

Three-Way, Industrial-Grade, Spring-Return, V-919x Series High-Pressure Pneumatically Actuated, Standard-Pressure, Standard-Temperature Butterfly Valve Assemblies

Description

VF Series Three-Way, Industrial-Grade, Spring-Return, V-919x 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 psig to 90 psig (80 psig nominal; 140 psig maximum)
- valve assemblies for on/off applications come standard with a 24 VAC or 120 VAC solenoid valve with speed controls
- valve assemblies for proportional applications come standard with a valve actuator positioner



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Repair Information

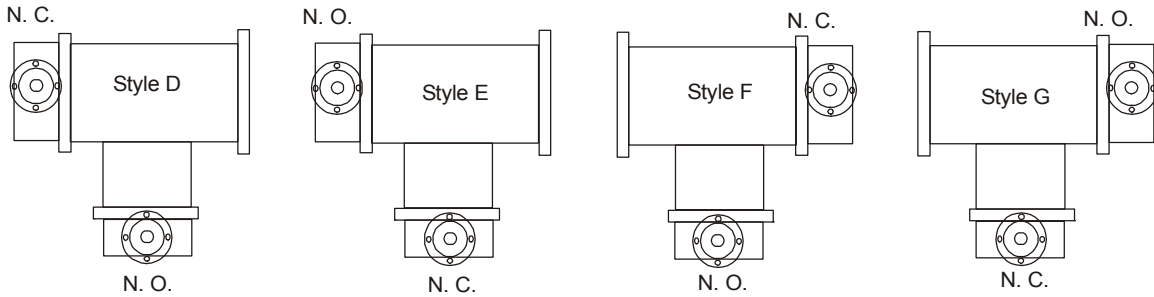
If the VF Series Butterfly Valve Assembly fails to operate within its specifications, refer to the *VF Series Standard-Pressure, Standard-Temperature Butterfly Valves Product Bulletin (LIT-977205P)* for a list of repair parts available.

Selection Chart

Valve Code Number	Actuator				On/Off ¹	Proportional (with Positioner)
	Size, in.	Cv at 90°	Cv at 60°	Closeoff Pressure, psig		
Three-Way, Spring Return² — 175 psig Closeoff Pressure; 75 psig Dead-End Service						
VFD-020HB	2	144	61	175	VFD-020HB-330C	VFD-020HB-330B
VFD-025HB	2-1/2	282	107	175	VFD-025HB-340C	VFD-025HB-340B
VFD-030HB	3	461	154	175	VFD-030HB-340C	VFD-030HB-340B
VFD-040HB	4	841	274	175	VFD-040HB-432C	VFD-040HB-432B
VFD-050HB	5	1,376	428	175	VFD-050HB-442C	VFD-050HB-442B
VFD-060HB	6	1,850	567	175	VFD-060HB-530C	VFD-060HB-530B
VFD-080HB	8	3,316	1,081	175	VFD-080HB-640C	VFD-080HB-640B
VFD-100HB	10	5,430	1,710	175	VFD-100HB-740C	VFD-100HB-740B
VFD-120HB	12	8,077	2,563	175	VFD-120HB-830C	VFD-120HB-830B
Three-Way, Spring Return² — 50 psig Closeoff Pressure; Not Rated for Dead-End Service						
VFD-040LB	4	841	274	50	VFD-040LB-340C	VFD-040LB-340B
VFD-050LB	5	1,376	428	50	VFD-050LB-432C	VFD-050LB-432B
VFD-060LB	6	1,850	567	50	VFD-060NB-442C	VFD-060NB-442B
VFD-080LB	8	3,316	1,081	50	VFD-080NB-530C	VFD-080NB-530B
VFD-100LB	10	5,430	1,710	50	VFD-100LB-640C	VFD-100LB-640B
VFD-120LB	12	8,077	2,563	50	VFD-120LB-740C	VFD-120LB-740B

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-xxxxx-xxxx, VFF-xxxxx-xxxx, or VFG-xxxxx-xxxx. See the following figure.

Three-Way, Industrial-Grade, Spring-Return, V-919x Series High-Pressure Pneumatically Actuated, Standard-Pressure, Standard-Temperature Butterfly Valve Assemblies (Continued)



Three-Way Valve Body Styles

Technical Specifications

Three-Way, Industrial-Grade, Spring-Return, V-919x 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 in. through 12 in., Fully Lugged	
Fluid Temperature Limits	-20°F to 250°F (-29°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°F to 150°F (-29°C to 66°C), Preferably 40°F to 85°F (4°C to 29°C)
	Operating	-20°F to 200°F (-29°C to 95°C)

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