

Three-Way, Industrial-Grade, Non-Spring-Return, V-909x Series High-Pressure Pneumatically Actuated, Standard-Pressure, Standard-Temperature Butterfly Valve Assemblies

Description

VF Series Three-Way, Industrial-Grade, Non-Spring-Return, V-909x Series High-Pressure Pneumatically Actuated, Standard-Pressure, Standard-Temperature Butterfly Valves are specifically designed for a wide range of HVAC applications, including two-position and modulating control of hot, chilled, or condenser water, and 50/50 glycol solutions. All valves are factory tested for bubble-tight shutoff at 100% of the fully rated pressure. These valves are bidirectional, allowing positive shutoff with the flow in either direction.

Refer to the *VF Series Standard-Pressure, Standard-Temperature Butterfly Valves Product Bulletin (LIT-977205P)* for important product application information.

Features

- low seating/unseating torques
- bubble-tight shutoff
- broad range of pre-assembled actuators

- compatible with all types of American National Standards Institute (ANSI) 125/150 slip-on and weld-neck flanges
- high-integrity components
- air supply pressure of 70 to 90 psig (80 psig nominal; 140 psig maximum)
- 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

Repair Information

If the VF Series Butterfly Valve Assembly fails to operate within its specifications, refer to the *VF Series Standard-Pressure, Standard-Temperature Butterfly Valves Product Bulletin (LIT-977205P)* for a list of repair parts available.



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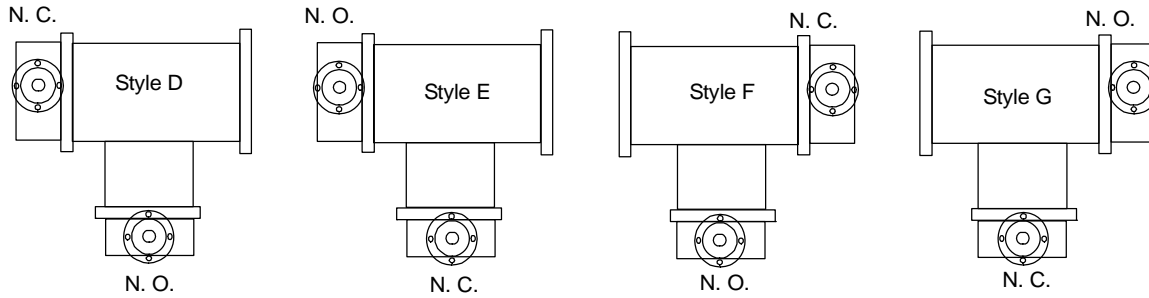
Selection Chart

Valve Code Number	Actuator				On/Off ¹	Proportional (with Positioner)
	Size, in.	Cv at 90°	Cv at 70°	Closeoff Pressure, psig		
Three-Way, Non-Spring Return² — 175 psig Closeoff Pressure, 75 psig Dead-End Service						
VFD-020HB	2	144	84	175	VFD-020HB-020C	VFD-020HB-020B
VFD-025HB	2-1/2	282	163	175	VFD-025HB-020C	VFD-025HB-020B
VFD-030HB	3	461	267	175	VFD-030HB-020C	VFD-030HB-020B
VFD-040HB	4	841	496	175	VFD-040HB-030C	VFD-040HB-030B
VFD-050HB	5	1,376	775	175	VFD-050HB-030C	VFD-050HB-030B
VFD-060HB	6	1,850	1,025	175	VFD-060HB-040C	VFD-060HB-040B
VFD-080HB	8	3,316	1,862	175	VFD-080HB-042C	VFD-080HB-042B
VFD-100HB	10	5,430	2,948	175	VFD-100HB-060C	VFD-100HB-060B
VFD-120HB	12	8,077	4,393	175	VFD-120HB-060C	VFD-120HB-060B
Three-Way, Non-Spring Return² — 50 psig Closeoff Pressure; Not Rated for Dead-End Service						
VFD-040LB	4	841	496	50	VFD-040LB-030C	VFD-040LB-030B
VFD-050LB	5	1,376	775	50	VFD-050LB-030C	VFD-050LB-030B
VFD-060LB	6	1,850	1,025	50	VFD-060LB-030C	VFD-060LB-030B
VFD-080LB	8	3,316	1,862	50	VFD-080LB-042C	VFD-080LB-042B
VFD-100LB	10	5,430	2,948	50	VFD-100LB-042C	VFD-100LB-042B
VFD-120LB	12	8,077	4,393	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 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-xxxx-xxxx, VFF-xxxx-xxxx, or VFG-xxxx-xxxx. See the following figure.

Three-Way, Industrial-Grade, Non-Spring-Return, V-909x Series High-Pressure Pneumatically Actuated, Standard-Pressure, Standard-Temperature Butterfly Valve Assemblies (Continued)



Three-Way Valve Body Styles

Technical Specifications

Three-Way, Industrial-Grade, Non-Spring-Return, V-909x Series High-Pressure Pneumatically Actuated, Standard-Pressure, Standard-Temperature Butterfly Valve Assemblies ¹		
Service	Hot, Chilled, or Condenser Water, and 50/50 Glycol Solutions (Not Designed for Use in Steam Applications)	
Body Styles and Sizes	Three-Way, 2 through 12 in., Fully Lugged	
Fluid Temperature Limits	-40°F to 250°F (-40°C to 121°C)	
Body Pressure Rating	175 psig	
Maximum Fluid Velocity	30 ft/second (9 m/second)	
Rangeability	Refer to the <i>VF Series Standard-Pressure, Standard-Temperature Butterfly Valves Product Bulletin (LIT-977205P)</i> .	
Leakage	Bubble Tight	
Flow Characteristics	Modified Equal Percentage	
Materials	Body	Cast Iron, ASTM A126 Class B
	Tee (Three-Way Valves Only)	Cast Iron
	Disc	Ductile Iron, Nylon 11 Coated, ASTM A536 Gr 65-45-12
	Seat	Ethylene Propylene Diene Monomer (EPDM)
	Stem	416 Stainless Steel
Ambient Temperature Limits	Storage	-20 to 150°F (-29 to 66°C), Preferably 40 to 85°F (4 to 29°C)
	Operating	-40 to 200°F (-40 to 95°C)

1. Refer to the *VF Series Standard-Pressure, Standard-Temperature Butterfly Valves Product Bulletin (LIT-977205P)* for actuator specifications.