

Two-Way, Industrial-Grade, 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

- spring return
- ANSI Class 125/150 flanges
- valve body: cast iron
- disc: ductile iron coated with Nylon 11
- valve stem: 2 through 12 in. 416 stainless steel; 14 through 20 in. 304 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

Repair Information

If the VF Series Two-Way, Industrial Grade, 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.



Two-Way Valve with Industrial-Grade Spring Return, V-919x Series Spring Return High Pressure Pneumatic Actuator

Selection Chart

VF Series Two-Way, Industrial Grade, 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	Spring Closed	Spring Open	Spring Closed	Spring Open
Two-Way Butterfly Valve Assemblies – 150 or 175 psig Closeoff Pressure; 75 psig Dead-End Service							
2	144	61	175	VFC-020HB-320C	VFN-020HB-320C	VFC-020HB-320B	VFN-020HB-320B
2-1/2	282	107	175	VFC-025HB-330C	VFN-025HB-320C	VFC-025HB-330B	VFN-025HB-320B
3	461	154	175	VFC-030HB-340C	VFN-030HB-330C	VFC-030HB-340B	VFN-030HB-330B
4	841	274	175	VFC-040HB-450C	VFN-040HB-440C	VFC-040HB-450B	VFN-040HB-440B
5	1,376	428	175	VFC-050HB-432C	VFN-050HB-422C	VFC-050HB-432B	VFN-050HB-422B
6	1,850	567	175	VFC-060HB-442C	VFN-060HB-432C	VFC-060HB-442B	VFN-060HB-432B
8	3,316	1,081	175	VFC-080HB-640C	VFN-080HB-620C	VFC-080HB-640B	VFN-080HB-620B
10	5,430	1,710	175	VFC-100HB-740C	VFN-100HB-720C	VFC-100HB-740B	VFN-100HB-720B
12	8,077	2,563	175	VFC-120HB-750C	VFN-120HB-730C	VFC-120HB-750B	VFN-120HB-730B
14	10,538	3,384	150	VFC-140HC-760C	VFN-140HC-820C	VFC-140HC-760B	VFN-140HC-820B
16	13,966	4,483	150	VFC-160HC-840C	VFN-160HC-830C	VFC-160HC-840B	VFN-160HC-830B
18	17,214	5,736	150	VFC-180HC-850C	VFN-180HC-830C	VFC-180HC-850B	VFN-180HC-830B
20	22,339	7,144	150	VFC-200HC-860C	VFN-200HC-840C	VFC-200HC-860B	VFN-200HC-840B
Two-Way Butterfly Valve Assemblies – 50 psig Closeoff Pressure; Not Rated for Dead-End Service							
4	841	274	50	VFC-040LB-340C	VFN-040LB-330C	VFC-040LB-340B	VFN-040LB-330B
5	1,376	428	50	VFC-050LB-440C	VFN-050LB-340C	VFC-050LB-440B	VFN-050LB-340B
6	1,850	567	50	VFC-060LB-432C	VFN-060LB-422C	VFC-060LB-432B	VFN-060LB-422B
8	3,316	1,081	50	VFC-080LB-442C	VFN-080LB-432C	VFC-080LB-442B	VFN-080LB-432B
10	5,430	1,710	50	VFC-100LB-550C	VFN-100LB-530C	VFC-100LB-550B	VFN-100LB-530B
12	8,077	2,563	50	VFC-120LB-660C	VFN-120LB-630C	VFC-120LB-660B	VFN-120LB-630B
14	10,538	3,384	50	VFC-140LC-740C	VFN-140LC-720C	VFC-140LC-740B	VFN-140LC-720B
16	13,966	4,483	50	VFC-160LC-740C	VFN-160LC-730C	VFC-160LC-740B	VFN-160LC-730B
18	17,214	5,736	50	VFC-180LC-750C	VFN-180LC-730C	VFC-180LC-750B	VFN-180LC-730B
20	22,339	7,144	50	VFC-200LC-830C	VFN-200LC-820C	VFC-200LC-830B	VFN-200LC-820B

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".

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

Technical Specifications

VF Series Two-Way, Industrial Grade, 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
	14 through 20 in. Type "H"	150 psig (1,034 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.)

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