

BV2H-Series Ball Valve

The BV2H valve is a full port valve and available with pneumatic or electric actuator and a variety of control options.

Applications

- 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

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
- Materials of construction
 - Product contact metal components: CF8M stainless steel
 - Product contact seals: RTFE
- 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 ID	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					Actuator			
Code					Code			
Aluminum spring return pneumatic rack and pinion					Electric			
Aluminum double acting pneumatic rack and pinion					Oversized (1-UP) electric			
Stainless steel spring return pneumatic rack and pinion					Nema 7 electric			
Stainless steel double acting pneumatic rack and pinion					Electric with riser kit			
Dead man spring return handle					Voltage			
Technopolymer spring return pneumatic rack and pinion					Code			
None					115VAC			
Oversized (1-UP)					12VDC			
Actuator mounted perpendicular to flow					24VAC			
High temp FKM elastomers					24VDC			
Extended travel stops					220VAC			
Riser kit					12VAC			
Feedback					Option 1			
Code					Code			
None					None			
Limit switch box, OPEN/CLOSE beacon, (2) SPDT mech. switches					Torque switches			
Limit switch box, OPEN/CLOSE beacon, (2) switches, magnetic reed SPDT, hermetically sealed, up to SIL3, exia ready, cULus class 1/2 div1/2					4-20mA input/output modulating controller			
Limit switch box, OPEN/CLOSE beacon, AS-I					Current position transmitter			
					Potentiometer			
					Local control unit			

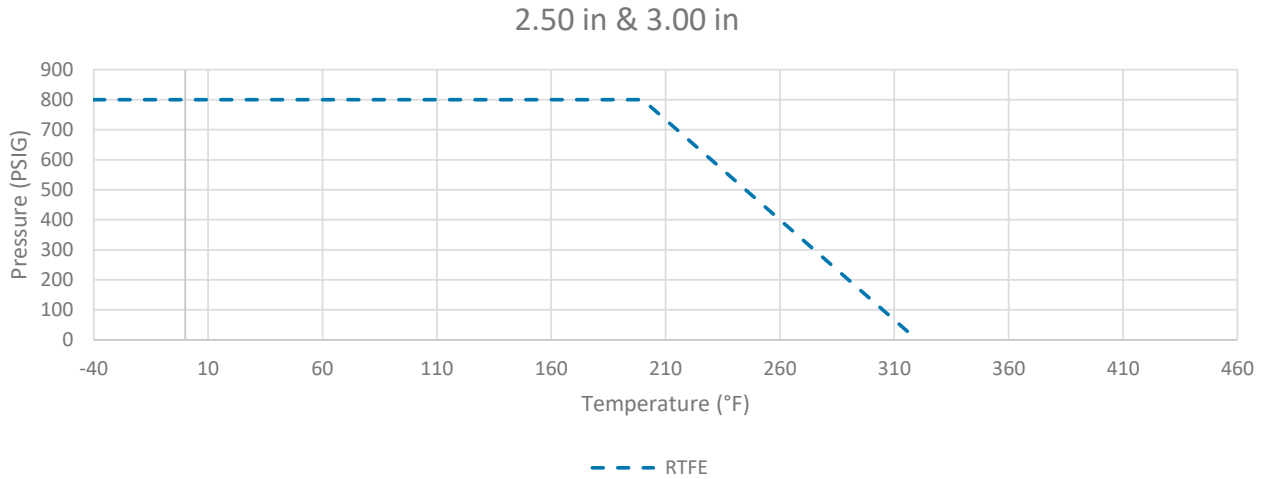
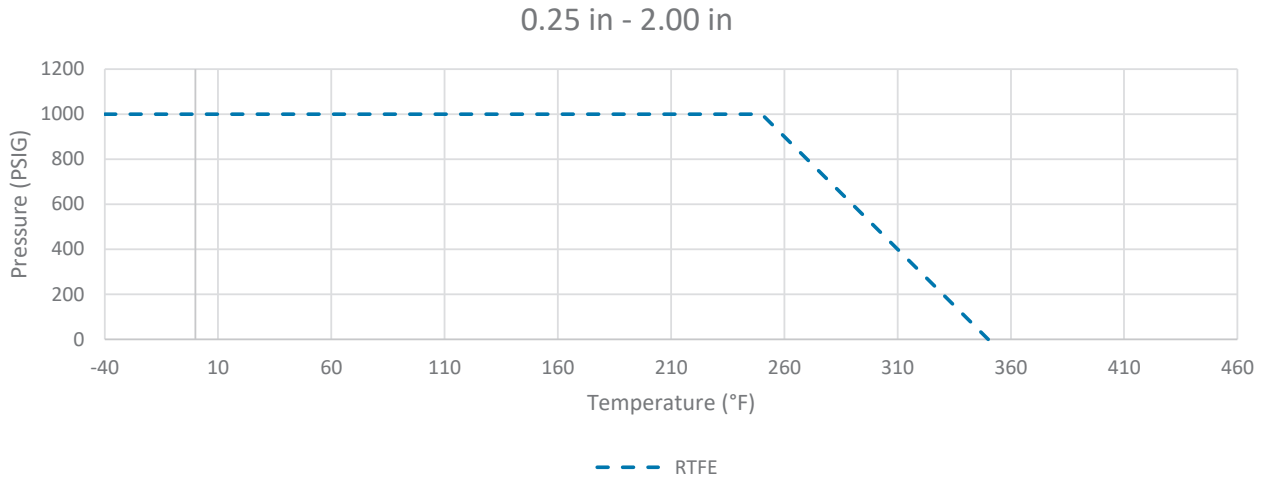
BV2H-Series Ball Valve - Part Number Key

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

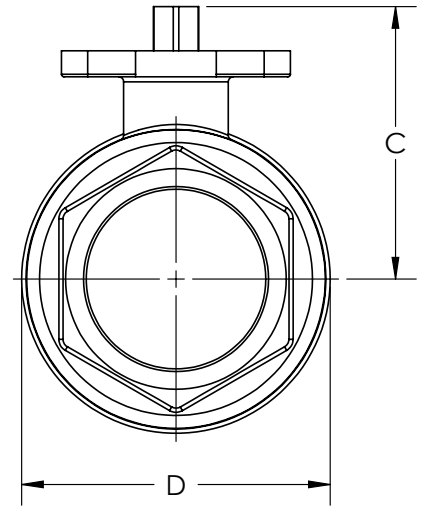
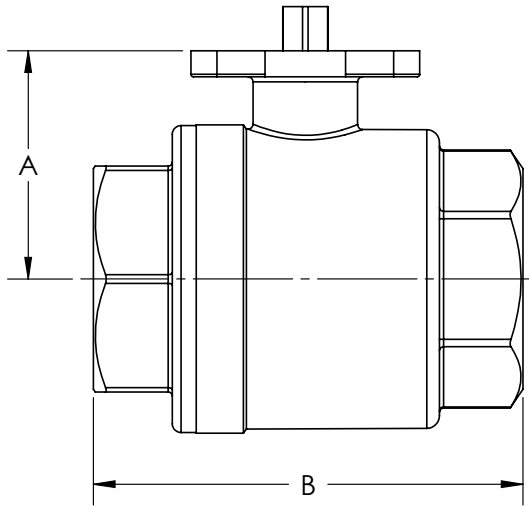
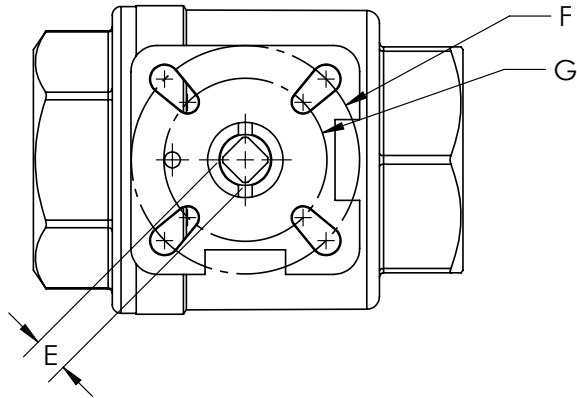
BV2H-Series Ball Valve - Pressure Drop Table



BV2H-Series Ball Valve - Weight & Break Torque Chart

Part Number	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

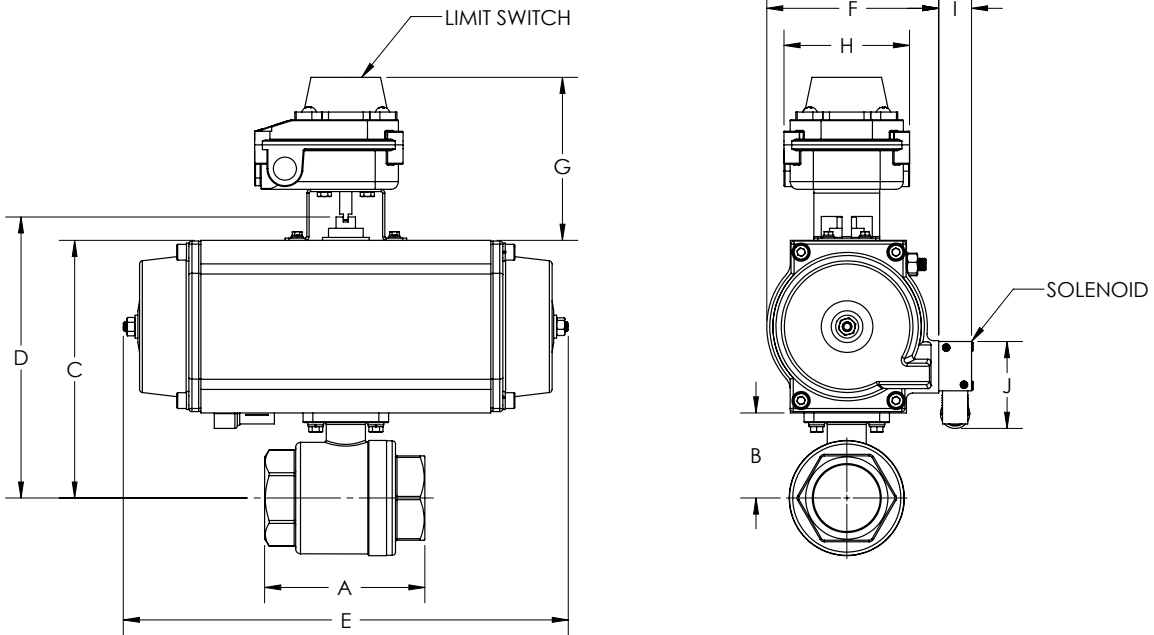
BV2H-Series Ball Valve - Dimensions



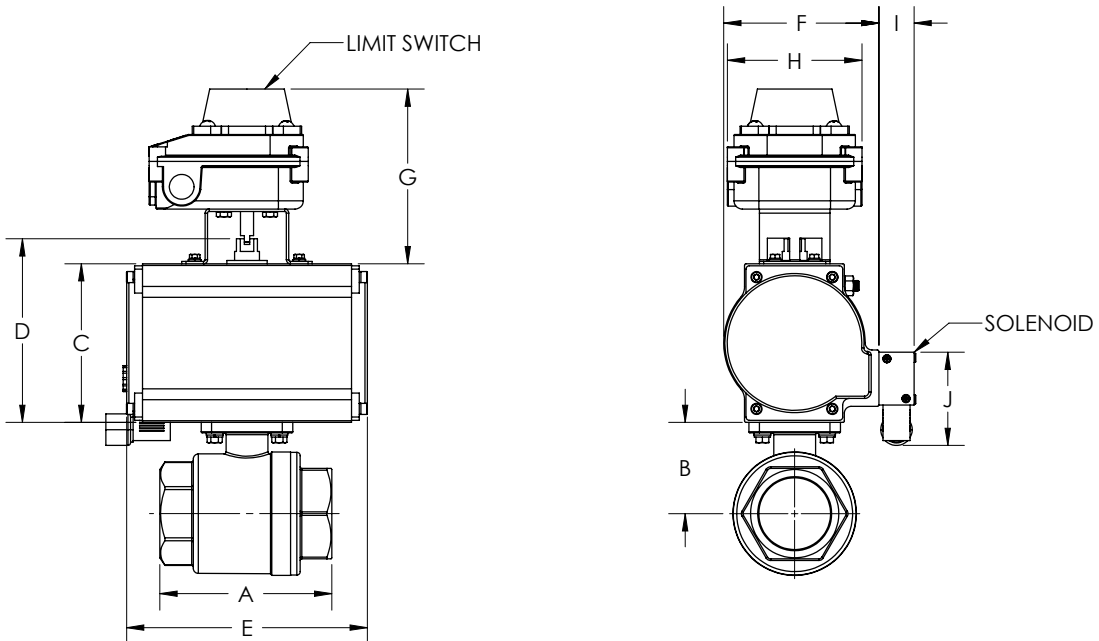
Size	A (in)	B (in)	C (in)	D (in)	E (mm)	F (ISO 5211)	G (ISO 5211)
1/4"	1.1	2.2	1.7	1.4	9.0	F04	F03
3/8"	1.1	2.2	1.5	1.2	9.0	F04	F03
1/2"	2.4	2.4	3.0	1.5	9.0	F04	F03
3/4"	3.0	3.0	3.6	1.9	9.0	F04	F03
1"	3.4	3.4	4.1	2.3	9.0	F05	F04
1-1/4"	3.9	3.9	4.6	2.8	9.0	F05	F04
1-1/2"	4.5	4.5	5.3	3.2	11.0	F07	F05
2"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

BV2H-Series Ball Valve - Dimensions

Actuated Spring Return



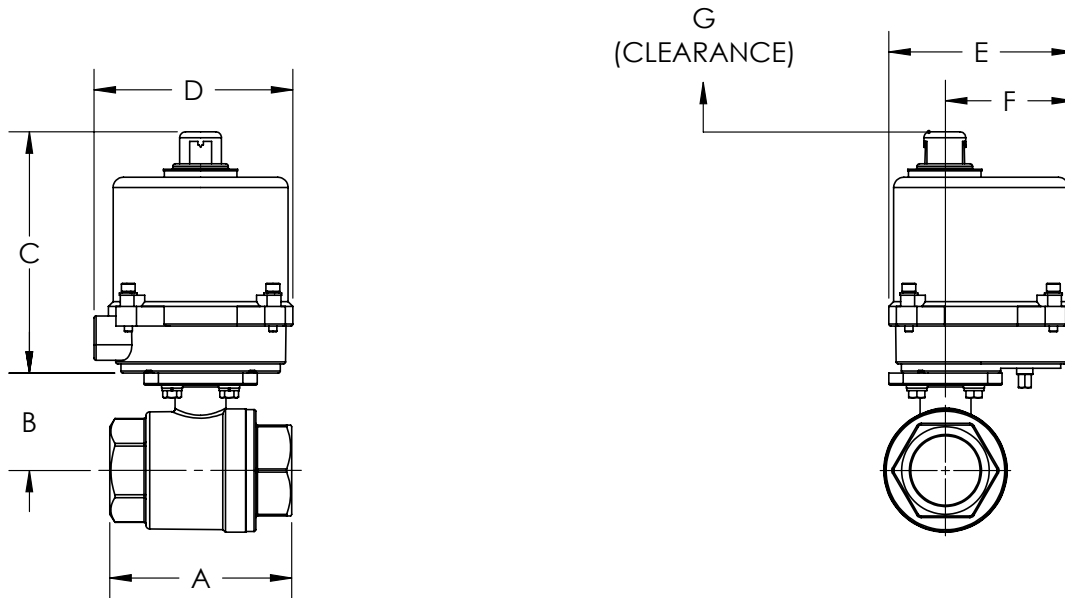
Actuated Double Acting



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

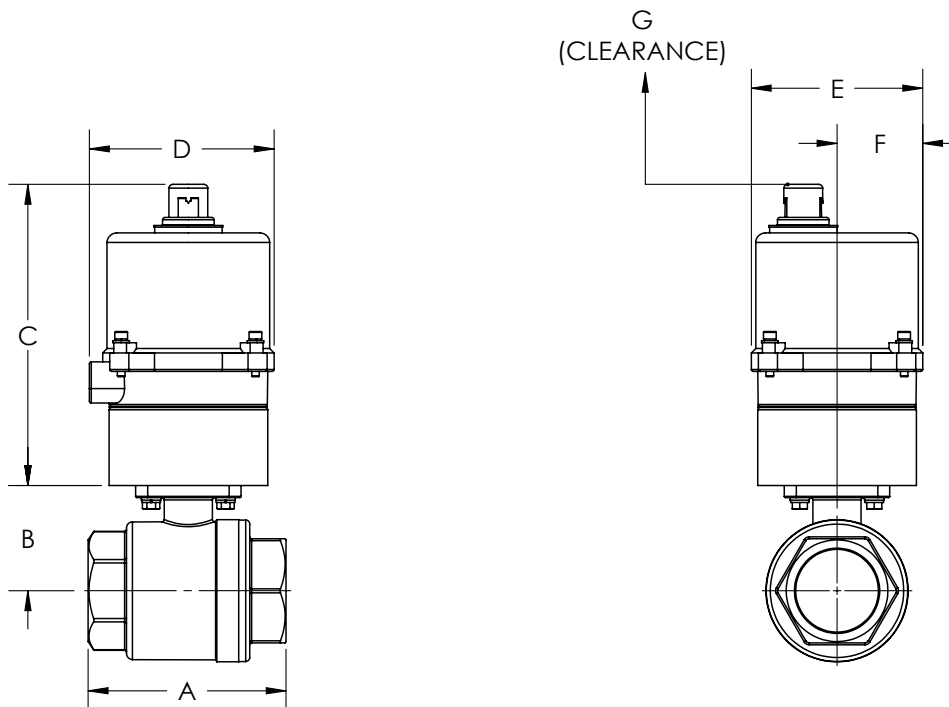
BV2H-Series Ball Valve - Dimensions

Actuated Electric



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

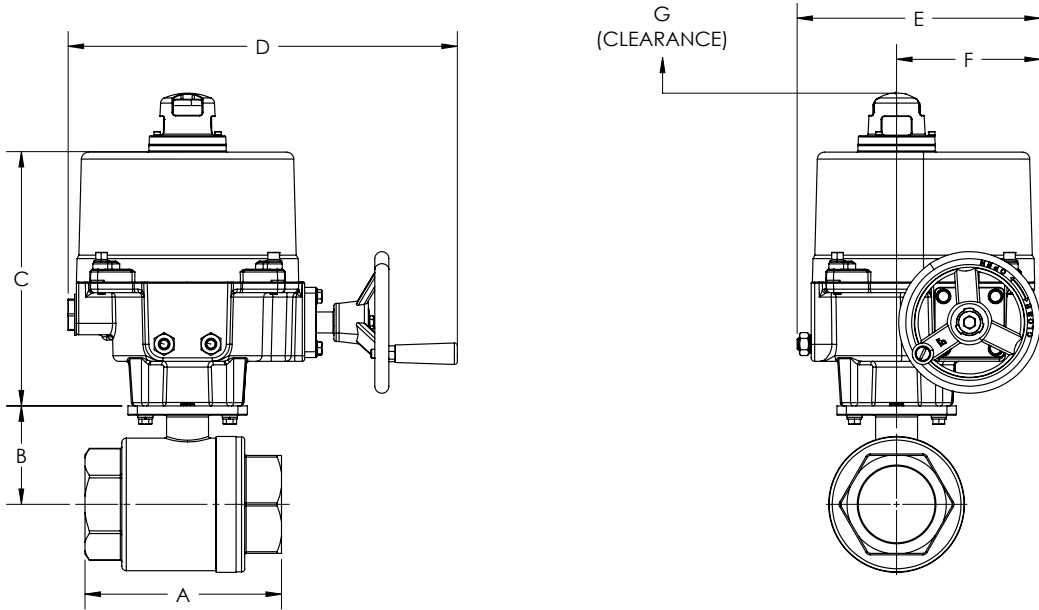
Actuated Electric



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

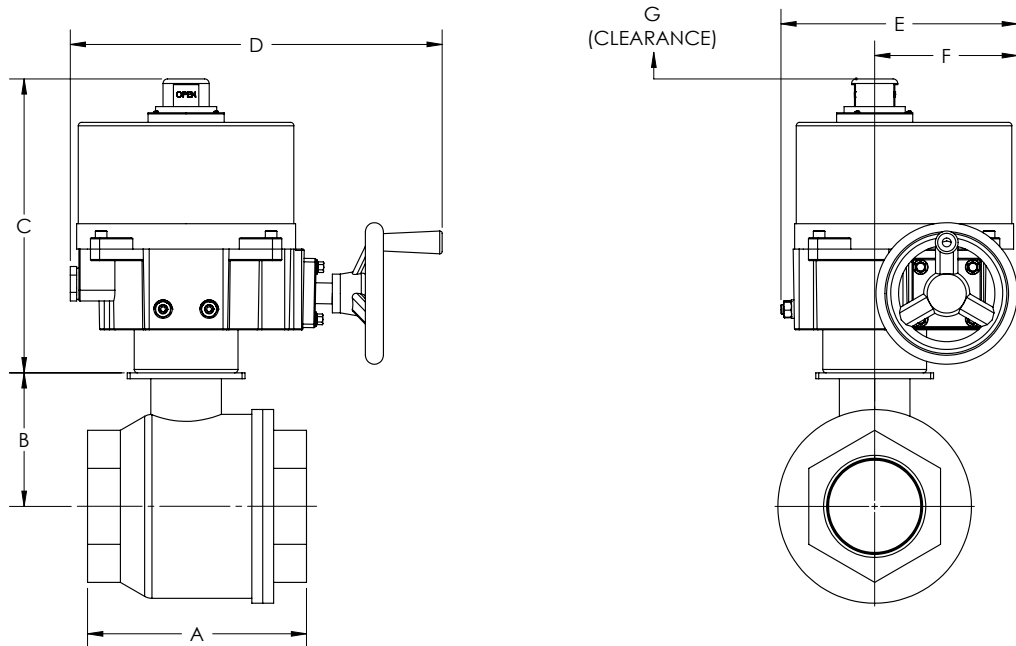
BV2H-Series Ball Valve - Dimensions

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	5.27	4.06	1.07	2.81
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	5.27	4.06	1.07	2.81
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	RP-BA-101-DA	4.79	5.54	7.20	4.77				
2-1/2"	6.61	4.13									
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	BM-2	7.68	6.34	6.06	4.33	4.72
2-1/2"	6.61	4.13	OM-3	10.55	12.84	7.13	4.84	6.50
3"	7.48	4.56						

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