

## Two-Way, Non-Spring Return, Electric Actuated, High-Pressure, High-Temperature Butterfly Valve Assemblies

### Description

VF Series High-Pressure, High-Temperature Butterfly Valves are designed for control of hot water, chilled water, steam, 50% glycol solutions and condenser water in a wide range of HVAC applications.

- internal heater: standard
- modulating input: 4 to 20 mA or 0 to 10 VDC
- 120 VAC input voltage
- NEMA 4X water-tight, corrosion-resistant enclosure
- thermal overload protection

### Features

- non-spring return (drive open, drive closed)
- valve body: carbon steel
- disc: stainless steel
- seat: RPTFE
- fluid temperature rating: -20 to 450°F
- actuator ambient temperature rating: -40 to 150°F
- actuator resolution: 100 positions
- manual opener: standard

### Repair Information

If the VF Series Two-Way, Industrial Grade, Non-Spring Return, Electrically Actuated, High-Pressure, High-Temperature Butterfly Valve Assembly fails to operate within its specifications, replace the unit. For a replacement valve, contact the nearest Johnson Controls® representative.



Two-Way High Performance Valve with Industrial-Grade, Non-Spring Return, VA-907x Series Electric Actuator

### Selection Chart

VF Series Two-Way, Industrial Grade, Non-Spring Return, Electrically Actuated, High-Pressure, High-Temperature Butterfly Valve Assemblies

Actuator				On/Off	0 to 10 VDC Proportional
Size, in.	Cv at 90°	Cv at 60°	Closeoff		
<b>Two-Way Butterfly Valve Assemblies – ANSI Class 300 Flanges <sup>1</sup></b>					
2-1/2	160	78	550 psig	VFC-025ZE-723D	VFC-025ZE-703N
3	185	123		VFC-030ZE-723D	VFC-030ZE-703N
4	375	250		VFC-040ZE-723D	VFC-040ZE-703N
5	790	360		VFC-050ZE-725D	VFC-050ZE-705N
6	1,000	530		VFC-060ZE-726D	VFC-060ZE-706N
8	2,000	950		VFC-080ZE-727D	VFC-080ZE-707N
10	2,650	1,200		VFC-100ZE-927D	VFC-100ZE-907N
12	4,000	1,690		VFC-120ZE-928D	VFC-120ZE-908N
14	3,900	1,570		VFC-140ZE-928D	VFC-140ZE-908N
<b>Two-Way Butterfly Valve Assemblies – ANSI Class 150 Flanges <sup>2</sup></b>					
2-1/2	160	78	240 psig	VFC-025VE-722D	VFC-025VE-702N
3	185	123		VFC-030VE-722D	VFC-030VE-702N
4	375	250		VFC-040VE-722D	VFC-040VE-702N
5	790	360		VFC-050VE-724D	VFC-050VE-704N
6	1,350	510		VFC-060VE-725D	VFC-060VE-705N
8	2,800	1,060		VFC-080VE-726D	VFC-080VE-706N
10	4,300	1,630		VFC-100VE-727D	VFC-100VE-707N
12	6,650	2,530		VFC-120VE-728D	VFC-120VE-708N
14	7,650	2,900		VFC-140VE-927D	VFC-140VE-907N
16	9,800	3,700	VFC-160VE-928D	VFC-160VE-908N	

1. Maximum closeoff pressure for ANSI Class 300 valves is 740 psig for fluid temperatures below 100°F, and 550 psig for fluid temperatures at 250°F. Maximum steam pressure is 150 psig for On/Off service and 50 psig for modulating service.  
 2. Maximum closeoff pressure for ANSI Class 150 valves is 280 psig for fluid temperatures below 100°F, and 240 psig for fluid temperatures at 250°F. Maximum steam pressure is 150 psig for On/Off service and 50 psig for modulating service.

## VF Series Two-Way, Non-Spring Return, Electric Actuated, High-Pressure, High-Temperature Butterfly Valve Assemblies (Continued)

### Technical Specifications

VF Series Two-Way, Industrial Grade, Non-Spring Return, Electrically Actuated, High-Pressure, High-Temperature Butterfly Valve Assemblies		
<b>Service<sup>1</sup></b>		Hot Water, Chill Water, Condenser Water, and Steam
<b>Fluid Temperature Limits</b>	<b>Water</b>	-20 to 500°F (-29 to 260°C)
	<b>Steam</b>	On/Off Applications: 150 psig (1,034 kPa) saturated steam at 366°F (185°C) Modulating Applications: 50 psig saturated steam at 298°F (148°C)
<b>Maximum Closeoff</b>	<b>ANSI Class 150</b>	280 psig at 100°F 240 psig at 250°F 100 psig at 500°F
	<b>ANSI Class 300</b>	720 psig at 100°F 550 psig at 250°F 100 psig at 500°F
<b>End Connection</b>		Fully Lugged
<b>Actuator Ambient Operating Temperature Limits</b>		-40 to 150°F (-40 to 66°C) Internal Actuator Heater is provided standard
<b>Air Supply Pressure</b>		70 to 90 psig, 80 psig (551 kPa) nominal), 140 psig (965 kPa) maximum
<b>Materials</b>	<b>Body</b>	Carbon Steel, ASTM A216 GR WCB/A516 GR 70
	<b>Disc</b>	Stainless Steel, ASTM A 351 GR CF8M
	<b>Stem</b>	17-4 PH Stainless Steel, ASTM A564-Type 630
	<b>Taper Pin (Two Locations)</b>	17-4 PH Stainless Steel, ASTM A564-Type 630 316 Stainless Steel, ASTM 276 Type 316
	<b>Disc Spacer (Two Locations)</b>	316 Stainless Steel, ASTM 276 Type 316
	<b>Gland Ring</b>	216 Stainless Steel, ASTM 276 Type 316
	<b>Stem Seal</b>	One Carbon Fiber Ring and Three TFE Rings
	<b>Thrust Washer</b>	316 Stainless Steel, ASTM 276 Type 316
	<b>Gland Retainer</b>	Carbon Steel, ASTM A216 GR WCB/A516 GR 70
	<b>Stud (Two Locations)</b>	316 Stainless Steel, ASTM A193-B8M
	<b>Lock Washer (Two Locations)</b>	18-8 Stainless Steel
	<b>Hex Nut (Two Locations)</b>	18-8 Stainless Steel
	<b>Seat Assembly</b>	RTFE with Silicone Rubber O-Ring
	<b>Seat Retainer</b>	Carbon Steel, ASTM A516 GR 70
	<b>Cap Screw (Eight Locations)</b>	Alloy Steel
	<b>O-Ring Gasket</b>	PTFE
<b>Locating Plug®</b>	Carbon Steel, Phosphate Coated	
<b>Bellville Washer and Grounding Washer</b>	18-8 Stainless Steel (For 14 and 16 in. ANSI Class 150 Valves and 14 in. ANSI Class 300 Valves)	

1. Refer to VDI 2035 Standard for recommended proper water treatment.