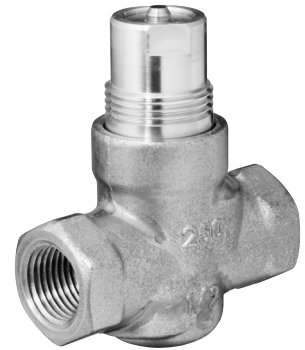


Two-way Valves

1/2 to 1-inch

Normally Open or Normally Closed



Powermite MT Series
Two-way Globe Valve.

Description

The Powermite MT Series Two-way Globe Valves are designed to work with either a pneumatic or electronic actuator with a 7/32-inch (5.5 mm) stroke. Compatible actuators deliver a minimum of 67 lbf. (300 N) of force.

Features

- Direct-coupled universal bonnet/No tools required for installation
- Choice of brass or stainless steel trim
- ANSI Leakage Class IV (0.01% of Cv)
- ANSI Class 250 body
- Available in 3 to 8 psig, 8 to 13 psig or 10 to 15 psig spring ranges with pneumatic actuation
- Rated for 15 psig steam with stainless steel trim
- Interchangeable pneumatic or electronic actuators
- Orderable as a valve only or as a complete valve/actuator assembly

Applications

The Powermite MT Series Globe Valves are used for hot or chilled water or low pressure steam (<15 psig with stainless steel trim only) control on convectors, fan coil units, unit conditioners, radiation, reheat coils, and similar terminal units.

Recommendation:

Only use the MT Series Valve Actuators. When using this valve with a pneumatic actuator, note that MT valve bodies have the spring in the body, rather than the actuator. To order the correct valve body, select the proper spring range.

Alternate spring ranges for pneumatic sequencing are available as valve and actuator factory assemblies only.

A-135

Valves

Two-way MT Series Valve Specifications

Valve Size	1/2 to 1" (15 to 25 mm)
Body Style	Globe
Seat Style	Metal to Metal
Action	NO/NC
Valve Body Rating	ANSI Class 250
Stem Travel (Stroke)	7/32" (5.5 mm)
Materials	
Body	Forged Brass C37700 (1/2 and 3/4 inch) or UNS CA 844 Bronze (1 inch)
Trim	Stainless Steel or Brass
Stem	Stainless Steel ASTM A582 Type 303
Packing	EPDM O-rings
Controlled Medium	Water, Steam, Glycol Solutions up to 50%
Spring Range	
Standard	
Normally Closed	10 to 15 psig (69 to 103 kPa)
Normally Open	3 to 8 psig (21 to 55 kPa)
Optional	
Normally Closed	3 to 8 psig (21 to 55 kPa) 8 to 13 psig (55 to 90 kPa)
Normally Open	8 to 13 psig (55 to 90 kPa) 10 to 15 psig (69 to 103 kPa)

Medium Temperature Range	35 to 250°F (2 to 120°C)
Max. Recommended Differential Pressure for Liquid Modulating Service	
Brass Trim	25 psi (173 kPa)
Stainless Steel Trim	50 psi (345 kPa)
Steam Stainless Steel Trim	15 psi (103 kPa)
Rangeability	
Cv<1	>50:1
Cv≥1	>100:1
Close-off Ratings	According to ANSI/FCI 70-2
Leakage Rate	Class IV (0.01% of Cv)
Flow Characteristics	Modified Equal Percentage
Mounting Location	NEMA 1 (Interior Only)

Refer back to the Selection Charts at the beginning of this section to make sure the configuration is valid.

A-136

Accessories & Service Kits

A-257

Valves

Two-way MT Series Valve Body Product Ordering

Normally Open/Normally Closed, Modified Equal Percentage, Brass 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)	0.4 (0.34)	7/32	599-02030	599-02000
	1/2 (15)	0.63 (0.54)	7/32	599-02032	599-02002
	1/2 (15)	1 (0.85)	7/32	599-02034	599-02004
	1/2 (15)	1.6 (1.37)	7/32	599-02036	599-02006
	1/2 (15)	2.5 (2.14)	7/32	599-02038	599-02008
	1/2 (15)	4 (3.42)	7/32	599-02041	599-02010
	3/4 (20)	6.3 (5.38)	7/32	599-02044	599-02012
	1 (25)	10 (8.55)	7/32	599-02046	599-02014
Female x Union Male	1/2 (15)	0.4 (0.34)	7/32	599-02031	599-02001
	1/2 (15)	0.63 (0.54)	7/32	599-02033	599-02003
	1/2 (15)	1 (0.85)	7/32	599-02035	599-02005
	1/2 (15)	1.6 (1.37)	7/32	599-02037	599-02007
	1/2 (15)	2.5 (2.14)	7/32	599-02039	599-02009
	1/2 (15)	4 (3.42)	7/32	599-02042	599-02011
	3/4 (20)	6.3 (5.38)	7/32	599-02045	599-02013
Angle Female x Union Male	1/2 (15)	2.5 (2.15)	7/32	599-02040	—
	1/2 (15)	4 (3.44)	7/32	599-02043	—

There are no repair parts for this product. Replace the entire valve body if inoperative.

A-137

Valves

Two-way MT Series Valve Body Product Ordering




Normally Open/Normally Closed, Modified Equal Percentage, 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)	0.4 (0.34)	7/32	599-02047	599-02015
	1/2 (15)	0.63 (0.54)	7/32	599-02049	599-02017
	1/2 (15)	1 (0.85)	7/32	599-02051	599-02019
	1/2 (15)	1.6 (1.37)	7/32	599-02053	599-02021
	1/2 (15)	2.5 (2.14)	7/32	599-02055	599-02023
	1/2 (15)	4 (3.42)	7/32	599-02058	599-02025
	3/4 (20)	6.3 (5.38)	7/32	599-02061	599-02027
	1 (25)	10 (8.55)	7/32	599-02063	599-02029
Female x Union Male	1/2 (15)	0.4 (0.34)	7/32	599-02048	599-02016
	1/2 (15)	0.63 (0.54)	7/32	599-02050	599-02018
	1/2 (15)	1 (0.85)	7/32	599-02052	599-02020
	1/2 (15)	1.6 (1.37)	7/32	599-02054	599-02022
	1/2 (15)	2.5 (2.14)	7/32	599-02056	599-02024
	1/2 (15)	4 (3.42)	7/32	599-02059	599-02026
	3/4 (20)	6.3 (5.38)	7/32	599-02062	599-02028
Angle Female x Union Male	1/2 (15)	2.5 (2.15)	7/32	599-02057	—
	1/2 (15)	4 (3.44)	7/32	599-02060	—

There are no repair parts for this product. Replace the entire valve body if inoperative.

Two-way MT Series Valve Actuator Product Ordering

Description		Part No.	Actuator Prefix Code	
 2"	Pneumatic*	3-8 psi (21-55 kPa)	599-01088	257
		8-13 psi (55-90 kPa)	599-01088	258
		10-15 psi (69-103 kPa)	599-01088	256
	Electro-Mechanical	24 V, Floating, Spring Return	SSC81.5U	260
		24 V, Floating, Non-Spring Return	SSC81U	259
		24 V, 0-10 V, Spring Return	SSC61.5U	262
		24 V, 0-10 V, Non-Spring Return	SSC61U	261
	Electro-Mechanical	24 V, Floating, Spring Return	SQS85.53U	266
		24 V, 0-10 V, Spring Return	SQS65.5U	265
		24 V, 0-10 V, Non-Spring Return	SQS65U	264

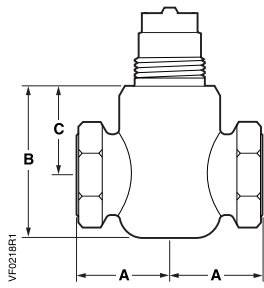
*Powermite MT Series valve bodies have the spring in the body, rather than in the pneumatic actuator. There are different valve part numbers for the different spring ranges.

A-138

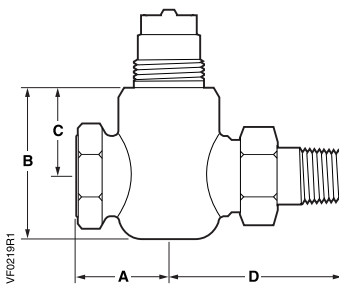
Refer back to the Selection Chart at the beginning of this section to make sure the configuration is valid.

Valves

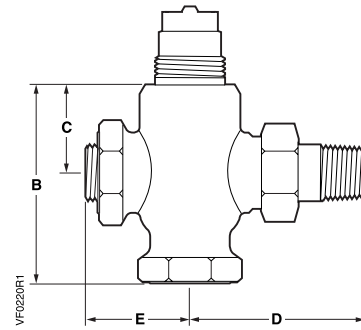
Dimensions and Weights



Female NPT by Female NPT
(FxF)



Female NPT by Union Male
(FxUM)



Angle Female by Union Male
(AFxUM)

Valve Size In.	Dimensions						Weight				
	A	B		AFxUM	C		D	E	FxF	FxUM	AFxUM
		NO	NC		NO	NC					
1/2" (15 mm)	1-3/8" (35 mm)	2-1/4" (57 mm)		2-15/16" (74 mm)	1-5/16" (33 mm)		2-5/8" (67 mm)	1-1/2" (38 mm)	1.3 lb. (0.6 kg)	1.5 lb. (0.7 kg)	1.8 lb. (0.8 kg)
3/4" (20 mm)	1-5/8" (41 mm)	2-3/8" (59 mm)		—	1-5/16" (33 mm)		3-1/8" (79 mm)	—	1.8 lb. (0.8 kg)	2.2 lb. (1 kg)	—
1" (25 mm)	1-15/16" (49 mm)	2-3/4" (69 mm)		—	1-9/16" (39 mm)		—	—	2.6 lb. (1.2 kg)	—	—
1-1/4" (32 mm)	2-1/2" (63.5 mm)	4-1/4" (108 mm)	3-7/8" (98.4 mm)	—	2-3/16" (55.6 mm)	1-11/16" (42.9 mm)	—	—	4 lb. (1.8 kg)	—	—
1-1/2" (40 mm)	2-9/16" (65 mm)	4-1/4" (108 mm)	3-7/8" (98.4 mm)	—	2-1/4" (57.2 mm)	1-5/8" (41.3 mm)	—	—	5 lb. (2.3 kg)	—	—

A-139

Valves