

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.



MP8000 Series
Pneumatic Valve Actuators

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

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 ¹	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)