	5/16	None	MP821C001	MP821D001	MP821E001	MP831C001	MP831D001	MP831E001
		MP8000-6701	MP821C001B	MP821D001B	MP821E001B			
	1/2	None	MP822C001	MP822D001	MP822E001	MP832C001	MP832D001	MP832E001
		MP8000-6702	MP822C001A	MP822D001A	MP822E001A			
	3/4	None	MP823C001	MP823D001	MP823E001	MP833C001	MP833D001	MP833E001
		MP8000-6702	MP823C001A	MP823D001A	MP823E001A			
MP8000-6501		MP823C001D	MP823D001D	MP823E001D	MP833C001D	MP833D001D	MP833E001D	
		MP8000-6201	MP823C001E	MP823D001E	MP823E001E	MP833C001E	MP833D001E	MP833E001E
50	3/4	None	MP843C001	MP843D001	MP843E001	MP853C001	MP853D001	MP853E001
		MP8000-6703	MP843C001C	MP843D001C	MP843E001C			
		MP8000-6201	MP843C001F	MP843D001F	MP843E001F	MP853C001F	MP853D001F	MP853E001F
	1	None	MP844C001	MP844D001	MP844E001	MP854C001	MP854D001	MP854E001
	1-1/8	None	MP845C001	MP845D001	MP845E001	MP855C001	MP855D001	MP855E001
		MP8000-6201	MP845C001F	MP845D001F	MP845E001F	MP855C001F	MP855D001F	MP855E001F
100	1-1/8	None	MP865C001	MP865D001	MP865E001	MP875C001	MP875D001	MP875E001
		MP8000-6203	MP865C001G	MP865D001G	MP865E001G	MP875C001G	MP875D001G	MP875E001G
	1-1/2	None	MP867C001	MP867D001	MP867E001	MP877C001	MP877D001	MP877E001
		MP8000-6203	MP867C001G	MP867D001G	MP867E001G	MP877C001G	MP877D001G	MP877E001G

## MP8000 Series Pneumatic Valve Actuators (Continued)

### Mounting Kits (for Assembly in the Field)

Code Number	Description
MP8000-6201	Mounting Kit for MP82, MP83, MP84, or MP85 Series Actuators Mounted to 2-1/2, 3, or 4 in. VG2000, V-5252, V-5462, or V-5842 Cast Iron Flanged Globe Valves with 3/8 in. Stem (Kit Includes: Two Stem Hex Jam Nuts and One Locknut)
MP8000-6203	Mounting Kit for MP86 or MP87 Series Actuators Mounted to 3, 4, 5, or 6 in. VG2000, V-5252, V-5462, or V-5842 Cast Iron Flanged Globe Valves with 1/2 in. Stem (Kit Includes: Two Stem Hex Jam Nuts and One Locknut)
MP8000-6501	Mounting Kit for MP82 or MP83 Series Actuators Mounted to 1-1/2 or 2 in. V-5254, V-5464, or V-5844 Series Cage Trim Valves with 1/4 in. Stem (Kit Includes: One Stem Nut, One Stem Extender, Two Stem Extender Nuts, and One Yoke Nut)
MP8000-6701	Mounting Kit for MP82 or MP83 Series Actuators Mounted to 1/2 or 3/4 in. VG7000 Series Bronze Control Valves with Stainless Steel Trim (Kit Includes: One Stem Nut, One Stem Extender, Two Stem Extender Nuts, and One Yoke Nut)
MP8000-6702	Mounting Kit for MP82 or MP83 Series Actuators Mounted to 1 through 2 in. VG7000 Series Bronze Control Valves with 1/4 in. Stem and Stainless Steel or Brass Trim (Kit Includes: One Stem Nut, One Stem Extender, Two Stem Extender Nuts, and One Yoke Nut)
MP8000-6703	Mounting Kit for MP84 or MP85 Series Actuators Mounted to 1-1/2 or 2 in. VG7000 Series Bronze Control Valves with 3/8 in. Stem and Stainless Steel Trim (Kit Includes: Two Stem Nuts and One Yoke Nut)

### Positioners and Positioner Mounting Kits (Order Separately)

Code Number	Description
V-9502-95	Pneumatic Valve Actuator Positioner (Less Spring and Mounting Hardware)
MP8000-6002	Mounting Kit for V-9502-95 Pneumatic Valve Actuator Positioner (Kit Includes All Necessary Mounting Hardware and Six Springs)
EPP-1000-8	Electro-Pneumatic Valve Actuator Positioner (Less Mounting Hardware)
MP8000-6003	Mounting Kit for EPP-1000-8 Electro-Pneumatic Valve Actuator Positioner (Kit Includes All Necessary Mounting Hardware)

### Accessories and Maintenance Parts

Code Number	Description
MP8000-6001	Seal Kit for All MP8000 Series Actuators
MP8000-6325	Diaphragm and Seal Kit for MP82 and MP83 Series Actuators
MP8000-6350	Diaphragm and Seal Kit for MP84, MP85, MP86, and MP87 Series Actuators (Two Kits Required for MP86 and MP87 Series Actuators)
MP8000-6012 <sup>1</sup>	Repair Tool Kit (Required for Diaphragm and Seal Replacement)

1. This kit includes a strap handle and polyester strap, stem wrench, and 7/16 in. hex tool.

### Technical Specifications

MP8000 Series Pneumatic Valve Actuators		
Effective Diaphragm Area	MP82/MP83 Series Actuators	25 sq. in. (Size 150)
	MP84/MP85 Series Actuators	50 sq. in. (Size 300)
	MP86/MP87 Series Actuators	100 sq. in. (Size 600)
Maximum Control Pressure		25 psig (172 kPa)
Air Connection		Barbed Fitting for 1/4 in. O.D. Polytubing
Ambient Operating Temperature Limits		-20 to 150°F (-29 to 66°C)
Ambient Storage Temperature Limits		-40 to 176°F (-40 to 80°C)
Materials	Housing	Die-Formed Carbon Steel (Coated with Corrosion-Resistant Finish)
	Diaphragm	Ethylene Propylene Diene Monomer (EPDM)
	Stem Seals	Nitrile U-Cups
	Bearings	Reinforced Thermoplastic
	Yoke	Formed Steel (Coated with Corrosion-Resistant Finish)
	Spring	Chrome-Silicon Steel (Coated with Corrosion-Resistant Finish)
	Stem Components	Stainless Steel
Shipping Weight	MP82/MP83 Series Actuators	14.0 lb (6.4 kg)
	MP84/MP85 Series Actuators	31.0 lb (14.1 kg)
	MP86/MP87 Series Actuators	47.0 lb (21.3 kg)