

## BV-Series – Submittal/Technical Data

1/21/19

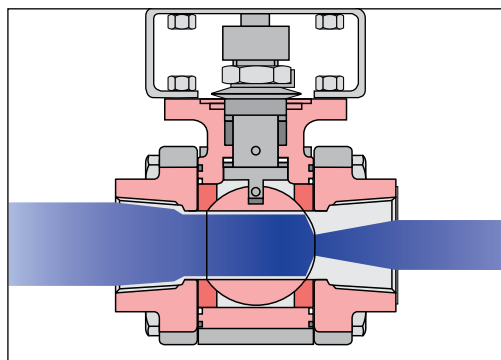
### Technical Specifications - BV Threaded Industrial Ball Valve , 1/2" - 4" – 2-Way

Carbon Steel Body		V-Port	Full-Port
Service		Chilled/Hot Water, 50/50 Glycol Solutions and Saturated Steam	
Size		1/2" to 4" Threaded Valves, 2-Way	
Maximum Fluid Temperature	Water	-20° to 225°F at 1000 PSI (-28° to 107°C at 6,895 kPa)	
	Steam	100 PSI (689 kPa)	
Valve Body Pressure Rating		1000 PSI (6895 kPa)	
Maximum Close-Off Pressure		300 PSI (2,068 kPa)* For higher close-offs contact Bray.	
Maximum Recommended Pressure Drop	Water	80 PSI (551 kPa)	
	Steam	50 PSI (344 kPa)	
Flow Characteristic	V15 Port	Linear	NA
	V30 Port	Modified Equal Percentage	NA
	V60 & 90 Port	Equal Percentage	NA
Rangeability		200:1	
Leakage		Bubble Tight per API 598	
End Connections		Threaded NPT	
Ambient Operating Temperature Range		See Actuator Rating (Optional high temperature mounting kit may be required)	
Materials	Body	WCB Carbon Steel	
	Ball & Stem	316 Stainless Steel	
	Seat	Tek-Fil	RPTFE
	Stem Seal/Packing	RPTFE	
	Body Seal	TFM	
	Body Bolts	SS304	

Disclaimer - The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Bray office. Bray, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

## BV - Piping Diagram

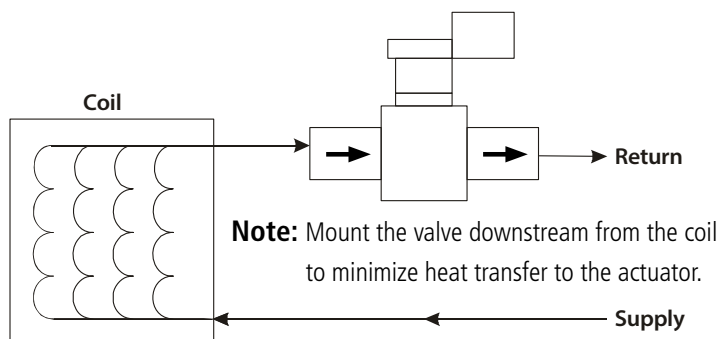
- "V-Port valves- Note the arrow engraved on the ends which shows the flow going from the bolt head to the nut so that the V-ball is downstream.
- "Full Port valves are bi-directional.



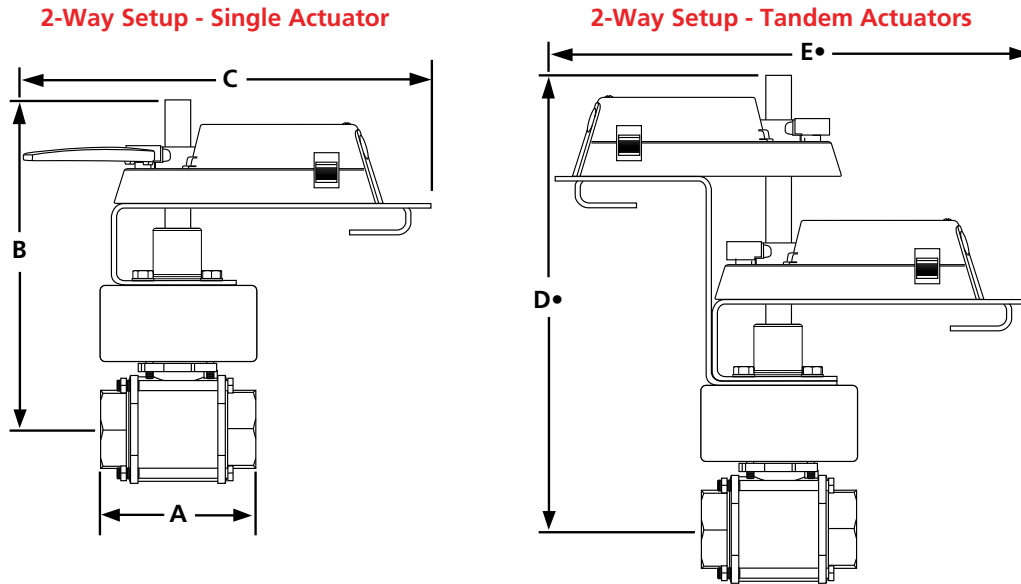
Media Flow entering valve from left. Installing the V downstream is preferred.

## BV - Mode of Actuation

### Typical Two-Way Ball Valve Application



# BV -2-Way-Threaded Ball Valve/Commercial Actuator Dimensions

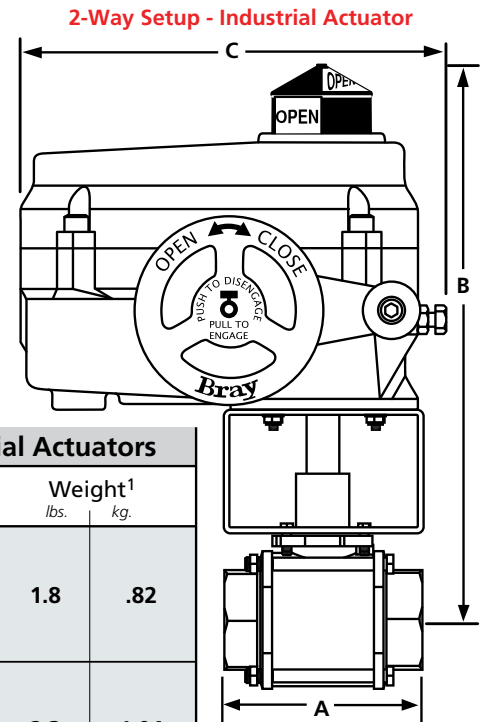


**2-Way BV Dimensions, 1/2" - 1-1/2" - Threaded BV Series - with Commercial Actuators**

Valve Models	Size		Flow Coefficient		A	B	C	Tandem Actuators		Weight <sup>1</sup>	
	in.	mm	Cv	Kv				D•	E•	lbs.	kg.
BV05-CS3-04	1/2	15	3.6	3.1	2.8 (71)	9.7 (246)	14.5 (368)			1.8	.82
BV05-CS3-05			4.7	4.0							
BV05-CS3-09			9.4	8.1							
BV05-CS3-12			11.6	10.0							
BV05-CS3-32			32.0*	27.6							
BV75-CS3-05	3/4	20	4.8	4.1	3.4 (86)	9.8 (249)	14.5 (368)			2.3	1.04
BV75-CS3-06			6.1	5.3							
BV75-CS3-12			12.4	10.7							
BV75-CS3-15			15.3	13.2							
BV75-CS3-54			54.0*	46.5							
BV1-CS3-09	1	25	8.5	7.3	3.6 (91)	10.2 (259)	14.5 (368)			3.4	1.5
BV1-CS3-13			12.8	11.1							
BV1-CS3-23			23.2	20.0							
BV1-CS3-31			31.4	27.1							
BV1-CS3-105			105.0*	90.5							
BV125-CS3-11	1.25	32	10.8	9.3	4.3 (109)	10.4 (264)	14.5 (368)	17.5 (445)	18.0 (457)	4.9	2.2
BV125-CS3-15			14.9	12.8							
BV125-CS3-33			33.4	28.8							
BV125-CS3-52			51.8	44.6							
BV125-CS3-200			200.0*	172.4							
BV150-CS3-15	1.50	40	14.9	12.8	4.8 (122)			17.9 (455)	18.0 (457)	7.6	3.4
BV150-CS3-20			20.4	17.6							
BV150-CS3-46			45.9	39.5							
BV150-CS3-71			71.2	61.3							
BV150-CS3-275			275.0*	237.1							

<sup>1</sup> - Weights are for valve bodies only.  
 • Indicates tandem mounted actuators are required.  
 - Largest Actuator dimension shown.  
 \* Full Port Valves  
 For steam applications, install valve with stem at 45° to 90° from vertical.

# BV -2-Way - Threaded Ball Valve/Industrial Actuator Dimensions



**2-Way BV Dimensions, 1/2" - 4" - Threaded BV Series - with Industrial Actuators**

Valve Models	Size		Flow Coefficient		A	B	C	Weight <sup>1</sup>	
	in.	mm	Cv	Kv				lbs.	kg.
BV05-CS3-04	1/2	15	3.6	3.1	2.8 (71)	9.8 (249)	7.5 (191)	1.8	.82
BV05-CS3-05			4.7	4.0					
BV05-CS3-09			9.4	8.1					
BV05-CS3-12			11.6	10.0					
BV05-CS3-32			32.0*	27.6					
BV75-CS3-05	3/4	20	4.8	4.1	3.4 (86)	9.9 (252)	7.5 (191)	2.3	1.04
BV75-CS3-06			6.1	5.3					
BV75-CS3-12			12.4	10.7					
BV75-CS3-15			15.3	13.2					
BV75-CS3-54			54.0*	46.5					
BV1-CS3-09	1	25	8.5	7.3	3.6 (91)	10.3 (262)	7.5 (191)	3.4	1.5
BV1-CS3-13			12.8	11.1					
BV1-CS3-23			23.2	20.0					
BV1-CS3-31			31.4	27.1					
BV1-CS3-105			105.0*	90.5					
BV125-CS3-11	1.25	32	10.8	9.3	4.3 (109)	10.5 (267)	7.5 (191)	4.9	2.2
BV125-CS3-15			14.9	12.8					
BV125-CS3-33			33.4	28.8					
BV125-CS3-52			51.8	44.6					
BV125-CS3-200			200.0*	172.4					
BV150-CS3-15	1.50	40	14.9	12.8	4.8 (122)	11.2 (285)	7.5 (191)	7.6	3.4
BV150-CS3-20			20.4	17.6					
BV150-CS3-46			45.9	39.5					
BV150-CS3-71			71.2	61.3					
BV150-CS3-275			275.0*	237.1					
BV2-CS3-29	2	50	28.8	24.8	5.6 (142)	11.5 (292)	7.5 (191)	11.4	5.2
BV2-CS3-48			48.1	41.5					
BV2-CS3-104			104.2	89.8					
BV2-CS3-130			129.8	111.8					
BV2-CS3-500			500.0*	431.0					
BV250-CS3-27	2.50	65	27.2	23.5	7.3 (231)	13.4 (340)	10.1 (257)	21.8	9.9
BV250-CS3-56			56.3	48.5					
BV250-CS3-114			113.7	98.0					
BV250-CS3-177			177.3	152.8					
BV250-CS3-780			780.0*	672.4					
BV3-CS3-32	3	80	31.8	27.4	8.0 (257)	15.8 (401)	10.1 (257)	34.6	15.7
BV3-CS3-70			69.8	60.1					
BV3-CS3-150			149.9	129.2					
BV3-CS3-237			237.3	204.6					
BV3-CS3-1150			1,150.0*	991.3					
BV4-CS3-76	4	100	75.5	65.1	9.1 (353)	17.2 (437)	12.1 (307)	54.7	24.8
BV4-CS3-159			158.5	136.7					
BV4-CS3-330			329.5	284.0					
BV4-CS3-547			546.6	471.2					
BV4-CS3-2100			2,100.0*	1,810.2					

<sup>1</sup> - Weights are for valve bodies only.

- Largest Actuator dimension shown.

\* Full Port Valves

For steam applications, install valve with stem at 45° to 90° from vertical.