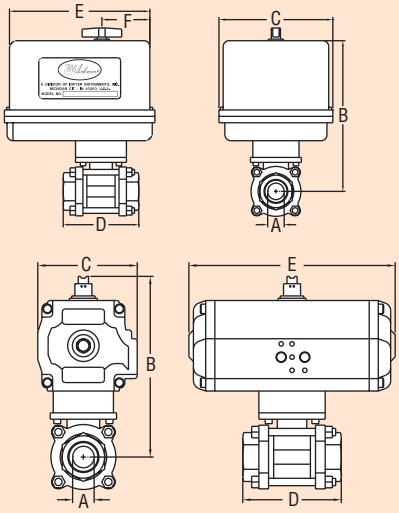
Series BV3

Automated Ball Valve – Three-Piece SS NPT

Electric and Pneumatic Actuators



Electric										
A	1/4″	3/8″	1/2″	3/4″	1″	1-1/4″	1-1/2″	2″	2-1/2″	3″
B	6.274	6.274	6.274	6.432	7.427	7.663	8.057	8.411	12.570*	12.970*
C	4.000	4.000	4.000	4.000	4.250	4.250	4.250	4.250	7.000	7.000
D	2.362	2.362	2.592	3.149	3.543	4.330	4.724	5.511	6.540	7.400
E	5.600	5.600	5.600	5.600	6.880	6.880	6.880	6.880	7.000	7.000
F	2.300	2.300	2.300	2.300	2.430	2.430	2.430	2.430	2.380	2.380
ACT.	U11, V12	U11, V12	U11, V12	U11, V12	U12, V12	U12, V12	U12, V12	U13, V13	U15, V15	U16, V16

*Includes declutchable manual override and handwheel.

Pneumatic Double Acting										
A	1/4″	3/8″	1/2″	3/4″	1″	1-1/4″	1-1/2″	2″	2-1/2″	3″
B	4.524	4.524	4.524	4.682	5.687	6.103	6.497	7.281	8.860	9.260
C	1.770	1.770	1.770	1.770	2.800	2.800	2.800	3.170	4.170	4.170
D	2.362	2.362	2.952	3.149	3.543	4.330	4.724	5.511	6.540	7.400
E	4.330	4.330	4.330	4.330	6.810	6.810	6.810	7.720	9.840	9.840
ACT.	DA1	DA1	DA1	DA1	DA2	DA2	DA3	DA3	DA5	DA5

Pneumatic Spring Return										
A	1/4″	3/8″	1/2″	3/4″	1″	1-1/4″	1-1/2″	2″	2-1/2″	3″
B	5.394	5.394	5.394	5.552	6.297	6.533	6.927	8.271	10.190	10.590
C	2.800	2.800	2.800	2.800	3.170	3.170	3.170	4.170	5.390	5.390
D	2.362	2.362	2.952	3.149	3.543	4.330	4.724	5.511	6.540	7.400
E	6.810	6.810	6.810	6.810	7.720	7.720	9.550	9.550	13.580	13.580
ACT.	SR2	SR2	SR2	SR2	SR3	SR3	SR4	SR5	SR7	SR7

BV3 Series Automated Ball Valves

- Ideal for food or chemical processing
- 3-piece SS investment cast body
- Internal entry blow-out stem
- Polished stem for high cycling
- 1000 WOG PSI, 125 psi steam

Series BV3 incorporates a full port three piece SS ball valve for great flow rates with minimal pressure drop. The valve features a blowout proof stem for added safety, reinforced PTFE seats and seals for longer life, and a 316SS (ASTM A351 GR CF8M) ball for better performance. Actuators are direct mounted creating a compact assembly for tight spaces. Double O-ring stem seals assure leak free operation.

The BV3 Series is an economical automated valve package with either an electric or pneumatic actuator. Electrically actuated models are weatherproof, NEMA 4, powered by standard 115 VAC supply, and are available in either two-position or proportional control. 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 thermal overload protection and a permanently lubricated gear train.

The pneumatic double acting actuator uses an air 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. Spring return pneumatic actuators use the air supply to open the valve and internally loaded springs return the valve to the closed position. Also available is the SV3 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 epoxy coated aluminum for years of corrosion free service.

SPECIFICATIONS

Body: 3 – piece.

Line Size: 1/4″ to 3″.

End Connections: Female NPT.

Pressure Limit: 1/4″ to 2″: 1000 psi (69 bar) WOG; 2-1/2″ to 3″: 800 psi (55 bar) WOG.

Wetted Materials: Body, end cap, stem: 316 SS; Ball: 316 SS; Seat, stem seal: PTFE.

Temperature Limit: -40 to 450°F (-40 to 232°C).

Other Materials: Body seal, body O-ring, stem O-ring: Fluoroelastomer.

ACTUATORS

Electric

Power Requirements: 120 VAC, 50/60 HZ, single phase. Optional 220 VAC, 24 VAC, 12 VDC, and 24 VDC.

Power Consumption (Locked Rotor Current): Two position: 1/4″ to 3/4″: 0.55 A, 1″ to 1-1/2″ : 0.75 A, 2″: 0.75 A, 2-1/2″: 0.75 A, 3″: 1.1 A; Modulating: 1/4″ to 3/4″: 0.55 A, 1″ to 1-1/2″: 0.75 A, 2″ and 2-1/2″: 0.75 A; 3″: 1.1 A.

Cycle Time (per 90°): Two position: 1/4″ to 3/4″: 2.5 s, 1″ to 2″: 5 s, 2-1/2″ and 3″: 15 s; Modulating: 1/4″ to 2″; 10 s, 2-1/2″: 20 s, 3″: 30 s.

Duty Rating: Two position: 1/4″ to 3/4″: 75%, 1″ to 3″: 25%; Modulating: 75%.

Enclosure Rating: NEMA 4 (IP56). Optional NEMA 7.

Housing Material: Aluminum with thermal bonding polyester powder finish.

Temperature Limit: 0 to 150°F (-18 to 65° C).

Electrical Connection: 1/2″ female NPT.

Modulating Input: 4 to 20 mA.

Standard Features: Manual override and position indicator except modulating units.

Pneumatic "DA" and "SR" Series

Type: DA Series is double acting and SR Series is spring return (rack and pinion).

Normal Supply Pressure: 80 psi (5.5 bar).

Maximum Supply Pressure: 130 psig (9.0 bar).

Air Connections: DA/SR1 to 5: 1/8″ female NPT, all other sizes: 1/4″ female NPT.

Air Consumption (per stroke): DA1: 2.32 in^3; DA2, SR2: 9.34 in^3; DA3, SR3: 17.21 in^3; SR4: 17.15 in^3; DA5, SR5: 39.54 in^3; SR6: 54.37 in^3; SR7: 103.74 in^3.

Cycle Time (per 90°): DA1: .03 s; DA2: .05 s; DA3: .06 s; DA5: .18 s; SR2: .09 s; SR3: .13 s; SR4: .17 s; SR5: .28 ; SR6: .39 s; SR7: .60 s.

Housing Material: Anodized aluminum body and epoxy coated aluminum end caps.

Temperature Limit: -4 to 180°F (-20 to 82°C).

Accessory Mounting: NAMUR standard.

Standard Features: Position indicator.

Size	Cv	Double Acting Pneumatic Model	Spring Return Pneumatic Model	Two Position Electric Model	Modulating Electric Model
1/4″	10	**BV3DA100**	**BV3SR200**	**BV3U1100**	**BV3V1200**
3/8″	10	**BV3DA101**	**BV3SR201**	**BV3U1101**	**BV3V1201**
1/2″	18	**BV3DA102**	**BV3SR202**	**BV3U1102**	**BV3V1202**
3/4″	40	**BV3DA103**	**BV3SR203**	**BV3U1103**	**BV3V1203**
1″	70	**BV3DA204**	**BV3SR304**	**BV3U1204**	**BV3V1204**
1-1/4″	120	**BV3DA205**	**BV3SR305**	**BV3U1205**	**BV3V1205**
1-1/2″	210	**BV3DA306**	**BV3SR406**	**BV3U1206**	**BV3V1206**
2″	340	**BV3DA307**	**BV3SR507**	**BV3U1307**	**BV3V1307**
2-1/2″	400	**BV3DA508**	**BV3SR708**	**BV3U1508**	**BV3V1508**
3″	675	**BV3DA509**	**BV3SR709**	**BV3U1609**	**BV3V1609**

OPTIONS

Explosion Proof Electric Actuators -add "-EX" to model number
Actuator Size*
XX1
XX2-XX6

*(Example: Third digit in U1**2** or V1**2** is the size)

Optional Electric Actuator Supply Voltages
-Contact factory for model number change

Solenoid Valve - See Model SV3.

For filters and regulators see pages 548-550 & 552.