Lockout L-O-X® and Soft Start EEZ-ON®
Valves
15 and 27 Series

www.rosscontrols.com
MANUAL LOCKOUT L-O-X® VALVES – KEY FEATURES

- Fluorocarbon slipper seals for easy shifting, even after long periods of inactivity
- Easily identified by yellow body with red handle
- Integrated sensing port for pressure verification
- Lockable only in the OFF position
- Has a full size exhaust port (equal to or larger than supply)
- Simple push/pull of the large handle provides positive direct manual operation

MANUAL LOCKOUT L-O-X® VALVES WITH SOFT START EEZ-ON® – KEY FEATURES

- Easily identified by blue handle
- Gradual re-application of pneumatic pressure prevents rapid equipment movement at startup
- Lockable only in the OFF position
- Has a full size exhaust port (equal to or larger than supply)
- Positive action (2 positions only)
- Simple push/pull of the large blue handle provides positive direct manual operation
- Integrated sensing port for pressure verification

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**VALVE TYPE** | **VALVE SERIES** | **AVAILABLE PORT SIZES** | **FUNCTIONS** | **Max Flow (Cv)** | **Solenoid Control** | **Pressure Control** | **Page**
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Modular | 15 | | | | | | |
Classic | 15 | | | | | | |
High Capacity | L-O-X® | | | | | | |
Stainless Steel | 15 | | | | | | |
Stainless Steel with Integrated Filter/Regulator | RCO | | | | | | |
Piloted Valves with Manual Lockout L-O-X® Control | | | | | | | |
Soft Start EEZ-ON® Valves | | | | | | | |
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27 | | | | | | |
27 | | | | | | |
27 | | | | | | |
Manual Lockout L-O-X® Valves with Soft Start EEZ-ON® Operation | | | | | | | |
Modular | 15 | | | | | | |
Classic | 15 | | | | | | |
Piloted Valves with Manual Lockout L-O-X® & Soft Start EEZ-ON® Operation | | | | | | | |
Manual Pilot Controlled | 27 | | | | | | |
Solenoide Pilot Controlled | 27 | | | | | | |
IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

**Construction:** Spool.

**Mounting Type:** In-Line.

**Ambient/Media Temperature:** 40° to 175°F (4° to 80°C).

**Flow Media:** Filtered air.

**Flow Media:** Filtered air.

**Inlet Pressure:** 0 to 145 psig (0 to 10 bar).

**Lock Hole Diameter:** 0.27 inch (7.0 mm).

**Length of Hole:** 0.43 inch (10.9 mm).

**NOTE:** Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
Manual Lockout L-O-X® Valves, Modular 15 Series

**Valve Dimensions** – inches (mm)

**Accessories & Options**

<table>
<thead>
<tr>
<th>Silencers</th>
<th>Pressure Switches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Size</td>
<td>Thread Type</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>3/4</td>
<td>Male - NPT</td>
</tr>
<tr>
<td>3/4</td>
<td>Male - BSPT</td>
</tr>
</tbody>
</table>

*Pressure switch closes on falling pressure of 5 psig (0.34 bar).

**Multiple Lock-out Device**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>356A30</th>
</tr>
</thead>
</table>

**Valve Operation**

**Valved Closed**
When the red handle is pushed inward, the flow of supply air is blocked and downstream air is exhausted via the exhaust port. While servicing or maintaining machinery, the L-O-X® valve should be padlocked in this position to prevent the handle from being pulled outward inadvertently where potential for human injury exists.

**Valve Open**
When the red handle is pulled outward, supply air flows freely from inlet to outlet and flow to exhaust is blocked. A detent keeps the handle in the open position.

If a system requires gradual buildup of downstream pressure, see manual L-O-X® valves with EEZ-ON® operation.

**STANDARD SPECIFICATIONS** (for valves on this page):

<table>
<thead>
<tr>
<th>Construction: Spool.</th>
<th>Inlet Pressure: 0 to 200 psig (0 to 14 bar).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting Type: Modular, In-Line.</td>
<td>Lock Hole Diameter: 0.27 inch (7.0 mm).</td>
</tr>
<tr>
<td>Ambient/Media Temperature: 40° to 175°F (4° to 80°C).</td>
<td>Length of Hole: 0.43 inch (10.9 mm).</td>
</tr>
<tr>
<td>Flow Media: Filtered air.</td>
<td>NOTE: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.</td>
</tr>
</tbody>
</table>

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

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## 3-Way 2-Position Valve

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Body Size</th>
<th>Valve Model Number</th>
<th>Cᵥ</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 3</td>
<td>3/4</td>
<td>Y1523C3002</td>
<td>4.74</td>
<td>3.57</td>
</tr>
<tr>
<td>1/2</td>
<td>3/4</td>
<td>Y1523C4002</td>
<td>7.10</td>
<td>4.00</td>
</tr>
<tr>
<td>3/4</td>
<td>3/4</td>
<td>Y1523C5012</td>
<td>8.26</td>
<td>4.10</td>
</tr>
<tr>
<td>3/4, 1</td>
<td>1</td>
<td>Y1523C5002</td>
<td>13.12</td>
<td>8.98</td>
</tr>
<tr>
<td>1</td>
<td>1/4</td>
<td>Y1523C6002</td>
<td>16.56</td>
<td>9.52</td>
</tr>
<tr>
<td>1</td>
<td>1/4</td>
<td>Y1523C7012</td>
<td>19.25</td>
<td>9.74</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, insert a “D” after “Y” to the model number, e.g., YD1523D3002.

---

### Valve Dimensions – inches (mm)

**Body Size 1/2**

- Port 1 (inlet): 6.61 (168)
- Port 2 (outlet): 8.96 (228)
- Port 3 (exhaust): 2.00 (51)
- Weight: 1.25 (32)

**Body Size 1**

- Port 1 (inlet): 7.72 (196)
- Port 2 (outlet): 10.76 (273)
- Port 3 (exhaust): 3.75 (95)
- Weight: 1.63 (41)

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### Accessories & Options

#### Silencers

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Thread Type</th>
<th>Model Number*</th>
<th>Avg. Cᵥ</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4</td>
<td>Male - NPT</td>
<td>5500A5003</td>
<td>11.5</td>
</tr>
<tr>
<td>3/4</td>
<td>Male - BSPT</td>
<td>D5500A5003</td>
<td>11.5</td>
</tr>
<tr>
<td>1¼</td>
<td>Male - NPT</td>
<td>5500A7013</td>
<td>16.4</td>
</tr>
<tr>
<td>1¼</td>
<td>Male - BSPT</td>
<td>D5500A7013</td>
<td>16.4</td>
</tr>
</tbody>
</table>

Pressures Range: 0 to 150 psig (0 to 10.3 bar) maximum. Flow Media: Filtered air.

#### Pressure Switches

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>Model Number*</th>
<th>Port Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN 43650 Form A</td>
<td>586A86</td>
<td>1/8 NPT</td>
</tr>
<tr>
<td>M12 Micro-DC</td>
<td>1153A30</td>
<td>1/8 NPT</td>
</tr>
</tbody>
</table>

*Pressure switch closes on falling pressure of 5 psig (0.34 bar).

#### Multiple Lock-out Device

- Model Number: 356A30

**1/8 NPT port threads.

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### Valve Operation

#### Valved Closed

With a short push of the red handle inward, the flow of supply air is blocked and downstream air is exhausted via the exhaust port at the bottom of the valve. The L-O-X® valve should be padlocked in this position to prevent the handle from being pulled outward inadvertently where potential for human injury exists while servicing machinery.

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### STANDARD SPECIFICATIONS

For valves on this page:

- **Construction:** Spool.
- **Mounting Type:** In-Line.
- **Ambient/Media Temperature:** 40° to 175°F (4° to 80°C).
- **Flow Media:** Filtered air.
- **Inlet Pressure:** 0 to 300 psig (0 to 20.7 bar).

**NOTE:** Per specifications and regulations, these products are defined as energy isolation devices, **NOT AS EMERGENCY STOP DEVICES**.

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**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.
Manual Lockout L-O-X® Valves, High Capacity

3-Way 2-Position Valve

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Valve Model Number</th>
<th>C_v1-2</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1½ 2</td>
<td>Y1523C8002</td>
<td>35.53</td>
<td>50.98</td>
</tr>
<tr>
<td>2 2</td>
<td>Y1523C9012</td>
<td>40.38</td>
<td>52.23</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, insert a “D” after “Y” to the model number, e.g., YO1523C8002.

Valve Dimensions – inches (mm)

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Valve Model Number</th>
<th>Avg. C_v</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/2</td>
<td>Y1523C8002</td>
<td>34.2</td>
</tr>
<tr>
<td>2 2</td>
<td>Y1523C9012</td>
<td>34.2</td>
</tr>
</tbody>
</table>

Pressure Switches

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>Model Number</th>
<th>Port Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN 43650 Form A</td>
<td>586A86</td>
<td>1/8 NPT</td>
</tr>
<tr>
<td>M12 Micro-DC</td>
<td>1153A30</td>
<td>1/8 NPT</td>
</tr>
</tbody>
</table>

Multiple Lock-out Device

Model Number: 356A30

Pop-Up Indicator

Model Number: 988A30

Valve Dimensions – inches (mm)

Valve Open

When the red handle is pulled out, supply air flows freely from inlet to outlet and flow to exhaust is blocked. A detent keeps the handle in the open position. The handle is not designed to be locked in this position, thereby providing for ready shut-off when necessary.

If a system requires gradual buildup of downstream pressure, see manual L-O-X® valves with EEZ-ON® operation.

STANDARD SPECIFICATIONS (for valves on this page):

- Construction: Spool.
- Mounting Type: In-Line.
- Ambient/Media Temperature: 40° to 175°F (4° to 80°C).
- Flow Media: Filtered air.
- Inlet Pressure: 0 to 300 psig (0 to 20.7 bar).
- Lock Hole Diameter: 0.27 inch (7.0 mm).
- Length of Hole: 0.43 inch (10.9 mm).

NOTE: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
**STANDARD SPECIFICATIONS** (for valves on this page):

- **Construction:** Spool, 316 Stainless Steel.
- **Mounting Type:** In-Line.
- **Ambient/Media Temperature:** 30° to 175°F (-1° to 80°C).
- **Flow Media:** Filtered air.
- **Inlet Pressure:** 0 to 300 psig (0 to 20.7 bar).
- **Lock Hole Diameter:** Port sizes 1/4 thru 2: 0.34 inch (8.64 mm).
- **Length of Hole:** Port size 1/4: 0.44 in (11.17 mm).
  - Port size 1/2: 0.47 in (11.93 mm)
  - Port size 1 and 2: 0.55 inch (13.97 mm).

**NOTE:** Per specifications and regulations, these products are defined as energy isolation devices, **NOT AS EMERGENCY STOP DEVICES.**
### Stainless Steel Lockout L-O-X® Valves with Integrated Filter/Regulator

**Air Entry Combination**  
**Pneumatic Energy Isolation (LOTO)**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Model Number</th>
<th>( C_v )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>RC010-13</td>
<td>2.14</td>
</tr>
<tr>
<td>1/2</td>
<td>RC011-13</td>
<td>4.4</td>
</tr>
<tr>
<td>3/4</td>
<td>RC012-13</td>
<td>5.0</td>
</tr>
<tr>
<td>1</td>
<td>RC013-13</td>
<td>8.0</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, consult ROSS.

**Dimensions – inches (mm)**

**Port Size 1/4**

**Port Size 1/2**

**Port Size 3/4**

**STANDARD SPECIFICATIONS** (for valves on this page):

- **Construction:** Spool, 316 Stainless Steel.
- **Secondary Pressure:** 7 to 174 psig (0.5 to 12 bar).
- **Mounting Type:** In-Line.
- **Ambient/Media Temperature:** 30° to 175°F (-1° to 80°C).
- **Seals:** Fluorocarbon (Viton).
- **Lock Hole Diameter:** Port sizes 1/4 thru 2: 0.34 inch (8.64 mm).
- **Note:** For lower temperature ratings, consult ROSS.
- **Flow Media:** Filtered air.
- **Inlet Pressure:** 0 to 300 psig (0 to 20.7 bar).
- **Length of Hole:** Port size 1/4: 0.44 in (11.17 mm).
- **Port size 1/2:** 0.47 in (11.93 mm)
- **Port size 1 and 2:** 0.55 inch (13.97 mm).

**NOTE:** Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
Stainless Steel Cabinet for Wash-Down Applications

- Stainless steel control cabinet includes filter/regulator and Category 4 DM® Series valve for Air Entry Control
- Stainless steel construction, designed for wash-down areas
- Control cabinet is built with slanted top to avoid pooling
- Control Reliable Energy Isolation

APPLICATIONS:
- Chemical Processing
- Forestry
- Mining
- Pharmaceutical
- Pulp and Paper
- Oil and Gas
- Off-shore Industries

Will build to your specifications!

NOTE: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.
Stainless Steel Lockout L-O-X® Valves

Stainless Steel Silencers

- Port sizes 1/4 thru 1 have all stainless steel construction
- Port size 2 have standard construction consisting of nickel plated bodies and stainless internals
- Supplied with a standard pipe thread fitting for attaching directly to the exhaust ports of air-operated equipment

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Thread Type</th>
<th>Model Number</th>
<th>Avg. CV</th>
<th>Dimensions inches (mm)</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NPT Threads</td>
<td>BSPT Threads</td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>1/4 Male</td>
<td>5500B2004</td>
<td>D5500B2004</td>
<td>1.44</td>
<td>0.56 (14.2)</td>
<td>1.75 (44.5)</td>
</tr>
<tr>
<td>1/2 Male</td>
<td>5500B4004</td>
<td>D5500B4004</td>
<td>3.01</td>
<td>0.87 (22.1)</td>
<td>2.75 (69.7)</td>
</tr>
<tr>
<td>1 Male</td>
<td>5500B6004</td>
<td>D5500B6004</td>
<td>10.41</td>
<td>1.31 (33.3)</td>
<td>3.87 (98.3)</td>
</tr>
<tr>
<td>2 Male</td>
<td>5500B9004</td>
<td>D5500B9004</td>
<td>28.11</td>
<td>2.37 (60.2)</td>
<td>5.50 (139.7)</td>
</tr>
</tbody>
</table>

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum.
Flow Media: Filtered air; 5 micron recommended.

Silencers for Stainless Steel L-O-X® Air Entry Combinations

- 316 Stainless Steel sintered element silencers used to protect ports open to the atmosphere.

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Thread Type</th>
<th>Model Number</th>
<th>Avg. CV</th>
<th>Dimensions inches (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NPT Threads</td>
<td>BSPT Threads</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1/4 Male</td>
<td>5500A2005</td>
<td>D5500A2005</td>
<td>1.44</td>
<td>0.67 (17)</td>
</tr>
<tr>
<td>1/2 Male</td>
<td>5500A4005</td>
<td>D5500A4005</td>
<td>3.01</td>
<td>0.94 (24)</td>
</tr>
<tr>
<td>1 Male</td>
<td>5500A6005</td>
<td>D5500A6005</td>
<td>10.41</td>
<td>1.41 (36)</td>
</tr>
</tbody>
</table>

Pressure Range: 0 to 174 psig (0 to 12 bar) maximum.
Flow Media: Filtered air; 5 micron recommended.
Seals: Nitrile.

Stainless Steel Pressure Switch

- 316 Stainless Steel Body
- Nitrile Seals
- DPDT (Double-Pole Double-Throw Switch)
- Factory preset 5 psi (falling)

Stainless Steel Visual Indicator

- 316 Stainless Steel Body, internals and Springs
- Nitrile Seals
- Visual Indicator piston, Acetal
- Visual Indicator assembly, Acetal with acrylic lens

<table>
<thead>
<tr>
<th>Inlet Port Size</th>
<th>Model Number</th>
<th>Dimensions inches (mm)</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>1162A30</td>
<td></td>
<td>0.23 (.01)</td>
</tr>
</tbody>
</table>

NPT port threads.

1 Red/White Circuit 1
2 All Red
3 Green
4 Red/Yellow Circuit 2
5 Red/Black
6 Red/Blue

Pin Configuration

Visual Indicator piston, Acetal
Visual Indicator assembly, Acetal with acrylic lens

Port 1.2 (30.5) Across Flats

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
Piloted Valves with Manual Lockout L-O-X® Control

3-Way 2-Position Valve, Solenoid Pilot Controlled

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Body Size</th>
<th>Valve Model Number*</th>
<th>C&lt;sub&gt;y&lt;/sub&gt; 1-2</th>
<th>C&lt;sub&gt;y&lt;/sub&gt; 2-3</th>
<th>Weight (lb (kg))</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 1/2</td>
<td>3/8</td>
<td>Y2773A2072**</td>
<td>2.5</td>
<td>3.1</td>
<td>3.5 (1.6)</td>
</tr>
<tr>
<td>3/8 1/2</td>
<td>3/8</td>
<td>Y2773A3072**</td>
<td>3.6</td>
<td>5.3</td>
<td>3.5 (1.6)</td>
</tr>
<tr>
<td>1/2 1/2</td>
<td>3/8</td>
<td>Y2773A4082**</td>
<td>3.3</td>
<td>5.3</td>
<td>3.5 (1.6)</td>
</tr>
<tr>
<td>1/2 1</td>
<td>3/4</td>
<td>Y2773A4072**</td>
<td>6.3</td>
<td>9.2</td>
<td>4.3 (1.9)</td>
</tr>
<tr>
<td>3/4 1</td>
<td>3/4</td>
<td>Y2773A5072**</td>
<td>7.7</td>
<td>11</td>
<td>4.3 (1.9)</td>
</tr>
<tr>
<td>1 1</td>
<td>3/4</td>
<td>Y2773A6082**</td>
<td>8.0</td>
<td>12</td>
<td>4.3 (1.9)</td>
</tr>
<tr>
<td>1 1½</td>
<td>1½</td>
<td>Y2773A6072**</td>
<td>23</td>
<td>34</td>
<td>8.0 (3.6)</td>
</tr>
<tr>
<td>1¼ 1½</td>
<td>1¾</td>
<td>Y2773A7072**</td>
<td>30</td>
<td>32</td>
<td>8.0 (3.6)</td>
</tr>
<tr>
<td>1½ 1½</td>
<td>1¼</td>
<td>Y2773A8082**</td>
<td>30</td>
<td>31</td>
<td>8.0 (3.6)</td>
</tr>
<tr>
<td>1¼ 2½</td>
<td>2</td>
<td>Y2773A8072**</td>
<td>68</td>
<td>70</td>
<td>17.5 (7.9)</td>
</tr>
<tr>
<td>2 2½</td>
<td>2</td>
<td>Y2773A9072**</td>
<td>70</td>
<td>70</td>
<td>17.5 (7.9)</td>
</tr>
<tr>
<td>2½ 2½</td>
<td>2</td>
<td>Y2773A9082**</td>
<td>70</td>
<td>71</td>
<td>17.5 (7.9)</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, insert a “D” after “Y” to the model number, e.g., YD2773A2072W.

** Insert voltage code: “W” = 24 volts DC; “Z” = 110-120 volts AC, 50/60 Hz; e.g., Y2773A2072W.

For other voltages, consult ROSS.

ACCESSORIES & OPTIONS

Silencers

Pressure Switches

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>Model Number*</th>
<th>Port Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN 43650 Form A</td>
<td>586A86</td>
<td>1/8 NPT</td>
</tr>
<tr>
<td>M12 Micro-DC</td>
<td>1153A30</td>
<td>1/8 NPT</td>
</tr>
</tbody>
</table>

*Pressure switch closes on falling pressure of 5 psig (0.34 bar).

Indicator Light Kit

<table>
<thead>
<tr>
<th>Kit Number</th>
<th>Indicator Light</th>
</tr>
</thead>
<tbody>
<tr>
<td>862K87-W</td>
<td>862K87-Z</td>
</tr>
</tbody>
</table>

Multiple Lock-out Device

<table>
<thead>
<tr>
<th>Model Number**</th>
<th>356A30</th>
</tr>
</thead>
</table>

STANDARD SPECIFICATIONS (for valves on this page):

Construction: Poppet.
Mounting Type: In-Line.
Solenoids: AC or DC power. Rated for continuous duty.
Standard Voltages: 24 volts DC; 110-120 volts AC, 50/60 Hz.
Power Consumption: 87 VA inrush, 30 VA holding on 50 or 60 Hz; 14 watts on DC.
Ambient Temperature: 40° to 120°F (4° to 50°C).
Media Temperature: 40° to 175°F (4° to 80°C).
Flow Media: Filtered air.

Inlet Pressure: Port sizes 1/4 to 1½: 15 to 150 psig (1 to 10 bar).
              Port sizes 1 to 2: 30 to 150 psig (2 to 10 bar).
Pilot Pressure: Must be equal to or greater than inlet pressure.

Safety Integrity Level (SIL) – Certified by TÜV Rheinland in accordance to IEC 61508 and IEC 61511 safety integrity level 2 (SIL 2) and EN ISO 13849-1, PL c or PL d (with application specific diagnosis) in singular application with HFT = 0 and SIL 3 and PL e in redundant application with HFT ≥ 1.

NOTE: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
## Valved Piloted Valves with Manual Lockout L-O-X® Control

### 27 Series

#### Valve Dimensions – inches (mm)

<table>
<thead>
<tr>
<th>Body Size</th>
<th>Port 3 (exhaust)</th>
<th>Port PV (pressure verification)</th>
<th>1/8 Pilot exhaust port Y-3</th>
<th>Port 1 (inlet) (Port 2 (outlet) on opposite side)</th>
<th>1/2 Electrical conduit port</th>
<th>1/8 External pilot supply port X-1</th>
<th>Port PV (pressure verification)</th>
<th>Ø</th>
<th>Port 3 (exhaust)</th>
<th>Port PV (pressure verification)</th>
<th>1/8 Pilot exhaust port Y-3</th>
<th>1/2 Electrical conduit port</th>
<th>1/8 External pilot supply port X-1</th>
<th>Port PV (pressure verification)</th>
<th>Ø</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8</td>
<td>8.13 (206)</td>
<td>2.41 (61)</td>
<td>-2.81 (71)</td>
<td>0.37 (9)</td>
<td>6.39 (162)</td>
<td>2.41 (61)</td>
<td>0.37 (9)</td>
<td>Ø 0.34 (9)</td>
<td>8.32 (226)</td>
<td>3.04 (77)</td>
<td>1/8 Pilot exhaust port Y-3</td>
<td>1/2 Electrical conduit port</td>
<td>1/8 External pilot supply port X-1</td>
<td>0.61 (15)</td>
<td>Ø 0.34</td>
</tr>
<tr>
<td>1 1/4</td>
<td>11.64 (296)</td>
<td>4.50 (114)</td>
<td>4.65 (118)</td>
<td>7.94 (202)</td>
<td>6.80 (173)</td>
<td>4.50 (114)</td>
<td>4.65 (118)</td>
<td>Ø 0.53 (13)</td>
<td>13.65 (347)</td>
<td>5.80 (147)</td>
<td>1/8 Pilot exhaust port Y-3</td>
<td>1/2 Electrical conduit port</td>
<td>1/8 External pilot supply port X-1</td>
<td>1.25 (32)</td>
<td>Ø 0.53</td>
</tr>
<tr>
<td>1 1/2</td>
<td>15.84 (397)</td>
<td>4.50 (114)</td>
<td>4.65 (118)</td>
<td>7.94 (202)</td>
<td>6.80 (173)</td>
<td>4.50 (114)</td>
<td>4.65 (118)</td>
<td>Ø 0.53 (13)</td>
<td>13.65 (347)</td>
<td>5.80 (147)</td>
<td>1/8 Pilot exhaust port Y-3</td>
<td>1/2 Electrical conduit port</td>
<td>1/8 External pilot supply port X-1</td>
<td>1.25 (32)</td>
<td>Ø 0.53</td>
</tr>
</tbody>
</table>

### Valve Operation

#### Pilot De-energized

With the solenoid pilot de-energized (regardless of the position of the L-O-X® handle) the inlet poppet remains closed. The outlet port is connected to the exhaust port so that pressure in the downstream lines is vented to atmosphere.

#### Pilot Energized

With the solenoid pilot energized and the L-O-X® control in the open position, air can flow from inlet to outlet port. The exhaust port is closed.

#### L-O-X® Valve Closed

With the handle pushed inward, the L-O-X® control is closed, and air to the valve piston is cut off. This allows the inlet poppet to be closed by its spring and the pressure of the inlet air. The outlet is connected to exhaust so downstream pressure is vented.

---

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
Piloted Valves with Manual Lockout L-O-X® Control

3-Way 2-Position Valve, Internal Pressure Controlled

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Body Size</th>
<th>Valve Model Number*</th>
<th>Cv 1-2</th>
<th>Cv 2-3</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/2 1/4</td>
<td>Y2783A6006</td>
<td>23 34</td>
<td>7.0 (3.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 1/2 1/4</td>
<td>Y2783A7006</td>
<td>30 32</td>
<td>7.0 (3.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 1/2 1/4</td>
<td>Y2783A8016</td>
<td>30 31</td>
<td>7.0 (3.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 1/2 2 2</td>
<td>Y2783A8006</td>
<td>68 70</td>
<td>15.3 (6.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 2 2</td>
<td>Y2783A9006</td>
<td>70 70</td>
<td>15.3 (6.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 2 2</td>
<td>Y2783A9016</td>
<td>70 71</td>
<td>15.3 (6.9)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, insert a “D” after “Y” to the model number, e.g., YD2783A6006.

Valve Dimensions – inches (mm)

Valve Closed: With a short push of the red handle inward, the flow of supply air is blocked and downstream air is exhausted via the exhaust port. Air pressure on the inlet and exhaust poppets produces a large closing force. The L-O-X® valve should be padlocked in this position to prevent the handle from being pulled outward inadvertently when potential for human injury exists or servicing machinery.

Valve Open: With the red handle pulled out, pilot air flows to the top of the actuating piston, causing it to open the inlet poppet. Supply air then flows freely from inlet to outlet, and the exhaust port is blocked. A detent keeps the L-O-X® handle in the open position. The handle is designed not to be locked in the open position, thereby allowing for quick shut-off when necessary.

** ACCESORIES & OPTIONS **

Silencers

| Port size 1 1/2 thru 2 | Model Number ** | 988A30 **

** 1/8 NPT port threads.

Pressure Switch

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>Model Number*</th>
<th>Port Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN 43650 Form A</td>
<td>586A86</td>
<td>1/8 NPT</td>
</tr>
<tr>
<td>M12 Micro-DC</td>
<td>1153A30</td>
<td>1/8 NPT</td>
</tr>
</tbody>
</table>

* Pressure switch closes on falling pressure of 5 psig (0.34 bar).

Pop-Up Indicator

Model Number ** 988A30 **

** 1/8 NPT port threads.

Multiple Lock-out Device

Model Number 356A30

** STANDARD SPECIFICATIONS **

(for valves on this page):

Construction: Poppet.
Mounting Type: In-Line.
Ambient/Media Temperature: 40° to 175°F (4° to 80°C).
Flow Media: Filtered air.
Inlet Pressure: Basic Size 1 1/4: 15 to 150 psig (1 to 10 bar).
Basic Size 2: 30 to 150 psig (2 to 10 bar).

Pilot Pressure: Must be equal to or greater than inlet pressure.

Safety Integrity Level (SIL) – Certified by TÜV Rheinland in accordance to IEC 61508 and IEC 61511 safety integrity level 2 (SIL 2) and EN ISO 13849-1, PL c or PL d (with application specific diagnosis) in singular application with HFT = 0 and SIL 3 and PL e in redundant application with HFT ≥1.

** IMPORTANT NOTE: ** Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
3 Inch L-O-X® Valve for Lockout

3-Way 2-Position Valve, Solenoid Pilot Controlled

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Valve Model Number</th>
<th>Cv</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 2½</td>
<td>Y3900A0896**</td>
<td>140</td>
<td>115 (53.0)</td>
</tr>
</tbody>
</table>

** Insert voltage code: “W” = 24 volts DC; “Z” = 110-120 volts AC, 50/60 Hz; e.g., Y3900A0896W. For other voltages, consult ROSS.

Valve Dimensions – inches (mm)

Valve Operation

**Pilot De-energized**
With the solenoid pilot de-energized (regardless of the position of the L-O-X® handle) the inlet poppet remains closed. The outlet port is connected to the exhaust port so that pressure in the downstream lines is vented to atmosphere.

**Pilot Energized**
With the solenoid pilot energized and the L-O-X® control in the open position, air can flow from inlet to outlet port. The exhaust port is closed.

L-O-X® Valve Closed
With the handle pushed inward, the L-O-X® control is closed, and air to the valve piston is cut off. This allows the inlet poppet to be closed by its spring and the pressure of the inlet air. The outlet is connected to exhaust so downstream pressure is vented.

Standard Specifications (for valves on this page):

Construction: Spool.
Mounting Type: In-Line.
Solenoids: AC or DC power. Rated for continuous duty.
Power Consumption: 87 VA inrush, 30 VA holding on 50 or 60 Hz; 14 watts on DC.

Ambient Temperature: 40 to 120°F (4 to 50°C).
Media Temperature: 40 to 175°F (4 to 80°C).
Flow Media: Filtered air; 5 micron filter recommended.
Inlet Pressure: 30 to 150 psig (2 to 10 bar).
Pilot Pressure: Must be equal to or greater than inlet pressure.
Port Threads: NPT.

**NOTE:** Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
Piloted Valves with Manual Lockout L-O-X® Control

3 Inch L-O-X® Valve for Lockout

3-Way 2-Position Valve, Pressure Controlled

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Valve Model Number</th>
<th>C_v</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 3</td>
<td>Y3900A0829</td>
<td>140</td>
<td>110 (49.9)</td>
</tr>
</tbody>
</table>

Valve Dimensions – inches (mm)

Valve Dimensions

Options

Multiple Lock-out Device

Model Number: 356A30

Valve Operation

Valve Closed
With a short push of the red handle inward the flow of supply air is blocked and downstream air is exhausted via the exhaust port. Air pressure on the inlet and exhaust poppets produces a large closing force. The L-O-X® valve should be padlocked in this position to prevent the handle from being pulled outward inadvertently when potential for human injury exists or servicing machinery.

Valve Open
With the red handle pulled out, pilot air flows to the top of the actuating piston, causing it to open the inlet poppet. Supply air then flows freely from inlet to outlet, and the exhaust port is blocked. A detent keeps the L-O-X® handle in the open position. The handle is designed not to be locked in the open position, thereby allowing for quick shut-off when necessary.

Standard Specifications

(For valves on this page):

Construction: Spool.
Mounting Type: In-Line.
Ambient/Media Temperature: 40 to 175° F (4 to 80°C).
Flow Media: Filtered air; 5 micron filter recommended.

Inlet Pressure: 30 to 150 psig (2 to 10 bar).
Pilot Pressure: Must be equal to or greater than inlet pressure.
Port Threads: NPT.

Note: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

Important Note: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
### Models with Threaded Banjo

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Valve Model Number</th>
<th>Avg. Cᵥ</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 (female threads)</td>
<td>Port 1</td>
<td>1969B2010</td>
<td>1.2</td>
</tr>
<tr>
<td>3/8 (female threads)</td>
<td>Port 2</td>
<td>1969B3010</td>
<td>1.7</td>
</tr>
<tr>
<td>G1/4 (female threads)</td>
<td>G1/4</td>
<td>D1969B2010</td>
<td>1.2</td>
</tr>
<tr>
<td>G3/8 (female threads)</td>
<td>G3/8</td>
<td>D1969B3010</td>
<td>1.7</td>
</tr>
</tbody>
</table>

### Valve Dimensions – inches (mm)

- Slot Adjustment
- Port 1
- Port 2
- 2.44 (62)

- Gradual re-application of pneumatic pressure prevents rapid equipment movement at startup
- Right angle style mounts directly in cylinder ports
- Available with threaded ports
- Point of use Soft Start

### STANDARD SPECIFICATIONS (for valves on this page):

**Construction:** Spool.

**Mounting Type:** Port Mounted.

**Ambient/Media Temperature:** 15° to 160°F (-10° to 70°C).

**Flow Media:** Filtered air.

**Operating Pressure:** 45 to 150 psig (3 to 10.3 bar).
**27 Series Soft Start EEZ-ON® Valves**

### 3-Way 2-Position Valve, Solenoid Pilot Controlled

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Body Size</th>
<th>Valve Model Number*</th>
<th>C_v</th>
<th>Weight (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 1/2</td>
<td>3/8</td>
<td>2773B2037**</td>
<td>2.5</td>
<td>4.5 (2.0)</td>
</tr>
<tr>
<td>3/8 1/2</td>
<td>3/8</td>
<td>2773B3037**</td>
<td>3.6</td>
<td>4.5 (2.0)</td>
</tr>
<tr>
<td>1/2 1/2</td>
<td>3/8</td>
<td>2773B4047**</td>
<td>3.3</td>
<td>4.5 (2.0)</td>
</tr>
<tr>
<td>1/2 1</td>
<td>3/4</td>
<td>2773B4037**</td>
<td>10.0</td>
<td>5.0 (2.3)</td>
</tr>
<tr>
<td>3/4 1</td>
<td>3/4</td>
<td>2773B5037**</td>
<td>12.0</td>
<td>5.0 (2.3)</td>
</tr>
<tr>
<td>1 1</td>
<td>3/4</td>
<td>2773B6047**</td>
<td>12.0</td>
<td>5.0 (2.3)</td>
</tr>
<tr>
<td>1 1 1/4</td>
<td>1 1/4</td>
<td>2773A6037**</td>
<td>23.0</td>
<td>8.8 (4.0)</td>
</tr>
<tr>
<td>1 1/2 1/4</td>
<td>1 1/4</td>
<td>2773A8047**</td>
<td>30.0</td>
<td>8.8 (4.0)</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, add a "D" prefix to the model number, e.g., D2773B2037.
** Insert voltage code: “W” = 24 volts DC; “Z” = 110-120 volts AC, 50/60 Hz; e.g., 2773B2037W.

For other voltages, consult ROSS.

### ACCESSORIES & OPTIONS

#### Silencers

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Thread Type</th>
<th>Model Number*</th>
<th>Avg. C_v</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 Male</td>
<td>NPT Threads</td>
<td>5500A4003</td>
<td>4.7</td>
</tr>
<tr>
<td>1 Male</td>
<td>BSPT Threads</td>
<td>D5500A4003</td>
<td>14.6</td>
</tr>
<tr>
<td>1 1/2 1/4 Female</td>
<td>5500A8001</td>
<td>D5500A8001</td>
<td>29.9</td>
</tr>
</tbody>
</table>

**Pressure Range:** 0 to 150 psig (0 to 10.3 bar) maximum. **Flow Media:** Filtered air.

#### Indicator Light Kit

<table>
<thead>
<tr>
<th>Kit Number</th>
<th>Indicator Light</th>
</tr>
</thead>
<tbody>
<tr>
<td>862K87-W</td>
<td>24 volts DC</td>
</tr>
<tr>
<td>862K87-Z</td>
<td>110-120 volts AC</td>
</tr>
</tbody>
</table>

#### Manual Overrides

<table>
<thead>
<tr>
<th>FLUSH BUTTON</th>
<th>EXTENDED BUTTON</th>
<th>EXTENDED BUTTON with PALM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locking Type</td>
<td>Kit Number</td>
<td>Locking Type</td>
</tr>
<tr>
<td>Non-Locking</td>
<td>792K87</td>
<td>Non-Locking</td>
</tr>
<tr>
<td>791K87</td>
<td></td>
<td>984H87</td>
</tr>
</tbody>
</table>

**NOTE:** The 3/2 EEZ-ON® valve is also available with a L-O-X® adapter so that both L-O-X® and EEZ-ON® functions are consolidated in a single valve.

### STANDARD SPECIFICATIONS (for valves on this page):

- **Construction:** Poppet.
- **Mounting Type:** In-Line.
- **Solenoid Pilot:** AC or DC power. Rated for continuous duty.
- **Standard Voltages:** 24 volts DC; 110-120 volts AC, 50/60 Hz.
- **Power Consumption:** 87 VA inrush, 30 VA holding on 50 or 60 Hz; 14 watts on DC.
- **Ambient Temperature:** 40° to 120°F (4° to 50°C).
- **Media Temperature:** 40° to 175°F (4° to 80°C).
- **Flow Media:** Filtered air.
- **Inlet Pressure:** 15 to 150 psig (1 to 10.3 bar).

**NOTE:** Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.
**VALVE OPERATION**

**Pilot Not Energized**
Pilot air is blocked by the pilot. Any downstream pressure forces piston B (which slides on the valve stem) upward. This opens the exhaust port and vents the downstream line.

**Pilot Energized**
Pilot air forces piston B downward to close the exhaust port. Pilot air also flows past the adjusting needle, opens the ball check and begins slowly to pressurize the outlet line. At the same time, pressure is building up on piston A.

**Pilot De-energized**
Air above pistons A and B is exhausted through the exhaust port of the pilot valve. Air above poppet C forces sliding piston B upward so that the main exhaust port is opened and the pressurized air is exhausted.

**Full Pressure**
When the pressure on piston A reaches approximately 50 percent of inlet pressure, it is forced downward and opens inlet poppet C. Full inlet pressure now flows freely to the outlet port.
2-Way 2-Position Valves, Pressure Controlled

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Body Size</th>
<th>Valve Model Number</th>
<th>C_v</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>3/8</td>
<td>2781A2007</td>
<td>2.3</td>
<td>1.5 (0.7)</td>
</tr>
<tr>
<td>3/8</td>
<td>3/8</td>
<td>2781A3007</td>
<td>3.8</td>
<td>1.5 (0.7)</td>
</tr>
<tr>
<td>1/2</td>
<td>3/8</td>
<td>2781A4017</td>
<td>4.0</td>
<td>1.5 (0.7)</td>
</tr>
<tr>
<td>1/2</td>
<td>3/4</td>
<td>2781A4007</td>
<td>13.0</td>
<td>2.3 (1.0)</td>
</tr>
<tr>
<td>3/4</td>
<td>3/4</td>
<td>2781A5007</td>
<td>15.0</td>
<td>2.3 (1.0)</td>
</tr>
<tr>
<td>1</td>
<td>3/4</td>
<td>2781A6017</td>
<td>16.0</td>
<td>2.3 (1.0)</td>
</tr>
<tr>
<td>1</td>
<td>1¼</td>
<td>2781A6007</td>
<td>24.0</td>
<td>6.0 (2.7)</td>
</tr>
<tr>
<td>1¼</td>
<td>1¼</td>
<td>2781A7007</td>
<td>29.0</td>
<td>6.0 (2.7)</td>
</tr>
<tr>
<td>1½</td>
<td>1¼</td>
<td>2781A8017</td>
<td>29.0</td>
<td>6.0 (2.7)</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, add a “D” prefix to the model number, e.g., D2781A2007.

Valve Dimensions – inches (mm)

<table>
<thead>
<tr>
<th>Body Size</th>
<th>Port 1 (inlet)</th>
<th>Port 2 (outlet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8</td>
<td>3.77 (96)</td>
<td>2.81 (71)</td>
</tr>
<tr>
<td></td>
<td>2.15 (55)</td>
<td>3.47 (88)</td>
</tr>
<tr>
<td></td>
<td>0.33 (8)</td>
<td>4.19 (106)</td>
</tr>
<tr>
<td>3/4</td>
<td>4.62 (117)</td>
<td>3.25 (83)</td>
</tr>
<tr>
<td></td>
<td>4.50 (114)</td>
<td>4.45 (110)</td>
</tr>
<tr>
<td>1¼</td>
<td>7.52 (191)</td>
<td>6.00 (152)</td>
</tr>
<tr>
<td></td>
<td>0.53 (13)</td>
<td>1.10 (28)</td>
</tr>
<tr>
<td></td>
<td>4.48 (114)</td>
<td>6.49 (165)</td>
</tr>
</tbody>
</table>

VALVE OPERATION

Air Pressure to Inlet
When air pressure is first applied to the inlet, air flow to the piston is restricted by the adjustable needle in the delay orifice. Downstream air pressure gradually builds up at a rate determined by the setting of the adjustable needle.

Valve Opens to Full Flow
When downstream air pressure reaches approximately 40 to 60 percent of inlet pressure, the valve element shifts to the full open position and there is full air flow to the downstream components. This condition continues as long as inlet air pressure is present.

Inlet Pressure Removed
When inlet pressure is removed, the exhausting downstream air pressure keeps the inlet poppet open until the downstream pressure drops by approximately 90 percent. The remaining pressure is exhausted via the delay orifice.

STANDARD SPECIFICATIONS (for valves on this page):

| Construction:   | Poppet.         |
| Mounting Type:  | In-Line.        |
| Ambient/Media Temperature: | 40° to 175°F (4° to 80°C). |
| Flow Media:     | Filtered air.   |
| Inlet Pressure: | 15 to 150 psig (1 to 10.3 bar). |

NOTE: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
### 3-Way 2-Position Valve, Pressure Controlled

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Body Size</th>
<th>Valve Model Number</th>
<th>C_v</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>1/2</td>
<td>3/8</td>
<td>2.5</td>
<td>3.1 4.5 (2.0)</td>
</tr>
<tr>
<td>3/8</td>
<td>1/2</td>
<td>3/8</td>
<td>3.6</td>
<td>5.3 4.5 (2.0)</td>
</tr>
<tr>
<td>1/2</td>
<td>1/2</td>
<td>3/8</td>
<td>3.3</td>
<td>5.3 4.5 (2.0)</td>
</tr>
<tr>
<td>1/2</td>
<td>1</td>
<td>3/4</td>
<td>10.0</td>
<td>13.0 5.0 (2.3)</td>
</tr>
<tr>
<td>3/4</td>
<td>1</td>
<td>3/4</td>
<td>12.0</td>
<td>15.0 5.0 (2.3)</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>3/4</td>
<td>12.0</td>
<td>16.0 5.0 (2.3)</td>
</tr>
<tr>
<td>1</td>
<td>1 1/2</td>
<td>1/4</td>
<td>23.0</td>
<td>34.0 8.8 (4.0)</td>
</tr>
<tr>
<td>1 1/4</td>
<td>1 1/4</td>
<td>1/4</td>
<td>30.0</td>
<td>32.0 8.8 (4.0)</td>
</tr>
<tr>
<td>1 1/2</td>
<td>1 1/4</td>
<td>1/4</td>
<td>30.0</td>
<td>31.0 8.8 (4.0)</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, add a “D” prefix to the model number, e.g., D2781A2007.

### VALVE OPERATION

#### Air Pressure to Inlet
When air pressure is first applied to the inlet, air flow to the piston is restricted by the adjustable needle in the delay orifice. Downstream air pressure gradually builds up at a rate determined by the setting of the adjustable needle.

#### Valve Opens to Full Flow
When downstream air pressure reaches approximately 40 to 60 percent of inlet pressure, the valve element shifts to the full open position and there is full air flow to the downstream components. This condition continues as long as inlet air pressure is present.

#### Inlet Pressure Removed
When inlet pressure is removed, the exhausting downstream air pressure keeps the inlet poppet open until the downstream pressure drops by approximately 90 percent. The remaining pressure is exhausted via the delay orifice.

### STANDARD SPECIFICATIONS (for valves on this page):

- **Construction:** Poppet.
- **Mounting Type:** In-Line.
- **Ambient/Media Temperature:** 40° to 175°F (4° to 80°C).

**Flow Media:** Filtered air.

**Inlet Pressure:** 15 to 150 psig (1 to 10.3 bar).

### IMPORTANT NOTE:

Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.
**Valved Closed**

With a short push of the blue handle inward, the flow of supply is blocked and downstream air is exhausted via the exhaust port at the bottom of the valve. It is required by OSHA that the L-O-X® valves with EEZ-ON® operation be padlocked in this position to prevent the handle from being pulled outward inadvertently when potential for human injury exists or servicing machinery.

**EEZ-ON® Function**

The blue handle will only shift part way due to a mechanical stop button allowing only partial flow from inlet to downstream causing the pressure to increase at a slower rate.

**Valve Open**

Pressing the mechanical stop button allows the blue handle to be shifted completely open allowing full flow from inlet to downstream.

---

**Standard Specifications** (for valves on this page):

- **Construction:** Spool.
- **Mounting Type:** In-Line.
- **Ambient/Media Temperature:** 40°F to 175°F (4°C to 80°C).
- **Flow Media:** Filtered air.
- **Inlet Pressure:** 0 to 200 psig (0 to 14 bar).
- **Lock Hole Diameter:** 0.27 inch (7.0 mm).
- **Length of Hole:** 0.43 inch (10.9 mm).

**Note:** Per specifications and regulations, these products are defined as energy isolation devices, NOT as emergency stop devices.

---

**Accessories & Options**

- **Silencers**
- **Pressure Switches**
- **Pop-Up Indicator**
- **Multiple Lock-out Device**

---

**Valve Dimensions**

- **Port Size**
- **Valve Model Number**
- **Cv**
- **Weight (lb/kg)**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Valve Model Number</th>
<th>Cv</th>
<th>Weight (lb/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>Y1523A2103</td>
<td>3.7</td>
<td>7.8</td>
</tr>
<tr>
<td>3/8</td>
<td>Y1523A3103</td>
<td>5.1</td>
<td>8.3</td>
</tr>
<tr>
<td>1/2</td>
<td>Y1523A4103</td>
<td>5.5</td>
<td>8.6</td>
</tr>
<tr>
<td>3/4</td>
<td>Y1523A5113</td>
<td>5.6</td>
<td>8.1</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, insert a “D” after “Y” to the model number, e.g., YD1523A3102.
Valved Closed

With a short push of the blue handle inward, the flow of supply is blocked and downstream air is exhausted via the exhaust port at the bottom of the valve. It is required by OSHA that the L-O-X® valves with EEZ-ON® operation be padlocked in this position to prevent the handle from being pulled outward inadvertently when potential for human injury exists or servicing machinery.

Valve Open

After the blue handle is pulled out and pressure downstream has gradually increased, the valve automatically changes to a fully open state, allowing full flow from inlet to downstream. Full flow is achieved at approximately 50% of inlet pressure.

**STANDARD SPECIFICATIONS**

(For valves on this page):

- **Construction:** Spool
- **Mounting Type:** In-Line
- **Ambient/Media Temperature:** 40°F to 175°F (4°C to 80°C)
- **Flow Media:** Filtered air
- **Inlet Pressure:** 0 to 150 psig (0 to 10 bar)

**NOTE:** Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

Online Version
Rev. 05/16

Valve Operation

L-O-X® Valve (Handle) Open
Pilot air forces piston B downward to close the exhaust port. Pilot air flows past the adjusting needle, opens the ball check and begins slowly to pressurize the outlet line. At the same time, pressure is building up on piston A.

L-O-X® Valve (Handle) Closed
Pilot air forces piston B downward to close the exhaust port. Pilot air flows past the adjusting needle, opens the ball check and begins slowly to pressurize the outlet line. At the same time, pressure is building up on piston A.

Full Pressure
With a short push of the red handle inward the flow of supply air is blocked and downstream air is exhausted via the exhaust port. Air pressure on the inlet and exhaust poppets produces a large closing force. The L-O-X® valve should be padlocked in this position to prevent the handle from being pulled outward inadvertently when potential for human injury exists or servicing machinery.

Standards Specifications (for valves on this page):

Construction: Poppet.
Mounting Type: In-Line.
Ambient/Media Temperature: 40°F to 175°F (4°C to 80°C).

Flow Media: Filtered air.
Inlet Pressure: 40 to 150 psig (2.8 to 10.3 bar).

Note: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

Important Note: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

3-Way 2-Position Valve, Manual Lockout Controlled

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Body Size</th>
<th>Valve Model Number*</th>
<th>Cv</th>
<th>Weight (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>1/2</td>
<td>3/8</td>
<td>Y2783B2055</td>
<td>2.5</td>
</tr>
<tr>
<td>3/8</td>
<td>1/2</td>
<td>3/8</td>
<td>Y2783B3055</td>
<td>3.6</td>
</tr>
<tr>
<td>1/2</td>
<td>1/2</td>
<td>3/8</td>
<td>Y2783B4065</td>
<td>3.3</td>
</tr>
<tr>
<td>1/2</td>
<td>1</td>
<td>3/4</td>
<td>Y2783B4055</td>
<td>10.0</td>
</tr>
<tr>
<td>1/2</td>
<td>1</td>
<td>3/4</td>
<td>Y2783B5055</td>
<td>12.0</td>
</tr>
<tr>
<td>1/2</td>
<td>1</td>
<td>3/4</td>
<td>Y2783B6065</td>
<td>12.0</td>
</tr>
<tr>
<td>1 1/8</td>
<td>1 1/4</td>
<td>Y2783A6055</td>
<td>23.0</td>
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<tr>
<td>1 1/8</td>
<td>1 1/4</td>
<td>Y2783A7055</td>
<td>30.0</td>
<td>32.0</td>
</tr>
<tr>
<td>1 1/8</td>
<td>1 1/4</td>
<td>Y2783A8065</td>
<td>30.0</td>
<td>31.0</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, insert a “D” after “Y” to the model number, e.g., YD2783A6055.
3-Way 2-Position Valve, Solenoid Pilot Controlled

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Body Size</th>
<th>Valve Model Number</th>
<th>(C_v) 1-2</th>
<th>(C_v) 2-3</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 1/2</td>
<td>3/8</td>
<td>Y2773B2075**</td>
<td>2.5</td>
<td>3.1</td>
<td>5.3 (2.4)</td>
</tr>
<tr>
<td>3/8 1/2</td>
<td>3/8</td>
<td>Y2773B3075**</td>
<td>3.6</td>
<td>5.3</td>
<td>5.3 (2.4)</td>
</tr>
<tr>
<td>1/2 1/2</td>
<td>3/8</td>
<td>Y2773B4085**</td>
<td>3.3</td>
<td>5.3</td>
<td>5.3 (2.4)</td>
</tr>
<tr>
<td>1/2 1</td>
<td>3/4</td>
<td>Y2773B4075**</td>
<td>10.0</td>
<td>13.0</td>
<td>6.0 (2.7)</td>
</tr>
<tr>
<td>3/4 1</td>
<td>3/4</td>
<td>Y2773B5075**</td>
<td>12.0</td>
<td>15.0</td>
<td>6.0 (2.7)</td>
</tr>
<tr>
<td>1 1</td>
<td>3/4</td>
<td>Y2773B6085**</td>
<td>12.0</td>
<td>16.0</td>
<td>6.0 (2.7)</td>
</tr>
<tr>
<td>1 1 1/2</td>
<td>1 1/4</td>
<td>Y2773B6075**</td>
<td>23.0</td>
<td>34.0</td>
<td>9.5 (4.3)</td>
</tr>
<tr>
<td>1 1 1 1/2</td>
<td>1 1/2</td>
<td>Y2773B7075**</td>
<td>30.0</td>
<td>32.0</td>
<td>9.5 (4.3)</td>
</tr>
<tr>
<td>1 1 1 1 1/2</td>
<td>1 1/4</td>
<td>Y2773B8085**</td>
<td>30.0</td>
<td>31.0</td>
<td>9.5 (4.3)</td>
</tr>
</tbody>
</table>

* NPT port threads. For BSPP threads, insert a “D” after “Y” to the model number, e.g., YD2773B2075.
** Insert voltage code: “W” = 24 volts DC; “Z” = 110-120 volts AC, 50/60 Hz; e.g., Y2773B2075W.
For other voltages, consult ROSS.

Valve Dimensions – inches (mm)

**STANDARD SPECIFICATIONS** (for valves on this page):

- **Construction**: Poppet.
- **Mounting Type**: In-Line.
- **Standard Voltages**: 24 volts DC; 110-120 volts AC, 50/60 Hz.
- **Power Consumption**: 87 VA inrush, 30 VA holding on 50 or 60 Hz; 14 watts on DC.
- **Ambient Temperature**: 40° to 120°F (4° to 50°C).
- **Media Temperature**: 40° to 175°F (4° to 80°C).
- **Flow Media**: Filtered air.
- **Inlet Pressure**: 40 to 150 psig (2.8 to 10.3 bar).

**NOTE**: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

**IMPORTANT NOTE**: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

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Valve Dimensions – inches (mm)

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Thread Type</th>
<th>Model Number*</th>
<th>Avg. CV</th>
<th>Thread Type</th>
<th>Model Number*</th>
<th>Avg. CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>Male</td>
<td>5500A4003</td>
<td>4.7</td>
<td>BSPT Threads</td>
<td>D5500A4003</td>
<td>4.7</td>
</tr>
<tr>
<td>1</td>
<td>Male</td>
<td>5500A6003</td>
<td>14.6</td>
<td>BSPT Threads</td>
<td>D5500A6003</td>
<td>14.6</td>
</tr>
<tr>
<td>1 ½</td>
<td>Female</td>
<td>5500A8001</td>
<td>29.9</td>
<td>BSPT Threads</td>
<td>D5500A8001</td>
<td>29.9</td>
</tr>
</tbody>
</table>

Pressure Range: 0 to 150 psig (0 to 10.3 bar) maximum.
Flow Media: Filtered air.

L-O-X® Handle Open and Pilot Not Energized
Pilot air is blocked by the pilot. Any downstream pressure forces piston B (which slides on the valve stem) upward. This opens the exhaust port and vents the downstream line.

L-O-X® Handle Open and Pilot Energized
Pilot air forces piston B downward to close the exhaust port. Pilot air also flows past the adjusting needle, opens the ball check and begins slowly to pressurize the outlet line. At the same time, pressure is building up on piston A.

Full Pressure
When the pressure on piston A reaches approximately 50 percent of inlet pressure, it is forced downward and opens inlet poppet C. Full inlet pressure now flows freely to the outlet port.

L-O-X® Handle Closed
At any time the L-O-X® handle can be pushed inward, thereby closing off the flow of pilot air. Pilot air above pistons A and B is then vented to atmosphere. Piston A moves upward and closes inlet poppet C. Sliding piston B also moves upward to open the exhaust port and vents the downstream line.

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.
General Information

Standard Specifications
The standard specifications for the products on each page of this catalog are given on the same page or referenced. For solenoid pilot valves, models with internal pilot supply are listed. Most models are also available for use with external pilot supply or have a built-in pilot supply selector valve.

The products in this catalog are intended for use in industrial pneumatic systems. Most products are adaptable to other uses and conditions not covered by the standard specifications given in this catalog. Weights shown are approximate and are subject to change. Dimensions given, unless otherwise noted, are envelope dimensions (not for mounting).

Contact ROSS for further information.

Port Threads
Ports of valves and bases described in this catalog have NPT (ANSI B2.1) threads. Other thread types can be specified by putting an appropriate prefix letter on the model or part number when ordering.

Thread Types by Model Prefix Letter

<table>
<thead>
<tr>
<th>Pneumatic Port Threads</th>
<th>Prefix Letter</th>
<th>Threaded Electrical Opening</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPT (ANSI B2.1)</td>
<td>None</td>
<td>NPT</td>
</tr>
<tr>
<td>ISO 228 - DIN 259 Parallel, BSPP*</td>
<td>C*</td>
<td>—</td>
</tr>
<tr>
<td>ISO 228 - DIN 259 Parallel, BSPP#</td>
<td>D</td>
<td>G</td>
</tr>
<tr>
<td>ISO 228 - JIS B0203 Tapered#</td>
<td>J</td>
<td>ISO</td>
</tr>
<tr>
<td>SAE 1926- ISO 11926</td>
<td>S</td>
<td>NPT</td>
</tr>
</tbody>
</table>

* Used only for filters, regulators, lubricators.
# ISO 228 threads supersede BSPP, G and JIS thread types.

Flow Ratings
Flow ratings are expressed as $C_v$ where $C_v = 1$ corresponds to a steady state air flow of approximately 32 scfm under the following conditions:

- Inlet pressure = 100 psig (6.7 bar)
- Pressure drop = 10 psi (0.69 bar)
- Air temperature = 68°F (20°C)
- Relative humidity = 36 percent

Note: Because widely differing test standards are used to measure $C_v$ values, the figures given in this catalog should not be used to compare ROSS valves with those of other makers. The $C_v$ ratings given here are intended only for use with performance charts published by ROSS. The $C_v$ ratings are averages for the various flow paths through the valve and are for steady flow conditions.

Approvals and Certifications
ROSS products are designed to meet a number of industrial standards, including the Canadian Standards Association (C.S.A.) guidelines. For more information on specific product approvals, contact your local distributor or ROSS.

Solenoids
All ROSS standard solenoids are rated for continuous duty (unless noted otherwise) and will operate the valve within the air pressure range specified in this catalog.

Explosion-Proof Solenoid Pilot available, for more information consult ROSS.

Voltage & Hertz
When ordering a solenoid valve, also specify the desired solenoid voltage and hertz.

Voltage Types by Model Suffix Letter

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Suffix Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 volts AC</td>
<td>Z</td>
</tr>
<tr>
<td>220 volts AC</td>
<td>Y</td>
</tr>
<tr>
<td>12 volts DC</td>
<td>H</td>
</tr>
<tr>
<td>24 volts DC</td>
<td>W</td>
</tr>
<tr>
<td>48 volts DC</td>
<td>M</td>
</tr>
<tr>
<td>90 volts DC</td>
<td>K</td>
</tr>
<tr>
<td>110 volts DC</td>
<td>P</td>
</tr>
<tr>
<td>125 volts DC</td>
<td>C</td>
</tr>
</tbody>
</table>

Recommended Solenoid Voltages: 100-110 volts, 50 Hz; 100-120 volts, 60 Hz; 24 volts DC; 110 volts DC.

In addition, the following voltages are available:
200, 220 volts, 50 Hz
200, 240, 480 volts, 60 Hz
24, 48, 220 volts, 50 Hz
240 volts, 60 Hz
200, 220 volts, 50 Hz
200, 240 volts, 60 Hz.

For example: Model 2773B5001, 120 volts, 60 Hz. Model W6076B2401, 220 volts, 50 Hz.

Please note that not all configurations are available for all models.

For additional information or help with voltage configuration, please contact your local distributor or ROSS.

Order Placement
For order placement, consult ROSS or your local ROSS distributor.

For a current list of countries and local distributors, visit ROSS’ website at www.rosscontrols.com.
PRE-INSTALLATION or SERVICE

1. Before servicing a valve or other pneumatic component, be sure that all sources of energy are turned off, the entire pneumatic system is shut off and exhausted, and all power sources are locked out (ref: OSHA 1910.147, EN 1037).

2. All ROSS products, including service kits and parts, should be installed and/or serviced only by persons having training and experience with pneumatic equipment. Because any installation can be tampered with or need servicing after installation, persons responsible for the safety of others or the care of equipment must check every installation on a regular basis and perform all necessary maintenance.

3. All applicable instructions should be read and complied with before using any fluid power system in order to prevent harm to persons or equipment. In addition, overhauled or serviced valves must be functionally tested prior to installation and use. If you have any questions, call your nearest ROSS location listed on the cover of this document.

4. Each ROSS product should be used within its specification limits. In addition, use only ROSS parts to repair ROSS products.

WARNING: Failure to follow these directions can adversely affect the performance of the product or result in the potential for human injury or damage to property.

FILTRATION and LUBRICATION

5. Dirt, scale, moisture, etc. are present in virtually every air system. Although some valves are more tolerant of these contaminants than others, best performance will be realized if a filter is installed to clean the air supply, thus preventing contaminants from interfering with the proper performance of the equipment. ROSS recommends a filter with a 5-micron rating for normal applications.

6. All standard ROSS filters and lubricators with polycarbonate plastic bowls are designed for compressed air applications only. Do not fail to use the metal bowl guard, where provided, to minimize danger from high pressure fragmentation in the event of bowl failure. Do not expose these products to certain fluids, such as alcohol or liquefied petroleum gas, as they can cause bowls to rupture, creating a combustible condition, hazardous leakage, and the potential for human injury or damage to property. Immediately replace a crazed, cracked, or deteriorated bowl. When bowl gets dirty, replace it or wipe it with a clean dry cloth.

7. Only use lubricants which are compatible with materials used in the valves and other components in the system. Normally, compatible lubricants are petroleum based oils with oxidation inhibitors, an aniline point between 180°F (82°C) and 220°F (104°C), and an ISO 32, or lighter, viscosity. Avoid oils with phosphate type additives which can harm polyurethane components, potentially leading to valve failure which risks human injury, and/or damage to property.

AVOID INTAKE/EXHAUST RESTRICTION

8. Do not restrict the air flow in the supply line. To do so could reduce the pressure of the supply air below the minimum requirements for the valve and thereby cause erratic action.

9. Do not restrict a valve’s exhaust port as this can adversely affect its operation. Exhaust silencers must be resistant to clogging and must have flow capacities at least as great as the exhaust capacities of the valves. Contamination of the silencer can result in reduced flow and increased back pressure.

WARNING: ROSS expressly disclaims all warranties and responsibility for any unsatisfactory performance or injuries caused by the use of the wrong type, wrong size, or an inadequately maintained silencer installed with a ROSS product.

POWER PRESSES

10. Mechanical power presses and other potentially hazardous machinery using a pneumatically controlled clutch and brake mechanism must use a press control double valve with a monitoring device. A double valve without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All double valve installations involving hazardous applications should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.

ENERGY ISOLATION/EMERGENCY STOP

11. Per specifications and regulations, ROSS L-O-X® and L-O-X® with EEZ-ON® operation products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

STANDARD WARRANTY

All products sold by ROSS CONTROLS are warranted for a one-year period [with the exception of all Filters, Regulators and Lubricators (“FRLs”) which are warranted for a period of seven years] from the date of purchase to be free of defects in material and workmanship. ROSS’ obligation under this warranty is limited to repair or replacement of the product or refund of the purchase price paid solely at the discretion of ROSS and provided such product is returned to ROSS freight prepaid and upon examination by ROSS is found to be defective. This warranty becomes void in the event that product has been subject to misuse, misapplication, improper maintenance, modification or tampering.

THE WARRANTY EXPRESSED ABOVE IS IN LIEU OF AND EXCLUSIVE OF ALL OTHER WARRANTIES AND ROSS EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ROSS MAKES NO WARRANTY WITH RESPECT TO ITS PRODUCTS MEETING THE PROVISIONS OF ANY GOVERNMENTAL OCCUPATIONAL SAFETY AND/OR HEALTH LAWS OR REGULATIONS. IN NO EVENT IS ROSS LIABLE TO PURCHASER, USER, THEIR EMPLOYEES OR OTHERS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM A BREACH OF THE WARRANTY DESCRIBED ABOVE OR THE USE OR MISUSE OF THE PRODUCTS. NO STATEMENT OF ANY REPRESENTATIVE OR EMPLOYEE OF ROSS MAY EXTEND THE LIABILITY OF ROSS AS SET FORTH HEREIN.
Full-Service Global Locations
There are ROSS Distributors Throughout the World

To meet your requirements across the globe, ROSS distributors are located throughout the world. Through ROSS or its distributors, guidance is available for the selection of ROSS products, both for those using pneumatic components for the first time and those designing complex pneumatic systems.

Other literature is available for engineering, maintenance, and service requirements. If you need products or specifications not shown here, please contact ROSS or your ROSS distributor. They will be happy to assist you in selecting the best product for your application.

For a current list of countries and local distributors, visit ROSS’ website at www.rosscontrols.com.