



Series  
BV2

# Automated Two-Piece Stainless Steel Ball Valve

## Electric and Pneumatic Actuators

### BV2 Series Automated Ball Valves:

- BV2B Series is a modulating electric actuator that is rated NEMA 4X
- BV2L Series is a low cost electric actuator that is rated NEMA 2 and is available in 120 VAC or 24 VAC/DC power supply with or without spring return
- BV2F Series is a pneumatic double acting rack and pinion actuator
- BV2J Series is a pneumatic spring return rack and pinion actuator
- BV2C Series is a pneumatic spring return rack and pinion actuator that is specifically for adverse environments and corrosive process materials



The **Series BV2B** incorporates a weatherproof, NEMA 4X, electric actuator powered by standard 115 VAC supply. The BV2B provides an economical weatherproof automated valve package. The modulating actuator accepts a 4 to 20 mA input for infinite valve positioning. Actuator features a single phase capacitor run motor with overload protection and a permanently lubricated gear train.



The **Series BV2L** is a low cost electric actuator combined with our durable two-piece stainless steel ball valve to make a compact, low cost, automated valve package. Electric actuators are available in either 24 VAC/DC or 120 VAC supply voltage. Spring return models return the valve to its failsafe position upon loss of power and are factory supplied to return to the closed position upon failure. The BV2L is an ideal valve package for HVAC applications and OEM's such as boiler manufacturers.



The **Series BV2F** is pneumatic double acting, rack and pinion actuated. The double acting actuator uses a pneumatic supply to drive the valve open and closed. The actuator has two supply ports with one driving the valve open and the other driving the valve closed. Available is a factory installed solenoid valve to electrically switch the air supply pressure between the air supply ports for opening and closing the valve. Actuators are constructed of anodized and polyurethane coated aluminum for years of corrosion free service.

The **Series BV2J** is the spring return version of the BV2F. The actuator uses the air supply to open the valve and internally loaded springs return the valve to the closed position.



The **Series BV2C** is designed to withstand the toughest environments. Incorporated in the BV2C is our two-piece stainless steel ball valve coupled with a pneumatic spring return rack and pinion actuator. The actuator body is constructed of glass-filled polyester with 303 SS shaft, polyaramide pistons, cylinder guides, and racks to provide optimum protection from adverse environments and corrosive process materials. All mounting hardware and couplings are constructed of 316 SS. This series is ideal for pharmaceutical, chemical, food and dairy, or pulp and paper industries where metal actuators would not survive.

**SPECIFICATIONS**

**Body:** 2- piece.  
**Line Size:** 1/4" to 2".  
**End Connections:** Female NPT.  
**Pressure Limit:** 1000 psi (69 bar) WOG, 150 psi (10.3 bar) SWP.  
**Wetted Materials:**  
 Body, ball, end cap: CF8M SS (316 SS);  
 Stem: 316 SS;  
 Seat, thrust washer: RTFE;  
 End gasket, stem packing: PTFE.  
**Temperature Limits:** -20 to 450°F (-29 to 232°C).

**Electric "L" Series**

**Power Requirements:** L9, LQ: 120 VAC ±10% 50/60 Hz; L1, L7, LR, LS, LT: 24 VAC ± 20% 50/60 Hz, 24 VDC ±10%.  
**Power Consumption:** LS: 2 W, LT: 2.5 W, L1: 3 W, L7, LR: 5W, LQ: 5.5 W, L9: 6 W.  
**Cycle Time (per 90°):** LQ, LR: Motor <40 to 75 sec., Spring Return <25 sec. (<60 sec. under -4°F (-20°C)); L9, L7: Motor 150 sec., Spring Return < 20 sec.; LS: 110 sec. Maximum; LT: 150 sec. Maximum; L1: 140 sec. Maximum.  
**Duty Rating:** Continuous.  
**Enclosure Rating:** NEMA 2.  
**Temperature Limits:** -22 to 122° F (-30 to 50° C).  
**Electrical Connection:** 3 ft, 18 GA cable and 1/2" conduit connector (except LS).  
**Weight:** LS: 1.2 lb (.55 kg), LT: 2.8 lb (1.3 kg), LR: 3.1 lb (1.4 kg), LQ: 3.4 lb (1.54 kg), L1: 4.0 lb (1.8 kg), L7: 6.0 lb (2.7 kg), L9: 6.9 lb (3.1 kg).  
**Approvals:** UL 873, CE (except L1), CSA.  
**Features:** Position indicator.

**Pneumatic "F" and "J" Series**

**Type:** F Series is double acting and J Series spring return (rack and pinion).  
**Normal Supply Pressure:** 80 psi (5.5 bar).  
**Maximum Supply Pressure:** 125 psig (8.6 bar).  
**Air Connections:** 1/4" female NPT.  
**Air Consumption (per stroke):** F1, J1: 9.6 cu. in.; F2, J2: 11.4 cu. in.; F3, J3: 27.5 cu. in.; J5: 55.5cu. in.  
**Cycle Time (per 90°):** F: 1 sec., J: 2 sec.  
**Housing Material:** Anodized aluminum body and polyurethane coated aluminum end caps.  
**Temperature Limit:** -31 to 230°F (-35 to 110°C).  
**Accessory Mounting:** NAMUR standard.  
**Standard Features:** Position indicator.  
**Weight:** F1, J1: 2.0 lb (.91 kg); F2, J2: 4.0 lb (1.81 kg); F3, J3: 7.5 lb (3.4 kg), J5: 13.2 lb (6.0 kg).

**Pneumatic "C" Series**

**Type:** Spring return (rack and pinion).  
**Normal Supply Pressure:** 80 psi (5.5 bar) [Can use air, water, or any other non-aggressive fluid].  
**Maximum Supply Pressure:** 120 psig (8.3 bar).  
**Air Connections:** 1/4" female NPT.  
**Air Consumption (per stroke):** C1: 4.58 cu. in., C2: 9.15 cu. in., C3: 21.4 cu. in.  
**Cycle Time (per 90°):** Open/closed: C1: 0.15/0.30 sec., C2: 0.20/0.40 sec, C3: 0.60/1.10 sec.  
**Housing Material:** Glass filled polyester body and endcaps.  
**Shaft:** 303 SS with double Buna N O-ring seal. Pistons, guides, and racks: Molded Polyaramide resin.  
**Temperature Limit:** -25 to 195°F (-32 to 90°C).  
**Accessory Mounting:** NAMUR standard.  
**Standard Features:** Position indicator.  
**Weight:** C1: 1.5 lb (.68 kg), C2: 3.0 lb (1.36 kg), C3: 6.0 lb (2.72 kg).

**BV2 - F, J, C, and B Actuators**

Size	Cv	Double Acting Pneumatic F Series	Spring Return Pneumatic J Series	Spring Return Pneumatic C Series	Modulating Electric B Series
		Model	Model	Model	Model
1/4"	6	BV2F100	BV2J100	BV2C100	BV2BA00
3/8"	7	BV2F101	BV2J101	BV2C101	BV2BA01
1/2"	10	BV2F102	BV2J102	BV2C102	BV2BA02
3/4"	24	BV2F103	BV2J203	BV2C203	BV2BA03
1"	45	BV2F104	BV2J204	BV2C204	BV2BA04
1-1/4"	90	BV2F205	BV2J305	BV2C205	BV2BA05
1-1/2"	125	BV2F306	BV2J506	BV2C306	BV2BA06
2"	190	BV2F307	BV2J507	BV2C307	BV2BA07

**OPTIONS**

**Factory Mounted Solenoid Valve (Pneumatic Actuators) - See Model SV3**

**BV2 - L Actuators**

Size	Cv	Model	Supply Voltage	Spring Return
1/4"	6	BV2LQ00	120 VAC	Yes
3/8"	7	BV2LQ01	120 VAC	Yes
1/2"	10	BV2L902	120 VAC	Yes
3/4"	24	BV2L903	120 VAC	Yes
1"	45	BV2L904	120 VAC	Yes
1/4"	6	BV2LR00	24 VAC/DC	Yes
3/8"	7	BV2LR01	24 VAC/DC	Yes
1/2"	10	BV2L702	24 VAC/DC	Yes
3/4"	24	BV2L703	24 VAC/DC	Yes
1"	45	BV2L704	24 VAC/DC	Yes
1/4"	6	BV2LS00	24 VAC/DC	No
3/8"	7	BV2LS01	24 VAC/DC	No
1/2"	10	BV2LT02	24 VAC/DC	No
3/4"	24	BV2LT03	24 VAC/DC	No
1"	45	BV2LT04	24 VAC/DC	No
1-1/4"	90	BV2L105	24 VAC/DC	No

All spring return actuators are factory standard as spring (fail) close. For spring (fail) open valves add suffix "-FO" to the model number.