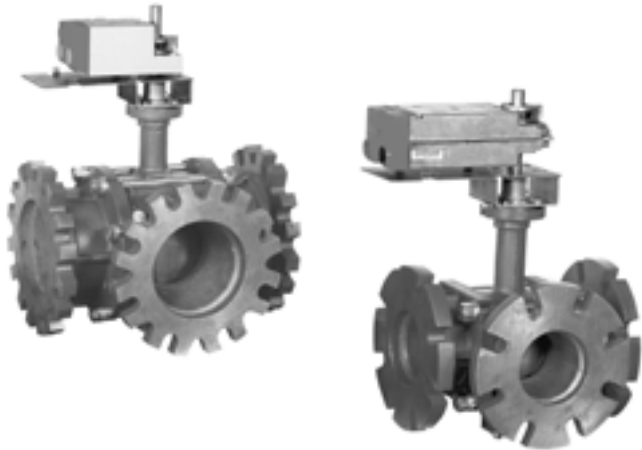


# Control Ball Valves

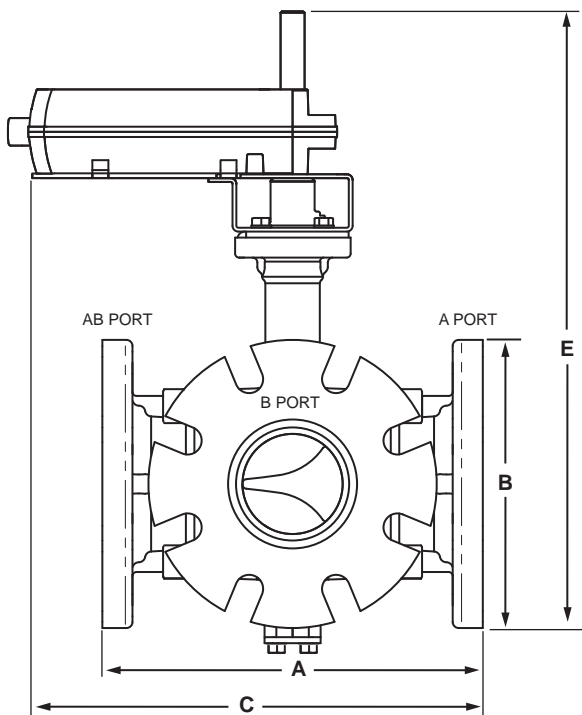
## VBF3 Three-way Flanged Control Ball Valve



The VBF3 Three-Way Ball Valve Assemblies, with and without actuators, control hot and chilled water with glycol solutions up to 50% in closed loop heating, ventilating, and air conditioning (HVAC) systems to provide two-position or modulating functions. These valve assemblies can be ordered with or without factory-mounted non-spring return or spring return direct-coupled actuators (DCA).

- Sizes from 4 to 6 inch with ANSI Class 125 flanged connections
- Equal percentage or linear flow characteristics
- Choice of four, factory-installed actuation control schemes: Floating, Modulating (2-10 V), Spring Return 24V 2-Position, Spring Return Modulating/Floating
- Field configurable for normally open or normally closed fail-safe position
- Removable manual operating handle to control valve during installation or in an event of power failure
- ANSI Class IV A-port seat leakage (0.01% of Cv)
- Optional NEMA 3R (IP54) rated enclosure for outdoor applications
- Option of four actuator mounting positions on the valve
- Wide range of Cv choices from 91 to 650
- Valve ball and stem 316 stainless steel
- Non-isolating mixing or diverting control

### Dimensions in inches (millimeters)



**Valve Type:** Control Ball Valve

**Body Pattern:** Three-way

**Connection Type:** Flanged

**Flow Characteristic:** Linear (B-AB); Equal Percentage (A-AB)

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

**Leakage Rating:** ANSI Class IV (A port only); B port ~2% leakage

**Maximum Safe Operating Pressure:** 240 psi (1655 kPa)

**Maximum Differential Pressure Ratings (Close-off):** 70 psi (483 kPa)

**Fluid Temperature Range:** -22 F to +250 F (-30 C to +121 C)

#### Materials

**(Body):** Cast Iron

**(Stem):** 316 Stainless Steel

**(Seat):** Teflon®

**(Plug/Ball/Disc):** 316 stainless steel

Size (in.)	Model Number	A in. (mm)	B in. (mm)	C in. (mm)	D (depth) (not shown) in. (mm)	E in. (mm)	Wt. lb (kg)
4	VBF3J	11-7/8 (278)	9 (229)	14-1/8 (337)	10-3/8 (229)	18-1/2 (470)	75 (34)
5	VBF3K	13-7/8 (352)	10 (254)	15-1/8 (362)	12 (254)	19-3/8 (483)	90 (41)
6	VBF3L	15-7/8 (403)	11 (278)	16-1/8 (410)	13-3/8 (521)	20-1/2 (521)	105 (48)

M13733A

# Control Ball Valves

Valve	Fitting	Body/Flow	Size	C <sub>v</sub>	T/P	Trim	Enclosure	Actuator	
VB = valve, ball									
	F = Flanged								
	N = Female NPT threaded								
		2 = 2 way							
		3 = 3 way							
			inch	S.I. metric					
			<b>A</b>	1/2	DN15				
			<b>B</b>	3/4	DN20				
			<b>C</b>	1	DN25				
			<b>D</b>	1-1/4	DN32				
			<b>E</b>	1-1/2	DN40				
			<b>F</b>	2	DN50				
			<b>G</b>	2-1/2	DN65				
			<b>H</b>	3	DN80				
			<b>J</b>	4	DN100				
			<b>K</b>	5	DN125				
			<b>L</b>	6	DN150				
			<b>B</b>	C <sub>v</sub> Designator (specific values vary by valve size)					
			<b>C</b>						
			<b>D</b>						
			<b>E</b>						
			<b>F</b>						
			....						
			<b>S</b>						
			<b>T</b>						
			<b>U</b>						
			<b>1</b>						
			<b>2</b>						
			<b>3</b>						
			<b>4</b>						
			<b>5</b>						
			<b>6</b>						
			<b>7</b>						
				<b>1 = ANSI Valve construction</b>					
				<b>3 = ANSI 300 Valve construction</b>					
						<b>P = Plated (chrome or nickel)</b>			
						<b>S = Stainless Steel</b>			
							<b>0 = no enclosure</b>		
							<b>R = NEMA 3R enclosure</b>		
								<b>X = no actuator</b>	
								<b>A = NSR, Floating, conduit</b>	
								<b>B = NSR, Modulating</b>	
								<b>C = SR, 2-Position, 24 Vac</b>	
								<b>D = SR, Floating/Modulating</b>	
								<b>F = NSR, Floating, open terminal strip, 1/2 and 3/4 inch only</b>	
VB	F	2	A	B	1	S	0	A	

Commercial Components