### Features:
- All plastic construction ideal for corrosive atmosphere.
- Direct manual override standard on ABVA & ABVS.
- Easy field attachment to ball valve.
- Long cycle life – extensively tested & proven.
- ABVS converts easily between normally-open and normally-closed operation.
- Lightweight assembly – less piping stress and lower shipping weight.
- Can be hydraulically actuated.

Each valve and actuator is 100% individually inspected and tested prior to shipment.

### Installation:
The ABVA requires a 4-way air solenoid valve (Part # 8345G1), and ABVS requires a 3-way air solenoid valve (Part # 8320G13) to control actuation. Compressed air should be filtered and lubricated. The hex nuts used to mount the actuator are tapped to facilitate piping support.

### Manual Override:
Series ABVA and ABVS have direct override to the ball valve shaft. Series ABVS requires simple loosening of the spring prior to manual override.

### Materials of Construction:
Actuator is constructed of corrosion resistant thermoplastics. Seals are Buna-N. For optional materials, please consult factory.

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### ACTUATOR ONLY – PART NUMBERS, WEIGHTS AND AIR PRESSURE REQUIREMENTS

<table>
<thead>
<tr>
<th>Valve Size</th>
<th>NPT or BSP</th>
<th>Air x Air Part Number</th>
<th>Weight Lbs.</th>
<th>Air x Air Air Pressure Required</th>
<th>Spring Kit Part Number</th>
<th>Weight Lbs.</th>
<th>Air Pressure Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>ABVA 1.2</td>
<td>0.9 .41</td>
<td>20 - 50 PSI</td>
<td>1.4 - 3.5 Bars</td>
<td>ABVS 1.2 .3 .14</td>
<td>50 - 80 PSI</td>
<td>3.4 - 5.5 Bars</td>
</tr>
<tr>
<td>3/4</td>
<td>ABVA 1.6</td>
<td>1.8 .82</td>
<td>20 - 50 PSI</td>
<td>1.4 - 3.5 Bars</td>
<td>ABVS 1.6 .6 .27</td>
<td>50 - 80 PSI</td>
<td>3.4 - 5.5 Bars</td>
</tr>
<tr>
<td>1</td>
<td>ABVA 1.6</td>
<td>1.8 .82</td>
<td>20 - 50 PSI</td>
<td>1.4 - 3.5 Bars</td>
<td>ABVS 1.6 .6 .27</td>
<td>50 - 80 PSI</td>
<td>3.4 - 5.5 Bars</td>
</tr>
</tbody>
</table>

---

### TYPICAL AIR CONNECTIONS, ABVA

- **AIR TO CLOSE**
- **AIR TO OPEN**
- **EXHAUST**
- **PRESSURE IN**

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### TYPICAL AIR CONNECTIONS, ABVS

- **SPRING TO CLOSE**
- **AIR TO OPEN**
- **COMMON PORT**
- **EXHAUST**
- **PRESSURE IN**

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### VALVE & ACTUATOR ASSEMBLY – PART NUMBERS & DIMENSIONS

| Pipe Size | Air x Air ** Actuator w/Valve Part Number | A IN. | MM | B IN. | MM | C IN. | MM | D IN. | MM | E IN. | MM | F IN. | MM | G IN. | MM | H IN. | MM | I IN. | MM | J IN. | MM |
|-----------|------------------------------------------|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
| 1/2       | ABVA 050 –                               | 5.75  | 146| 0.6  | 15| 5.6  | 142| 3.90  | 99| 1.25  | 32| 4.25  | 108| 6.5  | 165| 2.8  | 71| 1.75  | 44.4| 2.60  | 66|
| 3/4       | ABVA 075 –                               | 7.30  | 185| 0.6  | 15| 7.1  | 180| 5.00  | 127| 1.50  | 38| 4.60  | 117| 7.1  | 180| 2.8  | 71| 2.25  | 57.0| 3.25  | 83|
| 1         | ABVA 100 –                               | 7.30  | 185| 0.6  | 15| 7.8  | 198| 5.55  | 144| 1.90  | 48| 5.60  | 142| 8.0  | 203| 2.8  | 71| 2.50  | 64.0| 3.30  | 84|

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* For spring return simply change ABVA to ABVS and refer to Dimension H.
** To complete part numbers refer to the Order Information section on page 5, the Manual Ball Valve. The letters MBV are simply replaced by ABVA or ABVS as indicated in the above chart.
ACTUATOR ONLY – PART NUMBERS, WEIGHTS AND AIR PRESSURE REQUIREMENTS

Features:
- All plastic construction ideal for corrosive atmosphere.
- Manual override standard on ABRA & ABMS.
- Easy field attachment to ball valve.
- Long cycle life – extensively tested & proven.
- ABRS and ABMS can be converted between normally-closed and normally-open.
- Lightweight assembly - less piping stress and lower shipping weight.
- Can be hydraulically actuated.

Each valve and actuator is 100% individually inspected and tested prior to shipment.

Installation:
The ABRA requires a 4-way air solenoid valve (Part # 8345G1); and ABRS and ABMS require a 3-way air solenoid valve (Part # 8320G13) to control actuation. Compressed air should be filtered and lubricated. The hex nuts used to mount the actuator are tapped to facilitate piping support.

Manual Override:
Series ABRA has direct override to the ball valve shaft. Series ABRS has no manual override. Series ABMS is a spring-return model with direct override to the ball valve shaft.

Materials of Construction:
Actuator is constructed of corrosion resistant thermoplastics. Seals are Buna-N. For optional materials, please consult factory.

<table>
<thead>
<tr>
<th>Valve Size NPT or BSP</th>
<th>Actuator Type</th>
<th>Part Number</th>
<th>Weight Lbs.</th>
<th>Pressure Requirement</th>
<th>Maximum Pressure @ 75°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL 1 1/4&quot;, 1 1/2&quot;, &amp; 2&quot; BALL VALVES</td>
<td>Air x Air with Manual Override</td>
<td>ABRA</td>
<td>1.5</td>
<td>30-50 PSI</td>
<td>2.1-3.5 BAR</td>
</tr>
<tr>
<td></td>
<td>Air x Spring without Manual Override</td>
<td>ABRS</td>
<td>2.5</td>
<td>60-80 PSI</td>
<td>4.1-5.5 BAR</td>
</tr>
<tr>
<td></td>
<td>Air x Spring with Manual Override</td>
<td>ABMS</td>
<td>3.5</td>
<td>60-80 PSI</td>
<td>4.1-5.5 BAR</td>
</tr>
</tbody>
</table>

Maximum Ambient Temperature 120°F (49°C) ABRS/ABMS shipped “normally-closed”. They can be ordered “normally-open”.

Part Numbers to order Air x Air Actuator with Valve:
For 1 1/4" pipe size the part # is ABRA125...; 1 1/2" is ABRA150...; 2" is ABRA200...; to complete the part numbers refer to the “Order Information” section on page 5, Manual Ball Valves.
The letters MBV are simply replaced by ABRA (Air x Air), ABRS (Air x Spring) or ABMS (Air x Spring with manual override) as indicated.

TYPICAL AIR CONNECTIONS

ABRA

TYPICAL AIR CONNECTIONS

ABRS/ABMS

1384 Pompton Ave., Cedar Grove, NJ 07009 • (973) 256-3000 • Fax (973) 256-4745 • www.plastomatic.com • info@plastomatic.com
Rack & Pinion Pneumatic Actuator engineered for corrosion resistance
Double-Acting or Spring Return

The ABR rack and pinion pneumatic actuator produces linear torque output in a compact design utilizing the same body and end caps for double-acting and spring return units.

Features:
- Million cycle design
- Polished bore & low friction bearings
- Visual indication
- Blowout-proof shaft
- Meets ASTM B117-73 (500 hrs. salt spray)

Actuator Materials of Construction
Actuator body is aluminum alloy (ASTM 6063T6 and ASTM B179) with additional components constructed of nickel plated steel, stainless steel, spring steel, high alloy spring steel, aluminum, nylon, nitril, nitrile, and acetal resin.

Each activated valve is 100% individually inspected and tested prior to shipment.

Air x Air (Top View)
Air supplied to Port A forces pistons apart and toward end positions with exhaust air exiting at Port B. (A counter-clockwise rotation is obtained)

Air x Spring (Top View)
Air supplied to Port A forces pistons apart and toward end position, compressing springs. Exhaust air exits at Port B. (A counter-clockwise rotation is obtained)

Air supplied to Port B forces pistons toward center with exhaust air exiting at Port A. (A clockwise rotation is obtained)

Air or electric failure allows springs to force pistons toward center position with exhaust air exiting at Port A. (A clockwise rotation is obtained)

Ordering Information
Order by part number and specify exact chemicals, temperatures and pressures. To arrive at the proper part number, please consult diagram below.

The letters and numbers used in this part number are for example only!

ABRA*
VENTED BALL
Add “Z-ABR-VENT” for sodium hypochlorite.

*For Air x Spring, change ABRA to ABR.

DIMENSIONS

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Activator with Valve Model No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot;</td>
<td>ABRA 300 –</td>
<td>10.6</td>
<td>270</td>
<td>6.12</td>
<td>156</td>
<td>3.27</td>
<td>83</td>
<td>1/4&quot; NPT</td>
</tr>
<tr>
<td>4&quot;</td>
<td>ABRA 400 –</td>
<td>12.76</td>
<td>324</td>
<td>6.12</td>
<td>156</td>
<td>3.27</td>
<td>83</td>
<td>1/4&quot; NPT</td>
</tr>
</tbody>
</table>

* To complete the Model Numbers refer to the ordering chart below.