



Series
ABV

Automated Two-Piece Brass Ball Valve

Electric and Pneumatic Actuators

| Electric (inches) | | | | | | | | | | | |
|-------------------|-------|-------|-------|-------|-------|--------|--------|-------|--------|--------|--------|
| A | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 4" |
| B | 6.130 | 6.130 | 6.130 | 6.199 | 6.570 | 6.700 | 8.290 | 8.620 | 9.180 | 12.260 | 13.060 |
| C | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.000 | 4.220 | 4.220 | 4.220 | 8.500 | 8.500 |
| D | 2.640 | 2.640 | 2.640 | 2.980 | 3.350 | 3.660 | 4.130 | 4.820 | 6.500 | 7.400 | 8.590 |
| E | 5.630 | 5.630 | 5.630 | 5.630 | 5.630 | 5.630 | 5.630 | 6.880 | 6.880 | 7.000 | 7.000 |
| F | 2.310 | 2.310 | 2.310 | 2.310 | 2.310 | 2.310 | 2.430 | 2.430 | 2.430 | 3.130 | 3.130 |

| Pneumatic Double Acting (inches) | | | | | | | | | | | |
|----------------------------------|-------|-------|-------|-------|-------|--------|--------|-------|--------|-------|-------|
| A | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 4" |
| B | 4.200 | 4.200 | 4.200 | 4.269 | 4.644 | 4.770 | 6.226 | 6.558 | 7.552 | 7.986 | 9.801 |
| C | 1.780 | 1.780 | 1.780 | 1.780 | 1.780 | 1.780 | 2.880 | 2.880 | 3.169 | 3.169 | 4.178 |
| D | 2.638 | 2.638 | 2.638 | 2.980 | 3.350 | 3.657 | 4.126 | 4.805 | 6.496 | 7.402 | 8.856 |
| E | 4.257 | 4.257 | 4.257 | 4.527 | 4.527 | 4.527 | 6.585 | 6.585 | 7.717 | 7.717 | 9.842 |

| Pneumatic Spring Return (inches) | | | | | | | | | | | |
|----------------------------------|-------|-------|-------|-------|-------|--------|--------|-------|--------|-------|--------|
| A | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 4" |
| B | 5.060 | 5.060 | 5.060 | 5.129 | 5.504 | 5.630 | 6.666 | 6.998 | 8.532 | 8.996 | 10.315 |
| C | 2.880 | 2.880 | 2.880 | 2.880 | 2.880 | 2.880 | 3.175 | 3.175 | 4.173 | 4.173 | 5.249 |
| D | 2.638 | 2.638 | 2.638 | 2.980 | 3.350 | 3.657 | 4.126 | 4.805 | 6.496 | 7.402 | 8.858 |
| E | 6.585 | 6.585 | 6.585 | 6.585 | 6.585 | 6.585 | 7.788 | 7.788 | 9.843 | 9.843 | 11.693 |

ABV Series Automated Ball Valves

- Full port brass ball valve
- Direct mount actuators for compact assembly
- Electric actuator that is rated NEMA 4 and is available in two position or modulating
- Pneumatic double acting or spring return rack and pinion actuator

Series ABV incorporates a full port brass 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 Chrome/Nickel plated 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 ABV Series is an economical automated valve package with either an electric or pneumatic actuator. Electric 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 actuator uses 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.

SPECIFICATION

Body: 2 – piece.
Line Size: 1/4" to 4".
End Connections: Female NPT.
Pressure Limit: 600 psi (41 bar) WOG, 100 psi (6.9 bar) SWP.
Wetted Materials: Body, End Cap, Stem: Brass. Ball: Chrome/Nickel plated brass. Seat, Stem Seal: PTFE.
Temperature Limit: 300°F (148°C).
Other Materials: Body Seal, Body O-ring, Stem O-ring: Fluoroelastomer.

ACTUATORS

Electric
Power Requirements: 115 VAC, 50/60 HZ, single phase. Optional 220 VAC, 24 VAC, 12 VDC, and 24 VDC.
Power Consumption (Locked Rotor Current): Two position: U11: 0.55A; U12, U13, U14: 0.75A; U15: 1.1A. Modulating: V12, V13, V14: 0.75A; V15: 1.1A.
Cycle Time (per 90°): Two position: U11: 2.5 sec.; U12, U13: 5 sec.; U14: 10 sec.; U15: 15 sec. Modulating: V12, V13: 10 sec.; V13: 20 sec.; V15: 30 sec.
Duty Cycle: Two position: U11: 75%; U12, U13, U14, U15: 25%. Modulating: V12, V13, V14, V15: 75%.
Enclosure Rating: NEMA 4. Optional NEMA 7.
Housing Material: Aluminum with thermal bonding polyester powder finish.
Temperature Limit: 0 to 150°F (-17 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 cu. in.; DA2, SR2: 9.34 cu. in.; DA3, SR3: 17.21 cu. in.; DA5, SR5: 39.54 cu. in.; SR6: 54.37 cu. in.
Cycle Time (per 90°): DA1: .03 sec.; DA2: .05 sec.; DA3: .06 sec.; DA5: .18 sec.; SR2: .09 sec.; SR3: .13 sec.; SR5: .28 sec.; SR6: .39 sec.
Housing Material: Anodized aluminum body and epoxy coated aluminum end caps.
Temperature Limit: -4 to 180°F (-20 to 85°C).
Accessory Mounting: NAMUR standard.
Standard Features: Position indicator.

| Size | Cv | Double Acting Pneumatic | Spring Return Pneumatic | Two Position Electric | Modulating Electric | OPTIONS |
|--------|--------|-------------------------|-------------------------|-----------------------|---------------------|--|
| | | Model | Model | Model | Model | |
| 1/4" | 6.3 | ABV1DA100 | ABV1SR200 | ABV1U1100 | ABV1V1200 | <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">Explosion Proof Electric Actuators -add "-EX" to model number</div> Optional Electric Actuator Supply Voltages -Contact factory for model number change Solenoid Valve - See Model SV3. |
| 3/8" | 7.0 | ABV1DA101 | ABV1SR201 | ABV1U1101 | ABV1V1201 | |
| 1/2" | 19.0 | ABV1DA102 | ABV1SR202 | ABV1U1102 | ABV1V1202 | |
| 3/4" | 19.0 | ABV1DA103 | ABV1SR203 | ABV1U1103 | ABV1V1203 | |
| 1" | 34.5 | ABV1DA104 | ABV1SR204 | ABV1U1104 | ABV1V1204 | |
| 1-1/4" | 50.2 | ABV1DA105 | ABV1SR205 | ABV1U1105 | ABV1V1205 | |
| 1-1/2" | 268.4 | ABV1DA206 | ABV1SR306 | ABV1U1206 | ABV1V1206 | |
| 2" | 309.3 | ABV1DA307 | ABV1SR307 | ABV1U1207 | ABV1V1207 | |
| 2-1/2" | 629.5 | ABV1DA308 | ABV1SR508 | ABV1U1308 | ABV1V1308 | |
| 3" | 944.5 | ABV1DA309 | ABV1SR509 | ABV1U1409 | ABV1V1409 | |
| 4" | 1493.0 | ABV1DA510 | ABV1SR610 | ABV1U1510 | ABV1V1510 | |

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