

# Butterfly Control Valves

## VFF2 Two-way Butterfly Control Valves



Resilient seat two-way valves provide control for HVAC system applications including chilled water, hot water, cooling tower water, and thermal storage systems.

**Body Pattern:** 2 way (NC, NC/NO; NSR)

**Valve Action:** Normally Closed, convertible to Normally Open with Spring Return DCA

**Connection Type:** Lugged

**Controlled Medium:** Chilled or hot water with up to 50% Glycol; not for use with steam or fuels.

**Flow Characteristic:** Modified Equal Percent

**Mounting:** ANSI Flanged

**Static Pressure Rating (max):** 250 psi (1724 kPa)

**Actuator Ambient Temperature Ratings:** -5 F to 140 F (-20 C to 60 C)

**Temperature Range:** -40 F to 250 F (-40 C to 121 C)

**Number of Flange Bolts**

For 2 in., 2-1/2 in., 3 in. valves: 4

For 4 in., 5 in., 6 in., 8 in., valves: 8

For 10 in., 12 in., 14 in. valves: 12

For 16 in., 18 in. valves: 16

For 20 in. valves: 20

**Flange Bolt Thread**

For 2 in., 2-1/2 in., 3 in., 4 in. valves: 5/8 in. -11 pitch

For 5 in., 6 in., 8 in., valves: 3/4 in. -10 pitch

For 10 in., 12 in. valves: 7/8 in. -9 pitch

For 14 in., 16 in., 18 in., 20 in. valves: 1-1/8 in. -7 pitch

**Materials**

**(Body):** Polyester-coated cast iron ASTM A126 Class B

**(Stem):** 416 Stainless Steel

**(Seat):** Peroxide-cured EPDM resilient seat

**(Plug/Ball/Disc):** Nylon 11-coated ductile iron (optional: aluminum, bronze, and stainless steel)

**Approvals**

**CE:** Compliant

**Underwriters Laboratories, Inc:** C/US UL873, Plenum Rated

**Accessories:**

**VFF50-0400-**Position status monitor for VFF butterfly valves with high pressure pneumatic actuators

**NOTE:** Valves with Manual Operators use over-cut disks to achieve 250 psid close-off, and cannot be automated due to their high torque

# Butterfly Control Valves

Butterfly Valves	Fitting	Body Pattern	Size	Disk size (close-off)	Pressure Rating	Valve trim	Actuator secondary Specification	Actuator primary Specification	Description	Actuator Type		
VF	Butterfly Valve, resilient seat											
	F	Flanged fitting										
		1	2-way (spring return normally open)									
		2	2-way (non-spring return: Spring return normally closed or field-convertible)									
		3	3-way A-B-AB (mixing/diverting)									
		6	3-way A-AB-B (diverting/mixing)									
		F	2 inch (DN50)									
		G	2-1/2 inch (DN65)									
		H	3 inch (DN80)									
		J	4 inch (DN100)									
		K	5 inch (DN125)									
		L	6 inch (DN150)									
		M	8 inch (DN200)									
		N	10 inch (DN250)									
		P	12 inch (DN300)									
		R	14 inch (DN350)									
		S	16 inch (DN400)									
		T	18 inch (DN450)									
		U	20 inch (DN500)									
		V	Undercut disk (lower actuator torque; 50 psid close-off)									
		W	Full diameter disk (high close-off)									
			1	ANSI 150 psig body pressure rating								
			2	ANSI 250 psig body pressure rating								
			Y	Nylon-coated disk, EPDM seat								
			2	NEMA 2 actuator housing (Honeywell DCA)								Electric
			6	NEMA 6 actuator housing with manual operator and heater								Electric
			X	NEMA 4X actuator housing with manual operator and heater								Electric
			8	Spring Range 8-13 psi for 20 psi pneumatic actuator								Pneumatic
			C	24 Vac solenoid for 80 psi pneumatic actuator								Pneumatic
			D	Electro-pneumatic positioner for 80 psi actuator								Pneumatic
			E	120 Vac solenoid for 80 psi pneumatic actuator								Pneumatic
			P	Pneumatic positioner for modulating applications								Pneumatic
			X	Standard, two-position control only								Manual
			L	Lever operator for dead end service								Manual
			G	Geared operator for dead end service								Manual
			A	Floating actuator								Electric
			B	Modulating actuator								Electric
			C	Two-position 24 Vac spring return actuator								Electric
			D	Modulating spring return actuator								Electric
			E	Two-position 120 Vac spring return actuator								Electric
			P	Pneumatic actuator, spring return 20 psi								Pneumatic
			R	Pneumatic actuator, push-pull 80 psi								Pneumatic
			S	Pneumatic actuator, spring return 80 psi								Pneumatic
			X	Valve body only, for dead end service								Man
			I									
VF	F	2	J	V	1	Y	2	D	2-way, 4 inch flanged resilient-seat butterfly valve, undercut disk (50 psid close-off) modulating/floating control, spring return normally closed.			

Commercial Components

\*\*VFF50-0400 position status monitor for VFF butterfly valves with high pressure pneumatic actuators is available to be ordered separately or will be assembled to the valve if ordered at the same time. It is compatible with any high pressure pneumatic actuators without pneumatic or electro-pneumatic positioner (e.g. VFF...XR/XS, VFF...CR/CS, or VFF...ER/ES).