



Series 3ABV

# Automated Ball Valves - 3-Way Brass NPT

## Electric and Pneumatic Actuators

ELECTRIC (NEMA 4 ENCL.) (inches)								
A	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
B	5.90	5.90	6.13	6.20	6.57	6.70	8.29	8.62
C	4.00	4.00	4.00	4.00	4.75	4.75	4.75	4.75
D	2.64	2.64	2.64	3.03	3.43	4.13	4.82	5.45
E	5.63	5.63	5.63	5.63	6.88	6.88	6.88	6.88
F	1.43	1.43	1.43	1.59	1.87	2.20	2.44	2.87
G	1.33	1.33	1.33	1.53	1.88	2.36	2.83	3.38
H	0.76	0.76	0.76	0.86	1.00	1.22	1.45	1.75
I	0.86	0.86	1.06	1.25	1.61	1.96	2.16	2.75
ACT.	U11, V11	U11, V11	U11, V11	U11, V11	U12, V12	U12, V12	U12, V12	U13, V13

  

PNEUMATIC DOUBLE ACTING (inches)								
A	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
B	3.96	3.96	3.96	4.30	4.86	5.00	5.94	6.95
C	1.77	1.77	1.77	1.77	2.80	2.80	3.17	3.72
D	2.64	2.64	2.64	3.03	3.43	4.13	4.82	5.45
E	4.33	4.33	4.33	4.33	5.49	5.49	6.38	8.15
F	1.43	1.43	1.43	1.59	1.87	2.20	2.44	2.87
G	1.33	1.33	1.33	1.53	1.88	2.36	2.83	3.38
H	0.76	0.76	0.76	0.86	1.00	1.22	1.45	1.75
I	0.86	0.86	1.06	1.25	1.61	1.96	2.16	2.75
ACT.	DA1	DA1	DA1	DA1	DA2	DA2	DA3	DA4

  

PNEUMATIC SPRING RETURN (inches)								
A	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
B	4.45	4.45	4.45	4.52	5.30	5.44	6.59	7.40
C	2.80	2.80	2.80	2.80	3.17	3.17	3.17	4.17
D	2.64	2.64	2.64	3.03	3.43	4.13	4.82	5.45
E	5.49	5.49	5.49	5.49	6.38	6.38	8.15	9.35
F	1.43	1.43	1.43	1.59	1.87	2.20	2.44	2.87
G	1.33	1.33	1.33	1.53	1.88	2.36	2.83	3.38
H	0.76	0.76	0.76	0.86	1.00	1.22	1.45	1.75
I	0.86	0.86	1.06	1.25	1.61	1.96	2.16	2.75
ACT.	SR2	SR2	SR2	SR2	SR3	SR3	SR4	SR5

The Series 3ABV incorporates a standard port valve for great flow rates with minimal pressure drop. Features include a blowout proof stem for added safety and reinforced TFE 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 3ABV 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 4-20 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 in 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.

### HOW TO ORDER:

1. Select **Model No.** to specify pipe size and actuator.
2. Choose a **Port Configuration** to determine valve flow path.

**Example:** 3ABV1DA204-T2

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	All Open	
	-L2	A-B	
	-L3	All Closed	

### SPECIFICATIONS

**Service:** Compatible liquids, gases or steam.

**Body:** 3-way.

**Line Size:** 1/4" to 2".

**End Connections:** Female NPT.

**Pressure Limits:** 1/4" to 1-1/4": 435 psi (30 bar) WOG, 1-1/2": 232 psi (16 bar) WOG, 2": 145 psi (10 bar) WOG. 100 psi (6.9 bar) SWP.

**Wetted Materials:**

Body, End Cap, Stem: Brass.

Ball: Brass, Chrome Plated.

Seat, Stem Seal: TFE.

**Temperature Limits:** 320°F (160°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": .55A, 1" to 2": .75A. Modulating: 1/4" to 3/4": .55A, 1" to 2": .75A.

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

**Duty Cycle:** Two Position: 1/4" to 3/4": 75%, 1" to 2": 25%. Modulating: 75%.

**Options**

Explosion Proof Electric Actuator

-Add suffix "-EX" to the model number

Optional Electric Actuator Supply Voltages

-Contact factory for model number change (24 VAC)

220 VAC, 24 VDC or 12 VDC

Solenoid Valve - See Model SV3.

**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:** 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.

**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.

**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.

Size (in.)	Cv		Double Acting Pneumatic		Spring Return Pneumatic		Two Position Electric		Modulating Electric	
	L-Port	T-Port	Model*		Model*		Model*		Model*	
1/4"	3.26	3.50	3ABV1DA100		3ABV1SR200		3ABV1U1100		3ABV1V1100	
3/8"	3.50	4.08	3ABV1DA101		3ABV1SR201		3ABV1U1101		3ABV1V1101	
1/2"	4.20	5.02	3ABV1DA102		3ABV1SR202		3ABV1U1102		3ABV1V1102	
3/4"	7.00	7.70	3ABV1DA103		3ABV1SR203		3ABV1U1103		3ABV1V1103	
1"	12.83	14.24	3ABV1DA204		3ABV1SR304		3ABV1U1204		3ABV1V1204	
1-1/4"	18.67	19.72	3ABV1DA205		3ABV1SR305		3ABV1U1205		3ABV1V1205	
1-1/2"	29.75	30.69	3ABV1DA306		3ABV1SR406		3ABV1U1206		3ABV1V1206	
2"	43.76	44.58	3ABV1DA407		3ABV1SR507		3ABV1U1307		3ABV1V1307	

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

Valves