

Three-Way, Industrial-Grade, Non-Spring Return, High Pressure Pneumatic Actuated, Standard-Pressure, Standard-Temperature Butterfly Valve Assemblies

Description

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

Features

- non-spring return (drive open, drive closed)
- ANSI Class 125/150 flanges
- valve body: cast iron
- disc: ductile iron coated with Nylon 11
- valve stem: 416 stainless steel
- seat: EPDM

- fluid temperature rating: -40 to 250°F
- actuator ambient temperature rating: -13 to 200°F
- air supply pressure: 70 to 90 psig (80 psig nominal; 140 psig maximum)
- actuator body material: anodized extruded aluminum
- actuator end caps: polyester coated cast aluminum
- valve assemblies for On/Off applications come standard with a 24 or 120 VAC solenoid valve with speed controls
- valve assemblies for proportional applications come standard with a valve actuator positioner



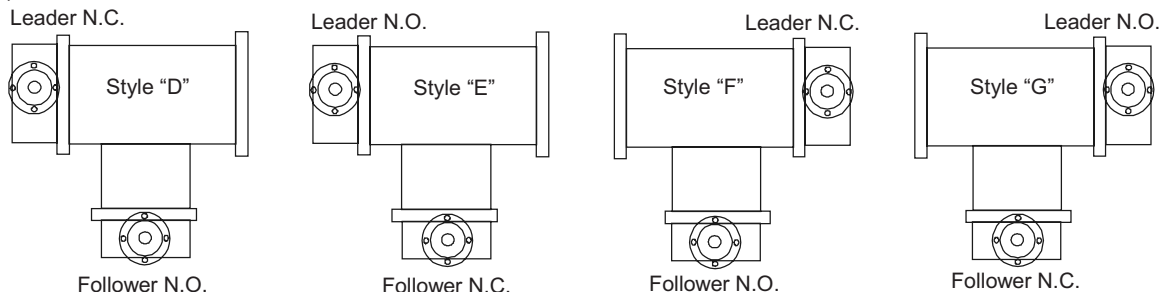
Three-Way Valve with Industrial-Grade, Non-Spring Return, V-909x Series High Pressure Pneumatic Actuator

Selection Chart

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

Actuator				On/Off ¹	Proportional (With Positioner)
Size, in.	Cv at 90°	Cv at 60°	Closeoff		
Three-Way Butterfly Valve Assemblies² – 175 psig Closeoff Pressure; 75 psig Dead-End Service					
2	144	61	175	VFD-020HB-020C	VFD-020HB-020B
2-1/2	282	107	175	VFD-025HB-020C	VFD-025HB-020B
3	461	154	175	VFD-030HB-020C	VFD-030HB-020B
4	841	274	175	VFD-040HB-030C	VFD-040HB-030B
5	1,376	428	175	VFD-050HB-030C	VFD-050HB-030B
6	1,850	567	175	VFD-060HB-040C	VFD-060HB-040B
8	3,316	1,081	175	VFD-080HB-042C	VFD-080HB-042B
10	5,430	1,710	175	VFD-100HB-060C	VFD-100HB-060B
12	8,077	2,563	175	VFD-120HB-060C	VFD-120HB-060B
Three-Way Butterfly Valve Assemblies² – 50 psig Closeoff Pressure; Not Rated for Dead-End Service					
4	841	274	50	VFD-040LB-030C	VFD-040LB-030B
5	1,376	428	50	VFD-050LB-030C	VFD-050LB-030B
6	1,850	567	50	VFD-060LB-030C	VFD-060LB-030B
8	3,316	1,081	50	VFD-080LB-042C	VFD-080LB-042B
10	5,430	1,710	50	VFD-100LB-042C	VFD-100LB-042B
12	8,077	2,563	50	VFD-120LB-060C	VFD-120LB-060B

1. On/Off assemblies come with a 120 VAC solenoid valve and speed controls. If a 24 VAC solenoid valve is desired, change the "C" at the end of the code number to an "E".
2. Code numbers listed above are three-way valves, style "D". For styles "E", "F", or "G" change the "D" in the third digit of the code number to the desired style. Example: VFE-xxxxx-xxxx, VFF-xxxxx-xxxx, VFG-xxxxx-xxxx.



Three-Way Valve Body Styles

VF Series Three-Way, Industrial-Grade, Non-Spring Return, High Pressure Pneumatic Actuated, Standard-Pressure, Standard-Temperature Butterfly Valve Assemblies (Continued)

Repair Information

If the VF Series Three-Way, Industrial Grade, Non-Spring Return, High Pressure Pneumatically 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.

Technical Specifications

VF Series Three-Way, Industrial Grade, Non-Spring Return, High Pressure Pneumatically Actuated, Standard-Pressure, Standard-Temperature Butterfly Valve Assemblies		
Service¹		Hot Water, Chill Water, Condenser Water, and 50/50 Glycol Solutions
Fluid Temperature Limits	Water	-40 to 250°F (-40 to 121°C)
	Steam	Not Rated for Steam Service
Maximum Closeoff	2 through 12 in. Type "H"	175 psig (1,206 kPa) Bidirectional 75 psig (517 kPa) Dead-End Service
	4 through 12 in. Type "L"	50 psig (345 kPa) Bidirectional Not Rated for Dead-End Service
Flow Characteristics		Equal Percentage
Maximum Fluid Velocity		30 ft/second (9 m/second)
End Connection		Fully Lugged, designed to be installed between ANSI 125/150 lb flanges
Actuator Ambient Operating Temperature Limits		-40 to 200°F (-40 to 93°C)
Air Supply Pressure		70 to 90 psig, 80 psig (551 kPa) nominal), 140 psig (965 kPa) maximum
Materials	Body	Cast Iron, Red Epoxy finish
	Disc	Ductile Iron Coated with Nylon 11
	Seat	Ethylene Propylene Diene Monomer (EPDM)
	Stem	416 Stainless Steel (2 through 12 in.) 304 Stainless Steel (14 through 20 in.)
	Tee	Cast Iron

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