

## Flowrite™ VF 599 Series, 3-Way Valves, 1/2 to 2-Inch



### Description

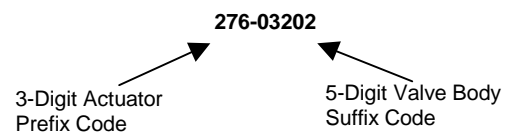
The Flowrite VF 599 Series ANSI Class 250 3-Way Valve bodies work with a Flowrite Series actuator with a 3/4-inch (20 mm) stroke. Typical applications include mixing of hot or chilled water and the control of glycol solutions up to 50%.










### Features

- Direct-coupled universal bonnet
- Bronze trim
- ANSI Leakage Class IV (0.01% of Cv)

### Product Numbers

Use the product numbers in the tables to order the valve and the actuator assembled together. The product number consists of a 3-digit prefix code, a hyphen, and a 5-digit suffix code. The prefix specifies an actuator. The suffix specifies the valve body.



3-Way, Equal Percentage Valve & Actuator Assemblies with Bronze Trim, Normal Duty Packing, and Female NPT Connections										
 Valve Body	Line Size, In. (mm)	Cv (Kvs)	Electro-hydraulic, 24V			Electro-mechanical, 24V				
			SKD62U 0-10V, 4-20 mA, SR	SKD82.50U 3 Pos, NSR	SKD82.51U 3 Pos, SR	SQX62U 0-10V, 4- 20 mA, NSR	SQX82.00U 3 Pos, 120 s, NSR	SQX82.03U 3 Pos, 30 s, NSR	599-03609 0-10V, SR	599-03611 2 Pos, SR
										
Actuator Prefix Code										
			274	275	276	271	272	273	298	299
599-03198	1/2 (15)	1 (0.85)	274-03198	275-03198	276-03198	271-03198	272-03198	273-03198	298-03198	299-03198
599-03199	1/2 (15)	1.6 (1.4)	274-03199	275-03199	276-03199	271-03199	272-03199	273-03199	298-03199	299-03199
599-03200	1/2 (15)	2.5 (2.2)	274-03200	275-03200	276-03200	271-03200	272-03200	273-03200	298-03200	299-03200
599-03201	1/2 (15)	4 (3.4)	274-03201	275-03201	276-03201	271-03201	272-03201	273-03201	298-03201	299-03201
599-03202	3/4 (20)	6.3(5.4)	274-03202	275-03202	276-03202	271-03202	272-03202	273-03202	298-03202	299-03202
599-03203	1 (25)	10(8.6)	274-03203	275-03203	276-03203	271-03203	272-03203	273-03203	298-03203	299-03203
599-03204	1-1/4 (32)	16 (14)	274-03204	275-03204	276-03204	271-03204	272-03204	273-03204	298-03204	299-03204
599-03205	1-1/2 (40)	25 (22)	274-03205	275-03205	276-03205	271-03205	272-03205	273-03205	298-03205	299-03205
599-03206	2 (50)	40 (34)	274-03206	275-03206	276-03206	271-03206	272-03206	273-03206	298-03206	299-03206

**Technical Data**

<b>Line Size</b>	1/2 to 2 inch (15 to 50 mm)	<b>Controlled Medium</b>	Water, steam, glycol solutions to 50%
<b>Body</b>	Globe style, UNS CA 844 bronze, ANSI Class 250	<b>Medium Temperature</b>	20 to 250°F (-7 to 120°C)
<b>Trim</b>	Bronze	<b>Max. Differential Pressure for Modulating Service</b>	25 psi (173 kPa)
<b>Stem</b>	Stainless steel ASTM A582 Type 303, 3/4-inch (20-mm) stroke	<b>Rangeability</b>	>100:1
<b>Seat</b>	Single seat, metal-to-metal	<b>Leakage Rate</b>	Class IV (0.01% of Cv)
<b>Packing</b>	Ethylene propylene O-ring	<b>Flow Characteristics</b>	Equal Percentage
<b>Close-off Ratings</b>	According to ANSI/FCI 70-2 See Table 1.	<b>Mounting</b>	NEMA 1 (interior only)

**Table 1. Close-Off Ratings in psi (kPa).**

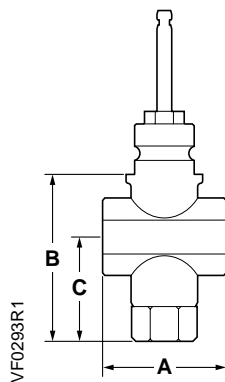
Action	Line Size In. (mm)	Electro-hydraulic		Electro-mechanical	
		SKB...	SKD...	SQX...	599-03609 599-03611
3-way, upper port	1/2 (15)	250 (1724)	250 (1724)	250 (1724)	250 (1724)
	3/4 (20)	250 (1724)	250 (1724)	221 (1524)	250 (1724)
	1 (25)	250 (1724)	203 (1400)	130 (896)	173 (1193)
	1-1/4 (32)	250 (1724)	117 (807)	75 (517)	100 (690)
	1-1/2 (40)	208 (1334)	73 (503)	46 (317)	61 (421)
	2 (50)	126 (869)	44 (303)	28 (193)	37 (255)
3-way, lower port	1/2 (15)	250 (1724)	250 (1724)	250 (1724)	250 (1724)
	3/4 (20)	250 (1724)	250 (1724)	173 (1193)	231 (1593)
	1 (25)	250 (1724)	201 (1386)	112 (772)	149 (1028)
	1-1/4 (32)	250 (1724)	124 (855)	69 (476)	92 (634)
	1-1/2 (40)	250 (1724)	80 (552)	44 (303)	59 (407)
	2 (50)	201 (1386)	49 (338)	27 (186)	36 (248)

**Typical Specifications**

Automatic control valves shall have NPT threaded type fittings, 1/2 through 2-inch (15 through 50 mm) sizes, and shall be ANSI rated to withstand the pressures and temperatures encountered.

Valves shall have metal-to-metal seats, stainless steel stems, and Ethylene propylene O-ring packing.

Valves shall be ANSI Leakage Class IV (0.01% of Cv). Valves shall have a 100:1 rangeability or better.



**Table 2. Valve Dimensions.**

Line Size In. (mm)	A	B	C	Weight lbs. (kg)
1/2 (15)	2-7/8 (72)	4-5/16 (110)	2-11/16 (68)	3 (1.4)
3/4 (20)	3-3/8 (85)	4-5/16 (110)	2-3/4 (69)	4 (1.8)
1 (25)	3-15/16 (100)	4-1/2 (114)	2-7/8 (72)	5 (2.3)
1-1/4 (32)	4-15/16 (125)	4-5/8 (116)	2-15/16 (74)	7 (3.2)
1-1/2 (40)	5-1/8 (130)	4-5/8 (116)	3 (76)	9 (4.1)
2 (50)	6-1/4 (158)	4-3/4 (121)	3-3/16 (81)	13 (5.9)

For complete technical details on valves with stainless steel trim, or union female, angle female, or union male end connections, see *Flowrite™ 599 Series, MT Series Terminal Unit Three-way Valves Technical Instructions*, Document No. 155-185P25.

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