



Series
BV2

Automated Two-Piece Stainless Steel Ball Valves

Electric and Pneumatic Actuators

BV2 Series Automated Ball Valves:

- BV2B Series is an electric actuator that is rated NEMA 4X and is available in two position or modulating
- 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 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 BV2B incorporates a weatherproof, NEMA 4X, electric actuator powered by standard 115 VAC supply. Available in either two-position or proportional control, the BV2B provides an economical weatherproof automated valve package. Two-position actuators use the 115 VAC input to drive the valve open or closed, while 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 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.



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.

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).

ACTUATORS

Electric "B" Series

Power Requirements: 115 VAC, 50/60 Hz, single phase.

Power Consumption: Locked Rotor Current: Two position: 0.70 A, Modulating: 0.56 A.

Cycle Time (per 90°): Two Position: 10 sec, Modulating: 30 sec.

Duty Rating: 30% at 75°F (24°C).

Enclosure Rating: NEMA 4X.

Housing Material: Anodized Aluminum with epoxy finish.

Temperature Limits: -40 to 140°F (-40 to 60°C).

Electrical Connection: 1/2" female NPT.

Modulating Input: 4 to 20 mA.

Weight: 5 lb (2.27 kg), BA: 12 lb (5.44 kg).

Approvals: CSA.

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).

MODELS

BV2 Model Chart - F, J, C, and B Actuators

Size	Cv	Double Acting Pneumatic F Series		Spring Return Pneumatic J Series		Spring Return Pneumatic C Series		Two Position Electric B Series		Modulating Electric B Series	
		Model		Model		Model		Model		Model	
1/4"	6	BV2F100		BV2J100		BV2C100		BV2B700		BV2BA00	
3/8"	7	BV2F101		BV2J101		BV2C101		BV2B701		BV2BA01	
1/2"	10	BV2F102		BV2J102		BV2C102		BV2B702		BV2BA02	
3/4"	24	BV2F103		BV2J203		BV2C203		BV2B703		BV2BA03	
1"	45	BV2F104		BV2J204		BV2C204		BV2B704		BV2BA04	
1-1/4"	90	BV2F205		BV2J305		BV2C205		BV2B705		BV2BA05	
1-1/2"	125	BV2F306		BV2J506		BV2C306		BV2B706		BV2BA06	
2"	190	BV2F307		BV2J507		BV2C307		BV2B707		BV2BA07	

Options:

Factory Mounted Solenoid Valve (Pneumatic Actuators) - add suffix "-SV" to model number

BV2 Model Chart - L Actuators

Size	Cv	Model Number	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.