



Series
3BV3

Automated Ball Valve - 3-Way SS NPT

Electric and Pneumatic Actuators

Electric [NEMA 4 ENCL.] (inches)						
A	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
B	6.47, 7.35	7.72	7.88	8.51	11.95*	12.62*
C	4.00, 4.25	4.25	4.25	4.25	7.00	7.00
D	3.78	4.21	4.96	5.24	5.94	6.56
E	5.83, 6.88	6.88	6.88	6.88	7.00	7.00
F	2.31, 2.43	2.43	2.43	2.43	2.38	2.38
M	1.89	2.11	2.48	2.62	2.97	3.27
ACT.	U11, V12	U12, V12	U12, V12	U13, V13	U14, V14	U15, V15

*Includes de clutchable manual override and handwheel.

Pneumatic Double Acting (inches)						
A	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
B	5.93	6.30	6.46	7.09	8.07	6.74
C	2.80	2.80	2.80	2.80	3.72	3.72
D	3.78	4.96	4.96	5.24	5.94	6.54
E	5.49	5.49	5.49	5.49	8.15	8.15
F	1.61	1.61	1.61	1.61	2.07	2.07
M	1.89	2.11	2.48	2.62	2.97	3.27
ACT.	DA2	DA2	DA2	DA2	DA4	DA4

Pneumatic Spring Return (inches)						
A	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
B	5.93	6.30	7.11	7.74	9.03	10.88
C	2.80	3.17	3.72	3.72	4.84	5.39
D	3.78	4.21	4.96	5.24	5.94	6.54
E	5.49	6.38	8.15	8.15	10.69	12.91
F	1.61	1.77	2.07	2.07	2.68	2.87
M	1.89	2.11	2.48	2.62	2.97	3.27
ACT.	SR2	SR3	SR4	SR4	SR6	SR7

The Series 3BV3 incorporates a full port design for maximum flow rates with minimal pressure drop. Features include a blowout proof stem for added safety and reinforced RTFE seats and seals for longer life and leak free operation. The four seat design allows for high cyclic capabilities and tight shut off in any position. Perfect for mixing or diverting services in the food and chemical processing industries.

The 3BV3 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 each of the valve ports open or closed, while the modulating actuator accepts a 4 to 20 mA input for infinite valve positioning. Actuator features include thermal overload protection to withstand stall conditions, visual position indication and a permanently lubricated gear train.

The pneumatic double acting actuator uses an air supply to drive each of the actuator ports. Spring return pneumatic actuators use the air supply to drive the valve stem one direction, and internally loaded springs return the valve to its original position. Also available is the SV3 solenoid valve to electrically switch the supply pressure between the air supply ports. Actuators are constructed of anodized aluminum and are epoxy coated for years of corrosion free service.

Port Configuration	Flow Path		Diagram
	Act. Open	Act. Closed	
"T" Port	-T1	All Open	
	-T2	A-B	
	-T3	A-C	
	-T4	B-C	
"L" Port	-L1	B-C	
	-L2	A-B	
	-L3	All Closed	

OPTIONS

Explosion Proof Electric Actuators -add "-EX" to model number

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

Solenoid Valve - See Model SV3.

SPECIFICATIONS

Service: Compatible liquids, gases or steam.

Body: 3-way.

Line Size: 1/2" to 2".

End Connections: Female NPT.

Pressure Limit: 1000 psig (69 bar) WOG; 150 psi (10.3 bar) SWP.

Wetted Materials:

Body, End Cap, Stem: 316 SS.

Ball: 316 SS.

Seat, Stem Seal: RTFE.

Temperature Limit: -40 to 450°F (-40 to 232°C). Steam max.: 366°F (186°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: 1/2": .55A, 3/4" to 1-1/2": .75A, 2": 1.1A. Modulating: 1/2" to 1-1/2": .75A, 2": 1.1A.

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

Duty Cycle: Two Position: 1/2": 75%, 3/4" to 2": 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).

Conduit Connection: 1/2" female NPT.

Modulating Input: 4 to 20 mA.

Standard Features: Manual override and visual 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: 120 psig (8 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 cu. in.; DA2, SR2: 9.34 cu. in.; DA3, SR3: 17.21 cu. in.; DA4, SR4: 20.5 cu. in.; SR5: 39.54 cu. in.; SR6: 54.37 cu. in.; SR7: 85.43 cu. in.

Cycle Time: (per 90°) DA1: .03 sec.; DA2: .04 sec.; DA3: .08 sec.; DA4: .12 sec.; SR2: .09 sec.; SR3: .14 sec.; SR4: .22 sec.; SR5: .33 sec.; SR6: .46 sec.; SR7: .78 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: Visual position indicator.

How To Order:

1. Select **Model No.** to specify pipe size and actuator.
2. Choose a **Port Configuration** to determine valve flow path.
Example: 3BV3SR404-T2

Size	Cv		Double Acting Pneumatic	Spring Return Pneumatic	Two Position Electric	Modulating Electric
	L-Port	T-Port	Model*	Model*	Model*	Model*
1/2"	10.0	16.0	3BV3DA202	3BV3SR202	3BV3U1102	3BV3V1202
3/4"	14.0	24.0	3BV3DA203	3BV3SR303	3BV3U1203	3BV3V1203
1"	25.0	45.0	3BV3DA204	3BV3SR404	3BV3U1204	3BV3V1204
1-1/4"	34.0	77.0	3BV3DA205	3BV3SR405	3BV3U1305	3BV3V1305
1-1/2"	56.0	100.0	3BV3DA406	3BV3SR606	3BV3U1406	3BV3V1406
2"	110.0	430.0	3BV3DA407	3BV3SR707	3BV3U1507	3BV3V1507

* Complete model includes **Port Configuration** - see "How to Order" above.