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BV2H-Series Ball Valve

The BV2H-series ball valve is a full port valve and available with pneumatic or electric actuator and a variety of control options. They are used in oil, water, and gas applications when you need a valve for isolation or control of the flow of product.

They are found in the industrial market and in the sanitary process markets on the non-process side where there is no product contact.

Sizes

- 1/4", 3/8", 1/2", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3"

Features

- Blow-out proof stem design
- ISO 5211 mounting pad

Materials

- Product contact metal components: CF8M stainless steel
- Product contact seals: RTFE

Specifications

- Standard connections: FNPT
- Valve data
 - Maximum pressure
 - 1/4" to 2": **1000 PSI WOG**
 - 2-1/2" to 3": **800 PSI WOG**
 - Operating temperature range
 - 1/4" to 2": **-20°F to 350°F (-28°C to 177°C)**
 - 2-1/2" to 3": **-20°F to 310°F (-28°C to 154°C)**
- Actuator: ISO 5211 mounting pad connection
- Surface finish
 - Product contact metal components: ≤ 32 Ra
 - Seat lubricant: BESSIL F-100



Size	ISO 5211 Mounting Pad Connections		Stem Width (mm)	Stem Height (mm)
1/4"	F03	F04	9	9
3/8"	F03	F04	9	10
1/2"	F03	F04	9	10
3/4"	F03	F04	9	11
1"	F04	F05	11	12.5
1-1/4"	F04	F05	11	14
1-1/2"	F05	F07	14	17
2"	F05	F07	14	17
2-1/2"	F07	F10	17	18.5
3"	F07	F10	17	18.5

BV2H-Series Ball Valve - Part Number Key

Valve I.D.	Size	Code	FNPT Connections
2HG	1/4"	03	1
	3/8"	04	
	1/2"	50	
	3/4"	75	
	1"	10	
	1-1/4"	13	
	1-1/2"	15	
	2"	20	
	2-1/2"	25	
	3"	30	

Continue to part number selection by following column 1 or 2.

1. Pneumatic Actuator or Spring Return Manual Handle					2. Electric Actuator			
Actuator	Actuator Options	Feedback	Control	Valve Operation	Actuator	Voltage	Option 1	Option 2
1	XX	00	XX	1	E	B	1	1
Actuator				Code	Actuator			Code
Aluminum spring return pneumatic rack and pinion				1	Electric			E
Aluminum double acting pneumatic rack and pinion				2	Oversized (1-UP) electric			F
Stainless steel spring return pneumatic rack and pinion				3	Explosion proof (Class I Div I group C and D, Class II Div I group E, F, and G) electric			G
Stainless steel double acting pneumatic rack and pinion				4	Electric with riser kit			H
Dead man spring return handle				6	Voltage		Explosion Proof	Code
Technopolymer spring return pneumatic rack and pinion				7	115VAC		115VAC	B
Actuator Options				Code	12VDC		n/a	C
None				XX	n/a		24VAC	D
Oversized (1-UP)				AA	24VDC/AC		24VDC	E
Actuator mounted perpendicular to flow				AB	220VAC		220VAC	F
High temp FKM elastomers				AC	12VAC		n/a	G
Extended travel stops				AD	Option 1			Code
Riser kit				AE	None			1
Feedback				Code	Torque switches			2
None				00	4-20mA input/output modulating controller			3
Limit switch box, OPEN/CLOSE beacon, (2) SPDT mech. switches				11	Current position transmitter			4
Limit switch box, OPEN/CLOSE beacon, (2) switches, magnetic reed SPDT, hermetically sealed, up to SIL3, Exia ready, cULus class 1/2 div 2, NEMA 4 and 4X				12	Potentiometer			5
Limit switch box, OPEN/CLOSE beacon, AS-I				13	Local control unit			6

BV2H-Series Ball Valve - Part Number Key

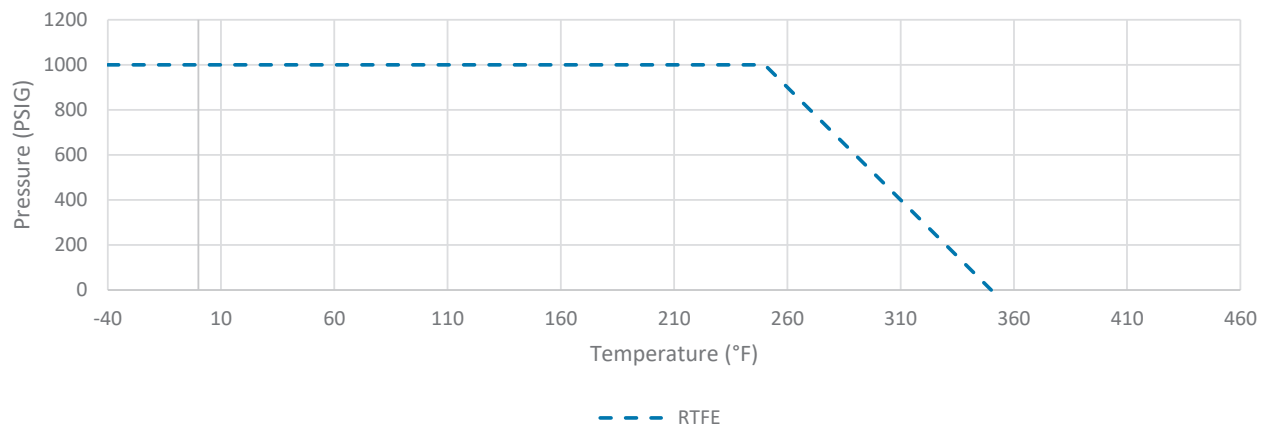
Limit switch box, OPEN/CLOSE beacon, (2) proximity SPDT switches, aluminum Exd IIB certified enclosure	14	Two extra travel cams and switches	7
Limit switch box, OPEN/CLOSE beacon, (2) DPDT mech. switches	15	Three position cam set	8
Limit switch box, OPEN/CLOSE beacon, (2) switches, electro mec. SPDT, silver contacts, up to SIL3, cULus Class 1/2 Div 1	16	Local control unit with lock	9
Limit switch box, OPEN/CLOSE beacon, inductive proximity P+F NBB2-V3-E2, 3 wire PNP NO	17	1-5V input/2-10V output modulating controller	A
Limit switch box, OPEN/CLOSE beacon, 4-20ma analog position transmitter	18	2-10V input/output modulating controller	B
Limit switch box, OPEN/CLOSE beacon, SPDT proximity, 0.25A@120VAC, 0.416A@48VDC, resistive	19	75% duty cycle	C
Limit switch box, OPEN/CLOSE beacon, 4-20ma analog position transmitter + 2 SPDT mechanical switches	20	Relay	D
Stainless steel limit switch box, OPEN/CLOSE beacon, (2) proximity SPDT switches	21	Four position cam set	E
Control	Code	25% duty cycle (actuator code G only)	F
None	XX	75% duty cycle (actuator code G only)	G
Single coil solenoid, 120VAC	AA	Option 2	Code
Single coil solenoid, 24VDC	AB	None	1
Single coil solenoid, 12VDC	AC	Torque switches	2
Single coil solenoid, 220VAC	AD	4-20mA input/output modulating controller	3
Dual coil solenoid, 120VAC	AE	Current position transmitter	4
Dual coil solenoid, 24VDC	AF	Potentiometer	5
Dual coil solenoid, 220VAC	AG	Local control unit	6
Pneumatic positioner 3-15psi input, no feedback	AH	Two extra travel cams and switches	7
Pneumatic positioner 3-15psi input, (2) SPDT mech. switches for feedback	AI	Three position cam set	8
Pneumatic positioner 3-15psi input, 4-20mA for feedback	AJ	Local control unit with lock	9
Electropneumatic positioner 4-20mA input, no feedback	AK	1-5V input/2-10V output modulating controller	A
Electropneumatic positioner 4-20mA input, (2) SPDT mech. switches for feedback	AL	2-10V input/output modulating controller	B
Electropneumatic positioner 4-20mA input, 4-20mA for feedback	AM	75% duty cycle	C
Electropneumatic positioner 0-10v input, no feedback	AN	Relay	D
Electropneumatic positioner 0-10v input, (2) SPDT mech. switches for feedback	AO	Four position cam set	E
Electropneumatic positioner 0-10v input, 4-20mA for feedback	AP	25% duty cycle (actuator code G only)	F
V200 rotary electropneumatic positioner 4-20mA input, 4-20mA feedback	AQ	75% duty cycle (actuator code G only)	G

BV2H-Series Ball Valve - Part Number Key

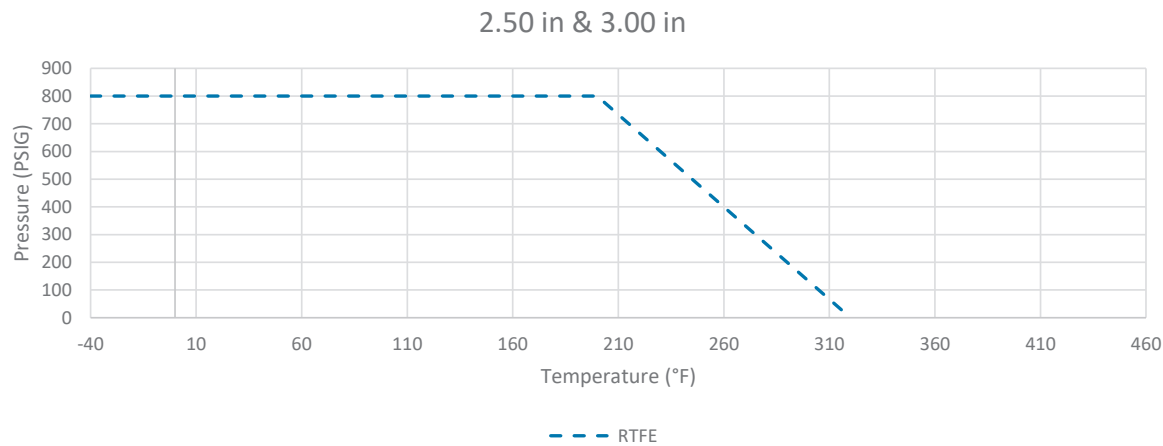
Electropneumatic positioner 4-20mA input, no feedback, class 1, div II explosion proof	AR
Single coil solenoid, 24VDC and 24V banjo solenoid valve with form B plug	AS
Single coil solenoid, 24VDC, AS-I, 2.5W low power	AT
Single coil solenoid, 24VDC, intrinsically safe	AU
Single coil solenoid, 120VAC, exp. proof, class H coil	AV
Single coil solenoid, 24VDC, exp. proof, class H coil	AW
Single coil solenoid, 24VAC	AX
V200 rotary electropneumatic positioner 4-20mA input, 4-20mA feedback, class 1, div II explosion proof	AY
Single coil solenoid, 24VDC, molded LED, ind. form, 2M leads	AZ
TUFRAM COATED electropneumatic positioner 4-20mA input, no feedback	BA
V200 rotary pneumatic positioner, (2) REED SWITCH feedback	BB
Single coil solenoid, 24VDC, pre-wired to limit switch WITH CORDSET (dual keyway, 1/2"-20 UNF mating thread, single ended, straight female connector, 22 AWG PVC, auto color code 2P to 6P cable, 12' length)	BC
Single coil solenoid, 24VDC, pre-wired to limit switch, 6P MALE CONNECTOR	BD
Single coil solenoid, stainless steel, 24VDC	BE
Valve Operation	Code
Normally closed (spring return)	1
Normally open (spring return)	2
Fail in place (double acting)	3

BV2H-Series Ball Valve - Pressure Drop Table

0.25 in - 2.00 in



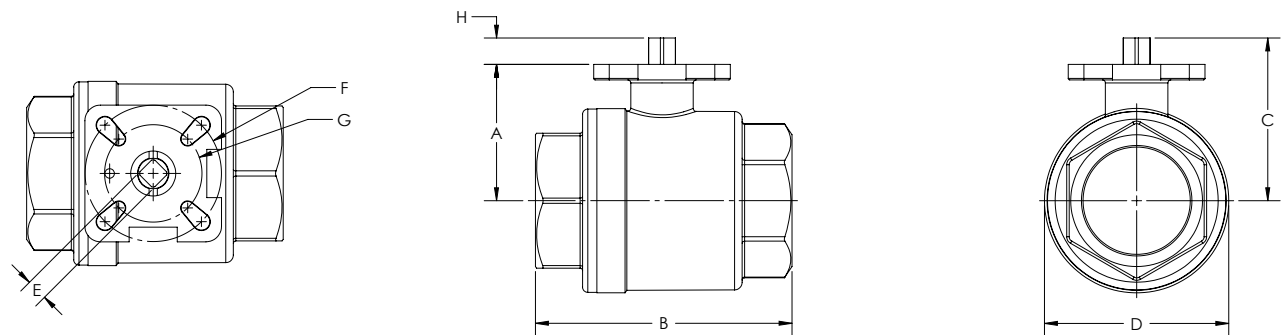
BV2H-Series Ball Valve - Pressure Drop Table



BV2H-Series Ball Valve - Weight & Break Torque Chart

Part #	Size	Break Torque (in-lbs)	Weight (lbs)
BV2HG-02511	1/4"	12	0.53
BV2HG-03811	3/8"	46	0.53
BV2HG-05011	1/2"	70	0.66
BV2HG-07511	3/4"	125	1.12
BV2HG-10011	1"	136	1.87
BV2HG-12511	1-1/4"	193	2.76
BV2HG-15011	1-1/2"	195	4.45
BV2HG-20011	2"	377	6.30
BV2HG-25011	2-1/2"	1250	11.62
BV2HG-30011	3"	1450	24.69

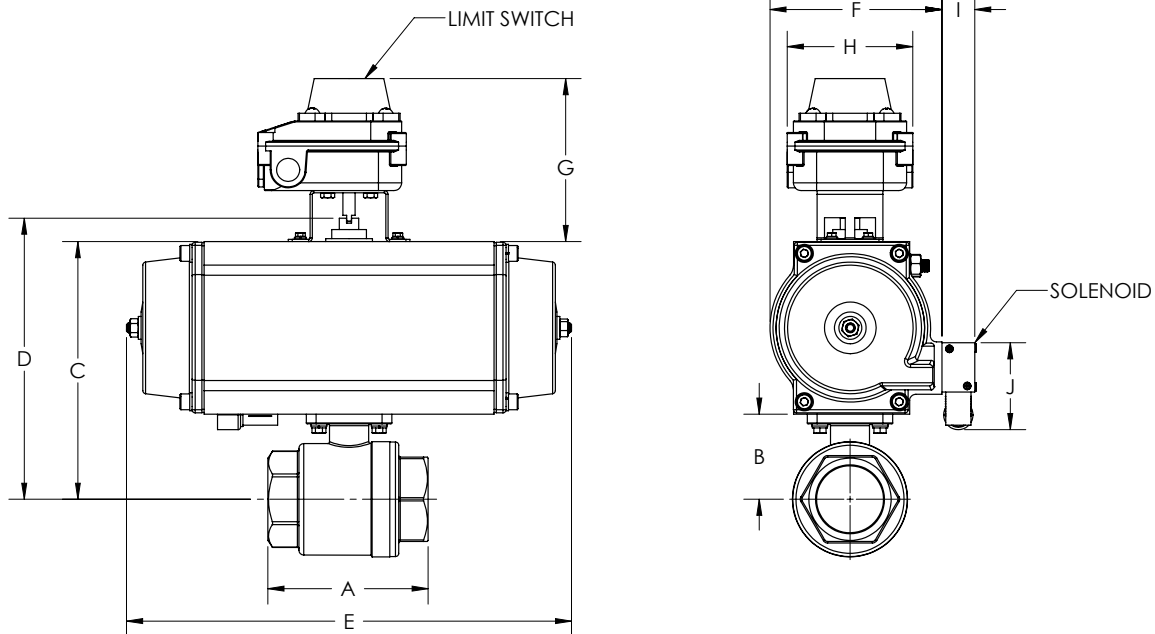
BV2H-Series Ball Valve - Dimensions



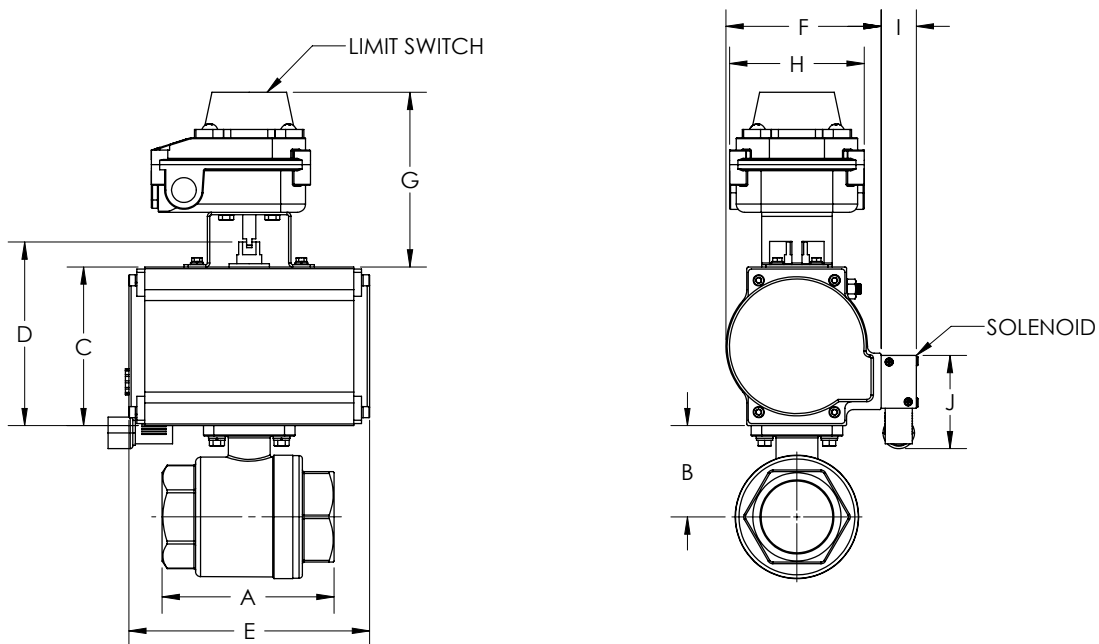
Size	A (in)	B (in)	C (in)	D (in)	E (mm)	F (ISO 5211)	G (ISO 5211)	H (mm)
1/4"	1.1	2.2	1.7	1.4	9.0	F04	F03	11
3/8"	1.1	2.2	1.5	1.2	9.0	F04	F03	11
1/2"	2.4	2.4	3.0	1.5	9.0	F04	F03	12
3/4"	3.0	3.0	3.6	1.9	9.0	F04	F03	10
1"	3.4	3.4	4.1	2.3	9.0	F05	F04	10
1-1/4"	3.9	3.9	4.6	2.8	9.0	F05	F04	13
1-1/2"	4.5	4.5	5.3	3.2	11.0	F07	F05	17
2"	5.2	5.2	6.0	3.9	11.0	F07	F05	14
2-1/2"	4.1	6.6	4.8	4.6	17.0	F10	F07	17
3"	4.6	7.5	5.3	5.5	17.0	F10	F07	21

BV2H-Series Ball Valve - Dimensions

Actuated Spring Return



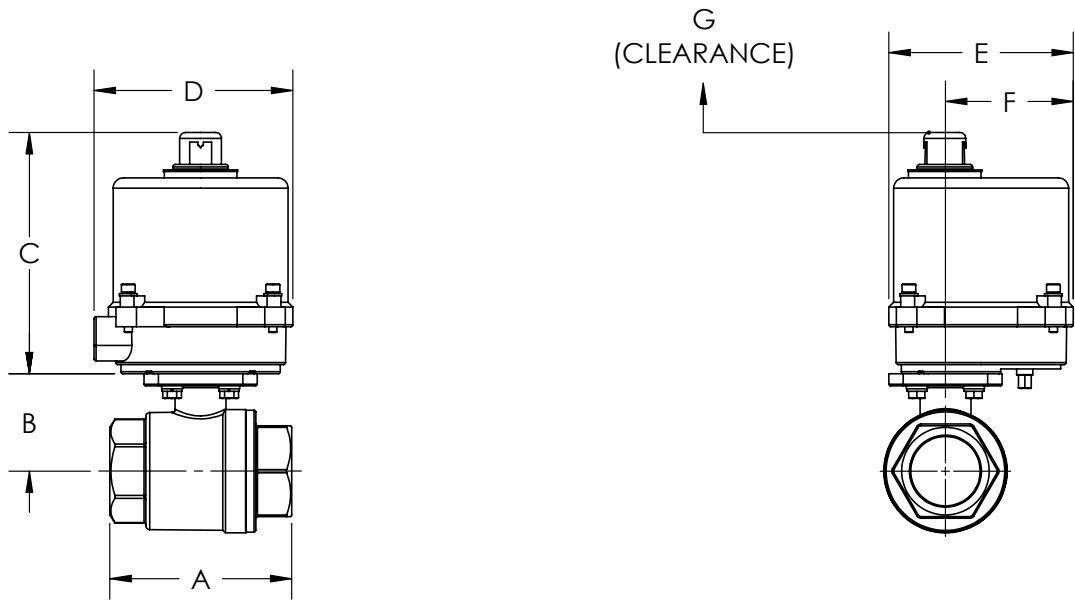
Actuated Double Acting



NOTE: For more information on actuation accessories see relevant EPRG for actuator, limit switch, and solenoid
 Pictured with optional limit switch and solenoid.

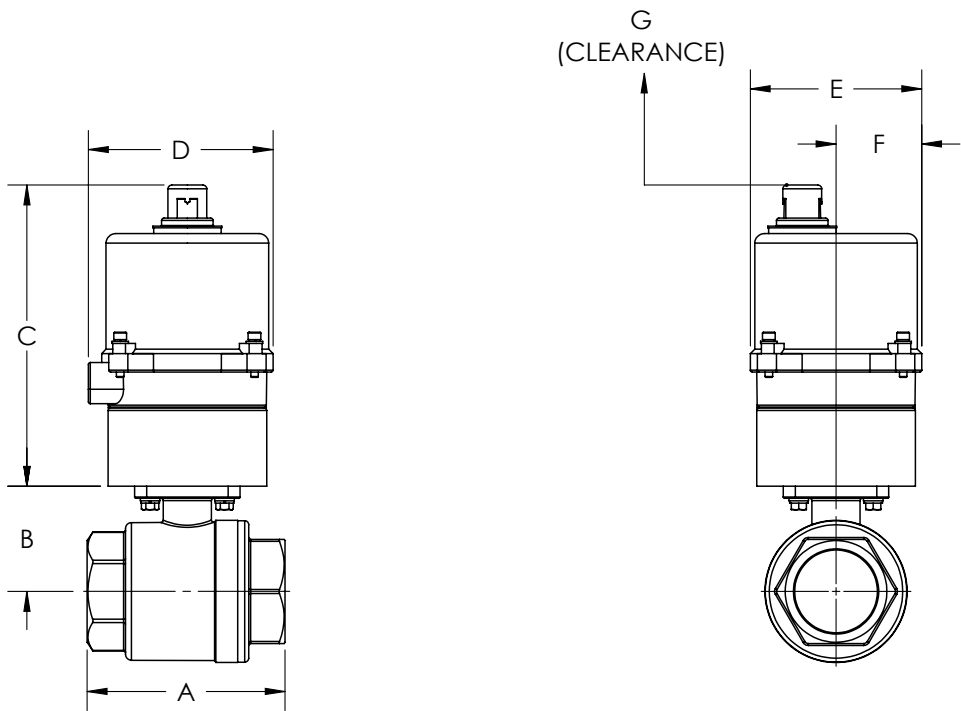
BV2H-Series Ball Valve - Dimensions

Actuated Electric



NOTE: Electric actuator shown is BEOM-1 series. For more information on actuation accessories, see relevant EPRG for electric actuators.

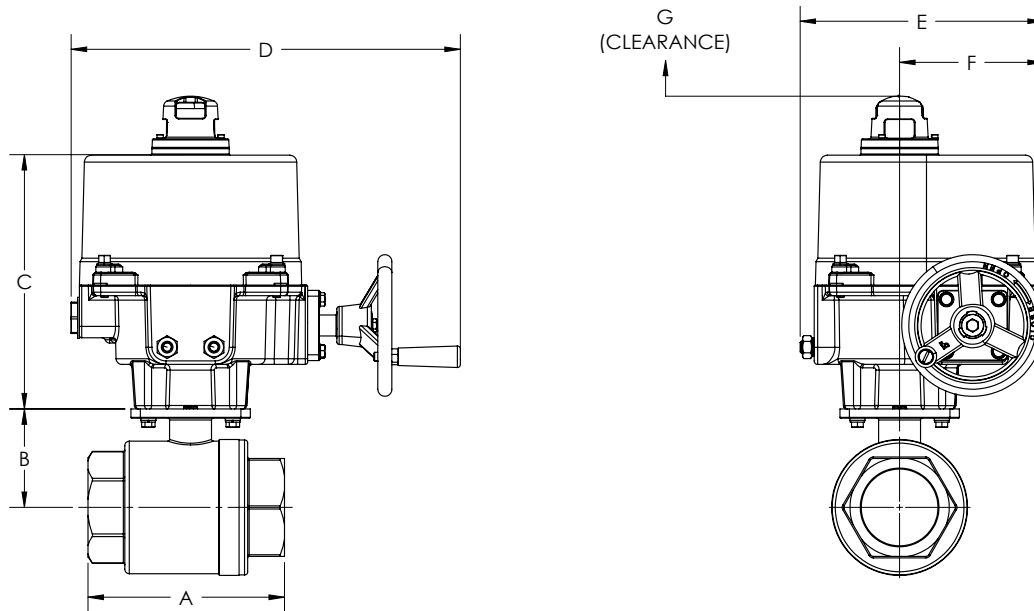
Actuated Electric



NOTE: Electric actuator shown is BEOM-A series. For more information on actuation accessories, see relevant EPRG for electric actuators.

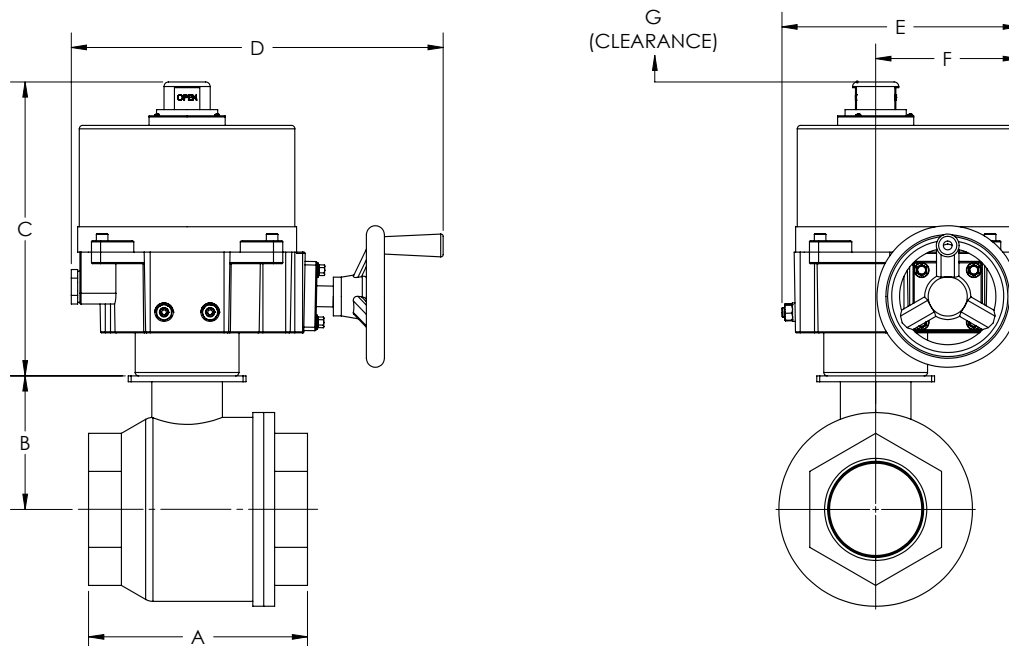
BV2H-Series Ball Valve - Dimensions

Actuated Electric



NOTE: Electric actuator shown is BM-2 series. For more information on actuation accessories, see relevant EPRG for electric actuators.

Actuated Electric



NOTE: Electric actuator shown is OM-3 series. For more information on actuation accessories, see relevant EPRG for electric actuators.

BV2H-Series Ball Valve - Dimensions

Spring Return

Size	A (in)	B (in)	RP-BA Series Actuator	C (in)	D (in)	E (in)	F(in)	G (in)	H (in)	I (in)	J (in)
								XLS-B4 Series		X Series	
1/4"	2.17	1.06	RP-BA-025-SR	3.10	3.83	7.66	3.20	5.27	4.06	1.07	2.81
3/8"	2.17	1.06									
1/2"	2.40	2.40									
3/4"	2.99	2.99									
1"	3.43	3.43	RP-BA-025-SR05	3.10	3.83	7.66	3.20				
1-1/4"	3.94	3.94									
1-1/2"	4.49	4.49	RP-BA-045-SR	3.68	4.63	8.09	3.72				
2"	5.20	5.20	RP-BA-101-SR	4.79	5.54	9.84	4.68				
2-1/2"	6.61	4.13	RP-BA-225-SR	5.58	6.34	13.98	5.56				
3"	7.48	4.56									

Double Acting

Size	A (in)	B (in)	RP-BA Series Actuator	C (in)	D (in)	E (in)	F(in)	G (in)	H (in)	I (in)	J (in)
								XLS-B4 Series		X Series	
1/4"	2.17	1.06	RP-BA-012-DA	2.60	3.39	4.72	2.93	5.27	4.06	1.07	2.81
3/8"	2.17	1.06									
1/2"	2.40	2.40									
3/4"	2.99	2.99									
1"	3.43	3.43	RP-BA-025-DA05	3.1	3.87	5.68	3.2				
1-1/4"	3.94	3.94									
1-1/2"	4.49	4.49	RP-BA-045-DA	3.86	4.63	5.87	3.72				
2"	5.20	5.20									
2-1/2"	6.61	4.13	RP-BA-101-DA	4.79	5.54	7.20	4.77				
3"	7.48	4.56									

Electric

Size	A (in)	B (in)	Electric Actuator Series	C (in)	D (in)	E (in)	F (in)	G (in)
1/4"	2.17	1.06	OM-1	6.02	4.80	4.49	3.11	4.72
3/8"	2.17	1.06						
1/2"	2.40	2.40						
3/4"	2.99	2.99						
1"	3.43	3.43						
1-1/4"	3.94	3.94						
1-1/2"	4.49	4.49	OM-A	7.83	4.80	4.49	2.24	4.72
2"	5.20	5.20						
2-1/2"	6.61	4.13						
3"	7.48	4.56	OM-3	10.55	12.84	7.13	4.84	6.50

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