

## Cast Iron Flanged Valves Linkage Kits

### Description

The M9000-53x Series Cast Iron Flanged Valve Linkage Kits are designed specifically for field mounting Johnson Controls® M9116 and M9124 Series Non-Spring Return (NSR) and M9220 Series Spring Return (SR) Electric Actuators to Johnson Controls VG2000 Series Cast Iron Flanged Valves in sizes 2-1/2 through 6 in. Kits are available to fit older Johnson Controls valves for easy conversion from pneumatic or older electric actuator installations.

Refer to the *M9000-53x Series Cast Iron Flanged Valve Linkage Kit for M9000 Series Electric Actuators Product Bulletin (LIT-1201538)* for important product application information.

### Features

- dedicated models facilitate quick and easy installation regardless of the valve stroke and electric actuator chosen
- single anti-rotation bracket allows one linkage to accommodate spring return and non-spring return electric actuators
- two-bolt coupler clamp provides quick and easy coupling of the linkage to the valve stem
- easy to convert from single to tandem actuators accommodates changing shutoff requirements

### Repair Information

If the M9000-53x Series Cast Iron Flanged Valve Linkage Kit fails to operate within its specifications, replace the unit. For a replacement kit, contact the nearest Johnson Controls representative.



**VG2x31 Valves with M9000 Series Electric Valve Actuators**

### Selection Chart

Valve Size, in.	Active Valve Code Number	Discontinued Valve Code Numbers That Are Compatible with Linkage Kit	Nominal Valve Stroke, in.	Valve Stem Diameter, in.	Actuator Series <sup>1</sup>	Number of Actuators Required	Linkage Kit Code Number
2-1/2	VG2231TM VG2431TM VG2831TM	V-5252-4, -5, -6, -7, -8, -32, -33 V-5462-6, -7, -34 V-5842-7, -8, -31 VB-3752-19 VB-3970-11 VB-4322-9	3/4	3/8	M9116 M9124 M9220	One	M9000-530 <sup>2</sup>
							M9000-531 <sup>3</sup>
3	VG2231UM VG2431UM VG2831UM	V-5252-9, -10, -11, -12, -13, -34, -35 V-5462-8, -9, -35 V-5842-9, -10, -32 VB-3752-22 VB-3970-14 VB-4322-11	1-1/8	1/2	M9124 M9220	Two	M9000-532
							M9000-537
	VG2231UN VG2431UN VG2831UN	V-5462-10, -36 V-5842-17, -18, -33	3/8	One	M9000-531 <sup>3</sup>		
4	VG2231VM VG2431VM VG2831VM	V-5252-14, -36 V-5462-11, -12, -37 V-5842-9, -10, -32 VB-3752-22 VB-3970-17 VB-4322-13	1-1/8	1/2	M9116 M9124 M9220	Two	M9000-532
							M9000-537
5	VG2231WN VG2431WN VG2831WN	V-5252-17, -18, -38 V-5462-15, -16, -39 V-5842-13, -14, -35 VB-3752-28 VB-3970-20 VB-4322-19	1-3/8	3/8	M9116 M9124 M9220	One	M9000-533 <sup>3</sup>
							M9000-534
6	VG2231YN VG2431YN VG2831YN	V-5252-19, -39 V-5462-17, -18, -40 V-5842-15, -16, -36 VB-3752-31 VB-3970-23 VB-4322-18	1-1/2	1/2	M9116 M9124 M9220	One	M9000-535 <sup>3</sup>
							M9000-536

1. M9116 and M9124 Series Electric Actuators are non-spring return. M9220 Series Electric Actuators are spring return.

2. The M9000-530 cannot be retrofitted with the M9000-610 Tandem Adapter Kit.

3. Linkages can be retrofitted with a tandem actuator using an M9100-610 Tandem Adapter Kit.

## M9000-53x Series Cast Iron Flanged Valves Linkage Kits (Continued)

### Technical Specifications

M9000-53x Series Cast Iron Flanged Valve Linkage Kits		
<b>Service<sup>1</sup></b>		Hot Water, Chilled Water, 50/50 Glycol Solutions, and 15 psig (103 kPa) Saturated Steam for Heating, Ventilating, and Air Conditioning (HVAC) Systems
<b>Force Output</b>	<b>M9000-530</b>	378 lb (1684 N) minimum with M9116 Series Actuator 605 lb (2691 N) minimum with M9124 Series Actuator 457 lb (2035 N) minimum with M9220 Series Actuator
	<b>M9000-531</b>	238 lb (1060 N) minimum with M9116 Series Actuator 380 lb (1694 N) minimum with M9124 Series Actuator 288 lb (1281 N) minimum with M9220 Series Actuator
	<b>M9000-532</b>	761 lb (3385 N) minimum with Tandem M9124 Series Actuators 576 lb (2562 N) minimum with Tandem M9220 Series Actuators
	<b>M9000-533</b>	315 lb (1405 N) minimum with M9124 Series Actuator
	<b>M9000-534</b>	631 lb (2806 N) minimum with Tandem M9124 Series Actuators 477 lb (2121 N) minimum with Tandem M9220 Series Actuators
	<b>M9000-535</b>	280 lb (1248 N) minimum with M9124 Series Actuator
	<b>M9000-536</b>	561 lb (2495 N) minimum with Tandem M9124 Series Actuators 424 lb (1887 N) minimum with Tandem M9220 Series Actuators
	<b>M9000-537</b>	761 lb (3385 N) minimum with Tandem M9124 Series Actuators 576 lb (2562 N) minimum with Tandem M9220 Series Actuators
<b>Valve Stroke</b>	<b>M9000-530</b>	3/4 in. (19 mm) Nominal
	<b>M9000-531</b>	1-1/8 in. (29 mm) Nominal
	<b>M9000-532</b>	1-1/8 in. (29 mm) Nominal
	<b>M9000-533</b>	1-3/8 in. (35 mm) Nominal
	<b>M9000-534</b>	1-3/8 in. (35 mm) Nominal
	<b>M9000-535</b>	1-1/2 in. (38 mm) Nominal
	<b>M9000-536</b>	1-1/2 in. (38 mm) Nominal
	<b>M9000-537</b>	1-1/8 in. (29 mm) Nominal
<b>Minimum Ambient Operating Temperature (Limited by the Valve)</b>		35°F (2°C) in Water and Steam Applications
<b>Maximum Ambient Operating Temperature<sup>2</sup> (Limited by the Actuator)</b>		122°F (50°C) M91xx Series Actuators 131°F (55°C) M9220 Series Actuators
<b>Shipping Weight</b>		7-1/2 lb (3.4 kg)

1. Proper water treatment is recommended; refer to VDI 2035 Standard.

2. In steam applications, install the valve with the stem horizontal to the piping, and wrap the valve with insulation.