

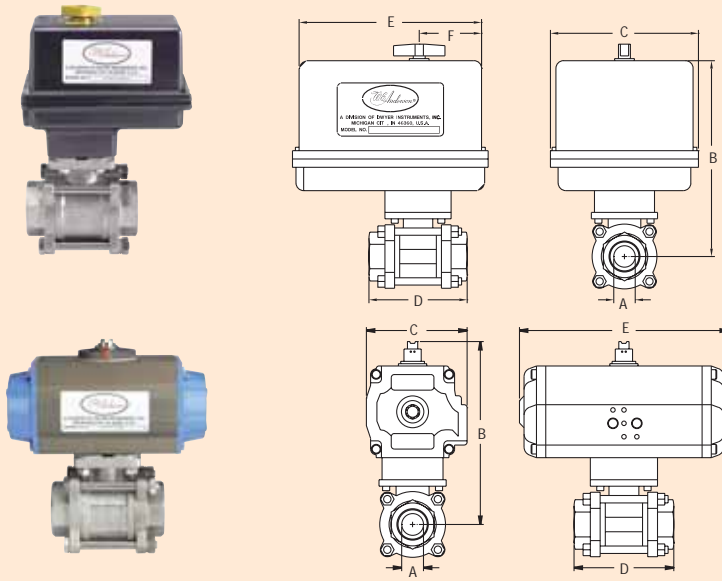


Series  
BV3

# Automated Ball Valves – Three-Piece SS NPT

## Electric and Pneumatic Actuators

CLEARANCE REQUIRED FOR COVER REMOVAL: 3.000"



ELECTRIC										
	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
A	6.274	6.274	6.274	6.432	7.427	7.663	8.057	8.411	12.570*	12.970*
B	4.000	4.000	4.000	4.000	4.250	4.250	4.250	4.250	7.000	7.000
C	2.362	2.362	2.592	3.149	3.543	4.330	4.724	5.511	6.540	7.400
D	5.600	5.600	5.600	5.600	6.880	6.880	6.880	6.880	7.000	7.000
E	2.300	2.300	2.300	2.300	2.430	2.430	2.430	2.430	2.380	2.380
F	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										
	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
A	4.524	4.524	4.524	4.682	5.687	6.103	6.497	7.281	8.860	9.260
B	1.770	1.770	1.770	1.770	2.800	2.800	2.800	3.170	4.170	4.170
C	2.362	2.362	2.952	3.149	3.543	4.330	4.724	5.511	6.540	7.400
D	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										
	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
A	5.394	5.394	5.394	5.552	6.297	6.533	6.927	8.271	10.190	10.590
B	2.800	2.800	2.800	2.800	3.170	3.170	3.170	4.170	5.390	5.390
C	2.362	2.362	2.952	3.149	3.543	4.330	4.724	5.511	6.540	7.400
D	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 stainless steel investment cast body
- Internal entry blow-out stem
- 100% factory hydro-tested
- Polished stem for high cycling
- 1000 WOG PSI, 125 psi steam

Series BV3 incorporates a full port three piece stainless steel 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 weather-proof, 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 Stainless Steel.  
Ball: 316 Stainless Steel.  
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": 0.55A, 1" to 1-1/2": 0.75A, 2": 0.75A, 2-1/2": 0.75A, 3": 1.1A. Modulating: 1/4" to 3/4": 0.55A, 1" to 1-1/2": 0.75A, 2" and 2-1/2": 0.75A, 3": 1.1A.

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

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

**Enclosure Rating:** NEMA 4. 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:** 1/4" female NPT.

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

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

**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		Spring Return Pneumatic		Two Position Electric		Modulating Electric	
		Model		Model		Model		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 Actuator**  
 -Add suffix "EX" to the model number

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

**Solenoid Valve** - See Model SV3.

NOTE: All spring return actuators are factory standard as spring (fail) close.