



Series
3ABV

Automated Ball Valve - 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	3.03	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.

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.

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.
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.

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

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.

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%.

Enclosure Rating: NEMA 4. Optional NEMA 7.

How To Order:

- Select **Model No.** to specify pipe size and actuator.
- Choose a **Port Configuration** to determine valve flow path.
Example: 3ABV1DA204-T2

Size	Cv		Double Acting Pneumatic		Spring Return Pneumatic		Two Position Electric		Modulating Electric	
	L-Port	T-Port	Model*	Model*	Model*	Model*	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.