

Two-way Globe Valves

*1/2 to 2-inch Bronze Body
Normally Open or Normally Closed*



Flowrite Two-way Globe Valve.

Description

Designed to work with either a pneumatic or electronic actuator with a 3/4-inch (20 mm) stroke, the Flowrite Two-way Globe Valves are available in ANSI Class 250 for Normally Closed or Normally Open action.

Features

- Direct-coupled bonnet
- Equal percentage or linear flow characteristics
- Brass or stainless steel trim
- Standard- or high-temperature packing
- Close-off up to 250 psi
- Fully serviceable
- Greater than 100:1 rangeability
- Accepts any 3/4-inch stroke Flowrite pneumatic or electronic actuator
- ANSI Leakage Class IV (0.01% of Cv)
- Cartridge-type packing for easy service
- Orderable as a valve only or as a complete valve/actuator assembly

Applications

The Flowrite Two-way Globe Valves are recommended for water, low and high pressure steam, and glycol solutions up to 50 percent.

A-157

Valves

Two-way Globe Valve Specifications

Valve Size	1/2 to 2" (15 to 50 mm)
Body Style	Globe Style Control Valve
Seat Style	Single Seat, Metal to Metal
Action	Normally Closed (NC), Normally Open (NO)
Stem Travel (Stroke)	3/4" (20 mm)
Valve Body	ANSI Class 250
Materials	
Body	UNS CA 844 Bronze
Trim	Brass or Stainless Steel
Stem	Stainless Steel ASTM A582 Type 303
Packing	
Normal Duty	EPDM O-rings
Steam	PTFE V-rings and EPDM O-ring
Operating	
Controlled Medium	Saturated Steam, Water, Glycol Solutions up to 50%
Medium Temperature Range	
Normal Duty Packing	20 to 250°F (-7 to 120°C)
Steam Packing	337°F (170°C) Max.

Max. Recommended Differential Pressure for Modulating Service

Brass Trim	
Liquid	25 psi (173 kPa)
Steam	15 psi (103 kPa)
Stainless Steel Trim	
Liquid	50 psi (345 kPa)
Steam	50 psi (345 kPa)

Max. Inlet Pressure

Water	Refer to Flowrite Reference Section.
Steam	100 psig (690 kPa)

Rangeability	>100:1
Close-off Ratings	According to ANSI/FCI 70-2
Leakage Rate	Class IV (0.01% of Cv)
Flow Characteristics	Equal Percentage or Linear

A-158

Valves

Two-way Globe Valve Body Product Ordering

Normally Open/Normally Closed, Equal Percentage



Connection	Valve Size in. (mm)	Flow Rate Cv (Kvs)	Stroke (in.)	Normally Open Part No.	Normally Closed Part No.
Standard-Temperature Packing — 20 to 250°F (-7 to 120°C)					
Brass Trim					
Female x Female	1/2 (15)	1 (0.9)	3/4	599-03162	599-03180
	1/2 (15)	1.6 (1.4)	3/4	599-03163	599-03181
	1/2 (15)	2.5 (2.2)	3/4	599-03164	599-03182
	1/2 (15)	4 (3.4)	3/4	599-03165	599-03183
	3/4 (20)	6.3 (5.4)	3/4	599-03166	599-03184
	1 (25)	10 (8.6)	3/4	599-03167	599-03185
	1-1/4 (32)	16 (14)	3/4	599-03168	599-03186
	1-1/2 (40)	25 (22)	3/4	599-03169	599-03187
	2 (50)	40 (34)	3/4	599-03170	599-03188
Stainless Steel Trim					
Female x Female	1/2 (15)	1 (0.9)	3/4	599-03108	599-03126
	1/2 (15)	1.6 (1.4)	3/4	599-03109	599-03127
	1/2 (15)	2.5 (2.2)	3/4	599-03110	599-03128
	1/2 (15)	4 (3.4)	3/4	599-03111	599-03129
	3/4 (20)	6.3 (5.4)	3/4	599-03112	599-03130
	1 (25)	10 (8.6)	3/4	599-03113	599-03131
	1-1/4 (32)	16 (14)	3/4	599-03114	599-03132
	1-1/2 (40)	25 (22)	3/4	599-03115	599-03133
	2 (50)	40 (34)	3/4	599-03116	599-03134

Accessories & Service Kits

A-257

Two-way Globe Valve Body Product Ordering






Normally Open/Normally Closed, Linear, Stainless Steel Trim



Connection	Valve Size in. (mm)	Flow Rate Cv (Kvs)	Stroke (in.)	Normally Open Part No.	Normally Closed Part No.
Standard-Temperature Packing — 20 to 250°F (-7 to 120°C)					
Female x Female	1/2 (15)	1 (0.9)	3/4	599-03000	599-03018
	1/2 (15)	1.6 (1.4)	3/4	599-03001	599-03019
	1/2 (15)	2.5 (2.2)	3/4	599-03002	599-03020
	1/2 (15)	4 (3.4)	3/4	599-03003	599-03021
	3/4 (20)	6.3 (5.4)	3/4	599-03004	599-03022
	1 (25)	10 (8.6)	3/4	599-03005	599-03023
	1-1/4 (32)	16 (14)	3/4	599-03006	599-03024
	1-1/2 (40)	25 (22)	3/4	599-03007	599-03025
2 (50)	40 (34)	3/4	599-03008	599-03026	
High-Temperature Packing — 337°F (170°C)					
Female x Female	1/2 (15)	1 (0.9)	3/4	599-03054	599-03072
	1/2 (15)	1.6 (1.4)	3/4	599-03055	599-03073
	1/2 (15)	2.5 (2.2)	3/4	599-03056	599-03074
	1/2 (15)	4 (3.4)	3/4	599-03057	599-03075
	3/4 (20)	6.3 (5.4)	3/4	599-03058	599-03076
	1 (25)	10 (8.6)	3/4	599-03059	599-03077
	1-1/4 (32)	16 (14)	3/4	599-03060	599-03078
	1-1/2 (40)	25 (22)	3/4	599-03061	599-03079
2 (50)	40 (34)	3/4	599-03062	599-03080	

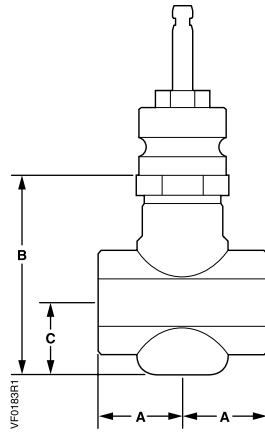
A-159

Flowrite Globe Valve Actuators Product Ordering

Description		Part No.	Actuator Prefix Code	
 4"	Pneumatic	3-8 psi (21-55 kPa)	599-01081	268
		5-10 psi (34-69 kPa)	599-01082	269
		10-15 psi (69 -103 kPa)	599-01083	270
 8"	Pneumatic	Normal Temp.	599-01050	277
		High-Temp.	599-01051	278
 8"	Pneumatic w/ Positioner	Normal Temp. w/Positioner	599-01050 + 599-00426	283
		High-Temp. w/Positioner	599-01051 + 599-00426	284
	Electro-Mechanical	Rack & Pinion 2P, Spring Return	599-03611	299
		Rack & Pinion, 0-10 Vdc, Spring Return	599-03609	298
		24 V, Floating 3P, Non-Spring Return	SAX81.03U	373
		24 V, 0-10 V, 4-20 mA, Non-Spring Return	SAX61.03U	371
	Electro-Hydraulic	24 V, Floating 3P, Spring Return	SKD82.51U	276
		24 V, Floating 3P, Non-Spring Return	SKD82.50U	275
		24 V, 0-10 V, 4-20 mA, Spring Return	SKD62U	274
		24 V, 0-10 V, 4-20 mA, Non-Spring Return	SKD60U	267
		24 V, 0-10 V, 4-20 mA, Spring Return	SKB62U	291

Valves

Two-way Globe Valve Body Dimensions and Weights



Female NPT by Female NPT (FxF)

A-160

Valves

Valve Size	Dimensions			Weight
	A	B	C	FxF
Normally Open				
1/2" (15 mm)	1-7/16" (36 mm)	—	2-15/16" (74 mm)	3 lb. (1.4 kg)
3/4" (20 mm)	1-11/16" (43 mm)	—	3-15/16" (99 mm)	4 lb. (1.8 kg)
1" (25 mm)	2" (50 mm)	—	3-3/4" (96 mm)	5 lb. (2.3 kg)
1-1/4" (32 mm)	2-1/2" (62 mm)	3-3/4" (95 mm)	4-1/8" ¹ (104 mm)	7 lb. (3.2 kg)
1-1/2" (40 mm)	2-9/16" (65 mm)	3-15/16" (99 mm)	4-1/4" ¹ (109 mm) ¹	9 lb. (4.1 kg)
2" (50 mm)	3-1/8" (79 mm)	4-9/16" (115 mm)	4-9/16" ¹ (115 mm) ¹	13 lb. (5.9 kg)
Normally Closed				
1/2" (15 mm)	1-7/16" (36 mm)	—	3-13/16" (97 mm)	3 lb. (1.4 kg)
3/4" (20 mm)	1-11/16" (43 mm)	—	3-13/16" (97 mm)	4 lb. (1.8 kg)
1" (25 mm)	2" (50 mm)	—	3-13/16" (97 mm)	5 lb. (2.3 kg)
1-1/4" (32 mm)	2-1/2" (62 mm)	3-3/4" (95 mm)	3-13/16" (97 mm)	7 lb. (3.2 kg)
1-1/2" (40 mm)	2-9/16" (65 mm)	3-15/16" (99 mm)	3-7/8" (99 mm)	8 lb. (3.6 kg)
2" (50 mm)	3-1/8" (79 mm)	4-9/16" (115 mm)	4-3/16" (106 mm)	16 lb. (7.3 kg)

Table Note

1. This dimension is determined by the union nut.