Bray COMMERCIAL

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STM-Series – Submittal/Technical Data

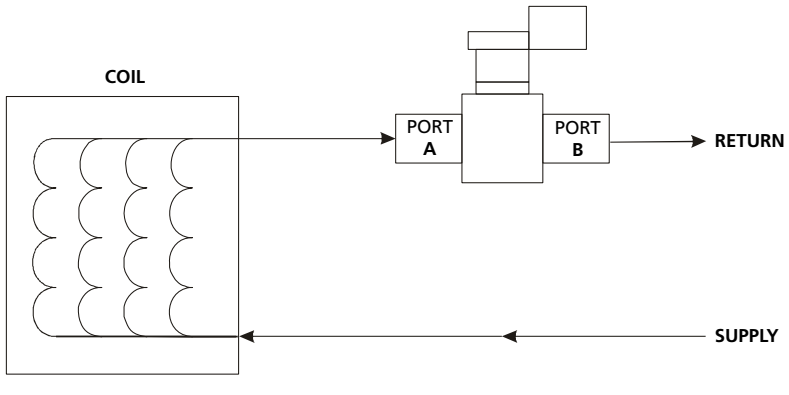
11/21/17

Technical Specifications

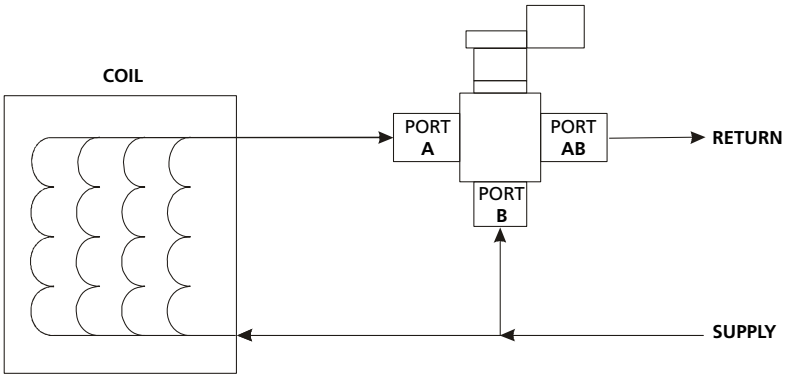
Service		Hot Water, Chilled Water, 50/50 Glycol Solutions, and 25 psig (172 kPa) Saturated Steam for HVAC Systems
Valve Fluid Temperature Limits		0 to 284°F (-18 to 140°C)
Valve Body Pressure/ Temperature Rating	**Water**	ANSI Class 125/150 250 psi at -20 to 100°F (29 to 38°C) 235psi at: 200°F (93°C) 218psi at: 284°F (140°C)
	Steam	25 psig (172 kPa) Saturated Steam for HVAC Systems
Maximum Close-Off Pressure	**Two-Way**	100 psi (689 kPa)
	Three-Way	50 psi (345 kPa)
Maximum Recommended Operating Pressure Drop		30 psi (207 kPa) for quiet service
Flow Characteristics	**Two-Way**	Equal Percentage
	Three-Way	Equal Percentage Flow Characteristics of In-line Port or Linear Percentage Flow Characteristics of Angle Port
Rangeability		Greater than 500:1
Leakage	**Two/Three-Way**	0.01% of Maximum Flow, Control Port, ANSI/FCI 70-2, Class 4
	Three-Way	1% of Maximum Flow, Bypass Port
End Connections		ANSI Class 125 Flange
Minimum Ambient Operating Temperature	**-4°F (-20°C)**	D24-210/DC24-310 Series Non-Spring Return Actuators
	-40°F (-40°C)	DS-180 Series Spring Return Actuators
Maximum Ambient Operating Temperature	**122°F (50°C)**	D24-210/DC24-310 Series Non-Spring Return Actuators
	131°F (55°C)	DS-180 Series Spring Return Actuators
Materials	**Body**	Brass
	Flanges	Ductile Iron
	Ball	300 Series Stainless Steel
	Stem	300 Series Stainless Steel
	Seats	Graphite Reinforced PTFE with EPDM O-Ring Backing
	Stem Seals	EPDM O-Rings
	Flow Control Disk	Amodel AS-1145HS Polyphthalamide Resin

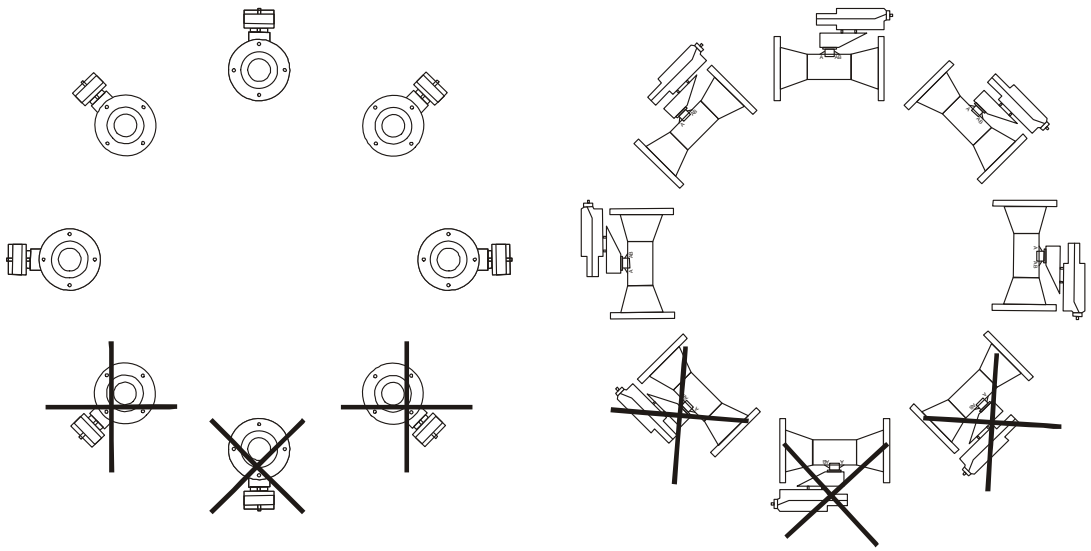
STM - Piping Diagrams

2-Way



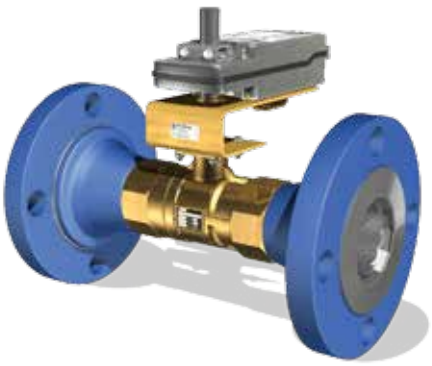
3-Way

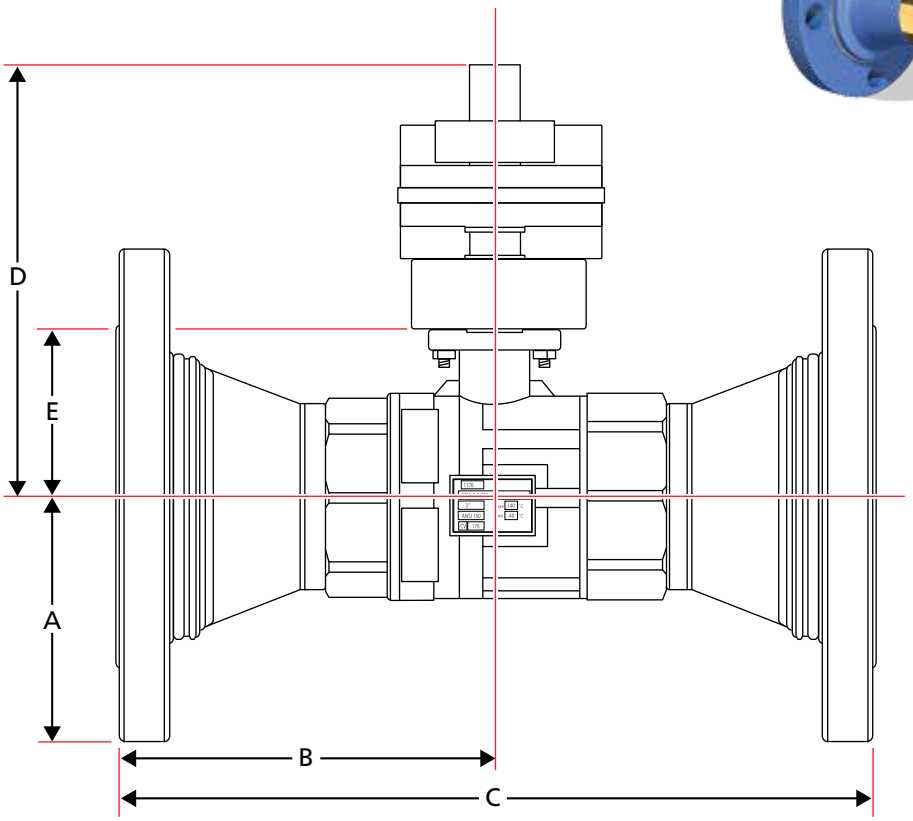




Recommended Mounting Positions for Non-Steam Applications

STM - 2-Way Dimensions



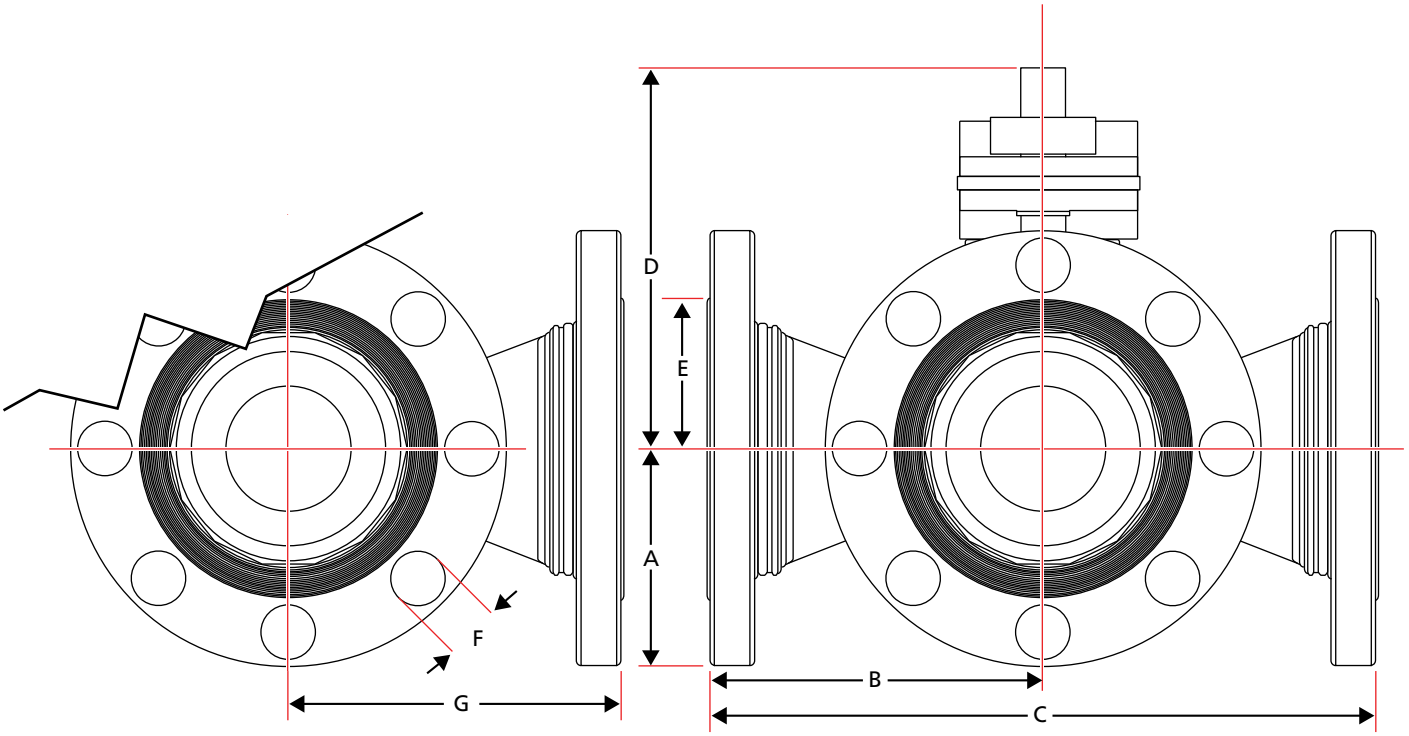


2-Way STM Dimensions

Valve Models	Size in.(mm)	Flow Coefficient Cv	Flow Coefficient Kv	Bolt Hole Diameter	Number of Bolt Holes	A	B	C	D	E	Weight lbs.	Weight kg.
STM 250-2-47	2 1/2 (65)	47	40.7	**5.50 (139)**	**4**	**3.50 (89)**	**5.71 (145)**	**11.42 (290)**	**10.25 (260)**	**2.05 (52.1)**	**34**	**15**
STM 250-2-74		74	64.0									
STM 250-2-117		117	101.2									
STM 3-2-74	3 (80)	74	64.0	**6.00 (152)**	**4**	**3.75 (95)**	**6.10 (155)**	**12.20 (310)**	**10.25 (260)**	**2.49 (63.2)**	**36**	**16**
STM 3-2-117		117	101.2									
STM 3-2-176		176	152.2									
STM 3-2-211		211	182.5									
STM 4-2-117	4 (100)	117	101.2	**7.50 (191)**	**8**	**4.50 (114)**	**6.89 (175)**	**13.77 (350)**	**10.25 (260)**	**3.09 (75.5)**	**44**	**20**
STM 4-2-176		176	152.2									

- Allow a minimum of 4 inches for actuator removal.
- Weights are for valve bodies only.
- Dimensions may vary depending on the actuator
- Dimensions Shown are based on largest actuator available for this series.

STM - 3-Way Dimensions



3-Way STM Dimensions

Valve Models	Size in.(mm)	Flow Coefficient Cv	Flow Coefficient Kv	Bolt Hole Diameter	Number of Bolt Holes	A	B	C	D	E	F	G	Weight lbs.	Weight kg.
STM 250-3-47	2 1/2 (65)	47	40.7	**5.50 (139)**	**4**	**3.50 (89)**	**5.71 (145)**	**11.42 (290)**	**10.25 (260)**	**2.05 (52.1)**	**0.75 (19.1)**	**5.87 (149)**	**43**	**20**
STM 250-3-74		74	64.0											
STM 250-3-117		117	101.2											
STM 3-3-74	3 (80)	74	64.0	**6.00 (152)**	**4**	**3.75 (95)**	**6.10 (155)**	**12.20 (310)**	**10.25 (260)**	**2.49 (63.2)**	**0.75 (19.1)**	**6.26 (159)**	**49**	**22**
STM 3-3-117		117	101.2											
STM 3-3-176		176	152.2											
STM 3-3-211		211	182.5											
STM 4-3-117	4 (100)	117	101.2	**7.50 (191)**	**8**	**4.50 (114)**	**6.89 (175)**	**13.77 (350)**	**10.25 (260)**	**3.09 (75.5)**	**0.75 (19.1)**	**7.05 (179)**	**62**	**28**
STM 4-3-176		176	152.2											

- Allow a minimum of 4 inches for actuator removal.
- Weights are for valve bodies only.
- Dimensions may vary depending on the actuator
- Dimensions Shown are based on largest actuator available for this series.
- Bypass Cv/Kv is 50% of the nominal service Cv.