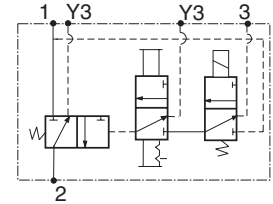
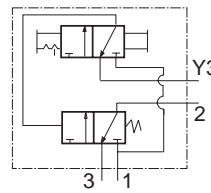
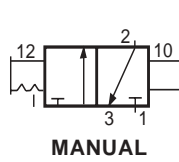


L-O-X® (Lock Out & eXhaust) Valves

ROSS L-O-X® valves are energy isolation valves and are generally used as the first valve in a line supplying compressed air to equipment. Air can be shut off by pushing the red L-O-X® handle inward; downstream air is simultaneously exhausted through the L-O-X® exhaust port. OSHA compliance requires that the valve be padlocked in this position to prevent handle from being pulled out inadvertently during maintenance.

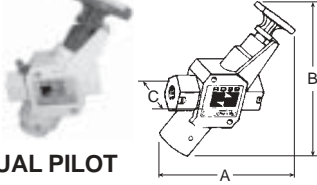


Piloted L-O-X® valves allow the flow of air to be controlled remotely as long as the L-O-X® control is open. See ROSS Bulletin 372D for more information about L-O-X® valves.

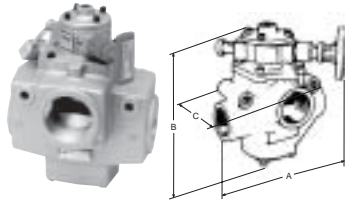
SOLENOID PILOT

Valve Type*

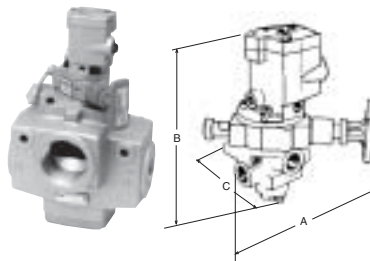
MANUAL



MANUAL PILOT



SOLENOID PILOT



| Port Size | | Valve Model | Avg. C _v | | Dimensions inches (mm) | | | | | Weight |
|-----------|-------|-------------|---------------------|----------|------------------------|------------|-----------|--|------------|--------|
| In-Out | Exh. | Number* | In-Out | Out-Exh. | A | B | C | | lb. (kg) | |
| 3/8 | 3/4 | 1523C3002 | 6.0 | 8.0 | 6.3 (159) | 8.8 (225) | 2.0 (51) | | 1.5 (0.7) | |
| 1/2 | 3/4 | 1523C4002 | 7.1 | 8.3 | 6.3 (159) | 8.8 (225) | 2.0 (51) | | 1.5 (0.7) | |
| 3/4 | 3/4 | 1523C5012 | 8.6 | 9.5 | 6.3 (159) | 8.8 (225) | 2.0 (51) | | 1.5 (0.7) | |
| 3/4 | 1-1/4 | 1523C5002 | 13 | 12 | 7.6 (194) | 10.6 (270) | 2.3 (57) | | 2.5 (1.1) | |
| 1 | 1-1/4 | 1523C6002 | 13 | 14 | 7.6 (194) | 10.6 (270) | 2.3 (57) | | 2.5 (1.1) | |
| 1-1/4 | 1-1/4 | 1523C7012 | 20 | 14 | 7.6 (194) | 10.6 (270) | 2.3 (57) | | 2.5 (1.1) | |
| 1 | 1-1/2 | 2783A6006 | 23 | 34 | 7.4 (187) | 8.6 (218) | 6.4 (162) | | 7.0 (3.2) | |
| 1-1/4 | 1-1/2 | 2783A7006 | 30 | 32 | 7.4 (187) | 8.6 (218) | 6.4 (162) | | 7.0 (3.2) | |
| 1-1/2 | 1-1/2 | 2783A8016 | 30 | 31 | 7.4 (187) | 8.6 (218) | 6.4 (162) | | 7.0 (3.2) | |
| 1-1/2 | 2-1/2 | 2783A8006 | 68 | 70 | 8.4 (213) | 10.2 (259) | 6.6 (162) | | 15.3 (6.9) | |
| 2 | 2-1/2 | 2783A9006 | 70 | 70 | 8.4 (213) | 10.2 (259) | 6.6 (162) | | 15.3 (6.9) | |
| 2-1/2 | 2-1/2 | 2783A9016 | 70 | 71 | 8.4 (213) | 10.2 (259) | 6.6 (162) | | 15.3 (6.9) | |
| 1/4 | 1/2 | 2773A2072 | 2.5 | 3.1 | 7.1 (181) | 8.4 (212) | 6.5 (165) | | 3.5 (1.6) | |
| 3/8 | 1/2 | 2773A3072 | 3.6 | 5.3 | 7.1 (181) | 8.4 (212) | 6.5 (165) | | 3.5 (1.6) | |
| 1/2 | 1/2 | 2773A4082 | 3.3 | 5.3 | 7.1 (181) | 8.4 (212) | 6.5 (165) | | 3.5 (1.6) | |
| 1/2 | 1 | 2773A4072 | 6.3 | 9.2 | 7.1 (181) | 9.0 (228) | 6.9 (175) | | 4.3 (1.9) | |
| 3/4 | 1 | 2773A5072 | 7.7 | 11 | 7.1 (181) | 9.0 (228) | 6.9 (175) | | 4.3 (1.9) | |
| 1 | 1 | 2773A6082 | 8.0 | 12 | 7.1 (181) | 9.0 (228) | 6.9 (175) | | 4.3 (1.9) | |
| 1 | 1-1/2 | 2773A6072 | 23 | 34 | 8.1 (206) | 11.8 (299) | 6.9 (175) | | 8.0 (3.6) | |
| 1-1/4 | 1-1/2 | 2773A7072 | 30 | 32 | 8.1 (206) | 11.8 (299) | 6.9 (175) | | 8.0 (3.6) | |
| 1-1/2 | 1-1/2 | 2773A8082 | 30 | 31 | 8.1 (206) | 11.8 (299) | 6.9 (175) | | 8.0 (3.6) | |
| 1-1/2 | 2-1/2 | 2773A8072 | 68 | 70 | 9.3 (235) | 13.8 (352) | 7.3 (184) | | 17.5 (7.9) | |
| 2 | 2-1/2 | 2773A9072 | 70 | 70 | 9.3 (235) | 13.8 (352) | 7.3 (184) | | 17.5 (7.9) | |
| 2-1/2 | 2-1/2 | 2773A9082 | 70 | 71 | 9.3 (235) | 13.8 (352) | 7.3 (184) | | 17.5 (7.9) | |

* ROSS' L-O-X® products come standard with a gold body and red handle. They can also be ordered with a yellow body. For NPT thread models with yellow bodies, prefix the number with a "Y" (Y1523C3002). For G thread models with yellow bodies, substitute the center letter with an "X" (D1523X3002).

L-O-X® Sensing Port

L-O-X® Sensing Port - Series 15 L-O-X® and L-O-X®/EEZ-ON® valves are now provided with 1/8 NPT sensing ports, enabling installation of a pressure sensing device such as the Pop-Up Indicator or Pressure Switch shown below. Standards suggest that machine design should include a method for verifying the release of energy after lock-out.

| | |
|---|--|
| The ROSS 988H30 Pop-Up Indicator is constructed for the industrial environment with a brass body and 1/8" NPT connection. It offers 360° visibility and a redundant verification feature. By pushing on the red plunger, the operator can "feel" the presence of pressure and verify that the indicator is performing its sensing function. | |
| The ROSS 586A86 Pressure Switch offers an electronic pressure sensing option that can be integrated into a safety monitoring system, which confirms energy isolation throughout the circuit. | |

STANDARD SPECIFICATIONS:

Ambient Temperature: Solenoid Valves: 40° to 120°F (4° to 50°C).

Manual Valves: 40° to 175°F (4° to 80°C).

Power Consumption: 87 VA holding on 50 or 60 Hz; 14 watts on DC.

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

Flow Media: Filtered air. 5 micron recommended.

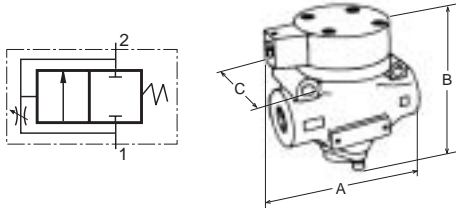
Inlet Pressure: Port sizes 3/8 to 1-1/2: 15 to 150 psig (1 to 10 bar) and 15 to 300 psig on Manual L-O-X® (1 to 20 bar). Port sizes 1-1/2 to 2-1/2: 30 to 150 psig (2 to 10 bar).

Threads: NPT standard. Prefix the model number with the letter "D" for parallel G threads, e.g. D1523C3002.

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

EEZ-ON® Valves

2/2 EEZ-ON® Valves



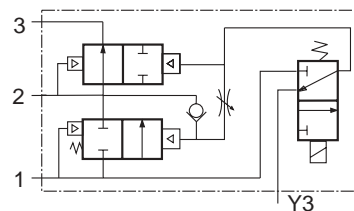
| Port Size | Valve Model Numbers | Average C _v | Dimensions inches (mm) | | | | Weight lb. (kg) |
|-----------|---------------------|------------------------|------------------------|-----------|-----------|-----------|-----------------|
| | | | A | B | C | | |
| 1/4 | 2781A2007 | 2.3 | 3.8 (97) | 3.8 (97) | 3.0 (77) | 1.5 (0.7) | |
| 3/8 | 2781A3007 | 3.8 | 3.8 (97) | 3.8 (97) | 3.0 (77) | 1.5 (0.7) | |
| 1/2 | 2781A4017 | 4.0 | 3.8 (97) | 3.8 (97) | 3.0 (77) | 1.5 (0.7) | |
| 1/2 | 2781A4007 | 7.7 | 4.6 (117) | 4.5 (114) | 3.0 (77) | 2.3 (1.0) | |
| 3/4 | 2781A5007 | 9.0 | 4.6 (117) | 4.5 (114) | 3.0 (77) | 2.3 (1.0) | |
| 1 | 2781A6017 | 9.0 | 4.6 (117) | 4.5 (114) | 3.0 (77) | 2.3 (1.0) | |
| 1 | 2781A6007 | 24 | 6.6 (168) | 7.6 (192) | 4.1 (103) | 6.0 (2.7) | |
| 1-1/4 | 2781A7007 | 29 | 6.6 (168) | 7.6 (192) | 4.1 (103) | 6.0 (2.7) | |
| 1-1/2 | 2781A8017 | 29 | 6.6 (168) | 7.6 (192) | 4.1 (103) | 6.0 (2.7) | |

An EEZ-ON® valve is used in an air supply line to provide a gradual buildup of downstream air pressure. This permits cylinders or other work elements to move slowly into their normal working positions before full line pressure is applied. The time required to reach full line pressure is adjustable.

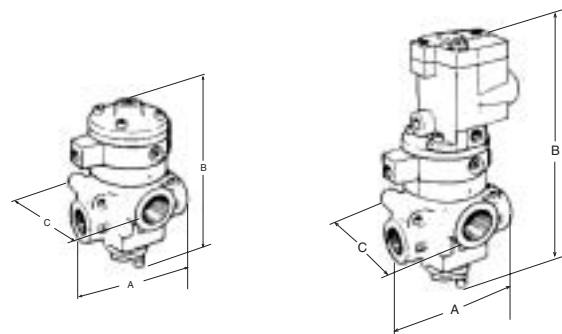
3/2 EEZ-ON® Valves

The 3/2 EEZ-ON® valve provides the same gradual pressure buildup as the 2/2 EEZ-ON® valves described above. In addition, the 3/2 valve has an exhaust port so that downstream air is exhausted when the valve is de-energized. At the same time, supply air is positively cut off so that a separate cutoff valve is not required.

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. See ROSS Bulletin 372D for more information.



Solenoid Pilot Models



| Port Size | | Valve Model Numbers | | Average C _v | | Dimensions inches (mm) | | | | Weight |
|-----------|---------|---------------------|------------------|------------------------|--------|------------------------|-----------|----------|-----------|-----------|
| In-Out | Exhaust | Solenoid Pilot | Remote Air Pilot | 1 to 2 | 2 to 3 | A | B | C | D | lb. (kg) |
| 1/4 | 1/2 | 2773B2037 | 2783B2037 | 2.5 | 3.1 | 4.1 (104) | 8.8 (224) | 3.1 (79) | 5.7 (146) | 4.5 (2.0) |
| 3/8 | 1/2 | 2773B3037 | 2783B3037 | 3.6 | 5.3 | 4.1 (104) | 8.8 (224) | 3.1 (79) | 5.7 (146) | 4.5 (2.0) |
| 1/2 | 1/2 | 2773B4047 | 2783B4047 | 3.3 | 5.3 | 4.1 (104) | 8.8 (224) | 3.1 (79) | 5.7 (146) | 4.5 (2.0) |
| 1/2 | 1 | 2773B4037 | 2783B4037 | 6.3 | 9.2 | 4.9 (124) | 9.6 (243) | 3.6 (92) | 7.1 (180) | 5.0 (2.3) |
| 3/4 | 1 | 2773B5037 | 2783B5037 | 7.7 | 11 | 4.9 (124) | 9.6 (243) | 3.6 (92) | 7.1 (180) | 5.0 (2.3) |
| 1 | 1 | 2773B6047 | 2783B6047 | 8.0 | 12 | 4.9 (124) | 9.6 (243) | 3.6 (92) | 7.1 (180) | 5.0 (2.3) |

IMPORTANT NOTE

Please read carefully and thoroughly all of the **CAUTIONS** on page 89.

STANDARD SPECIFICATIONS

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

Power Consumption: 87 VA holding on 50 or 60 Hz; 14 watts on DC.

Flow Media: Filtered air. 5 micron recommended.

Inlet Pressure:

2/2 models: 30 to 150 psig (2 to 10 bar).

3/2 models: 15 to 150 psig (1 to 10 bar).

Combination L-O-X®/EEZ-ON® Valves

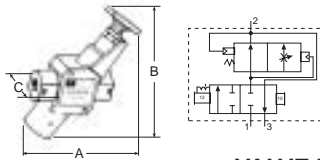
Combines L-O-X® Shut-off with EEZ-ON® Gradual Starts



The L-O-X®/EEZ-ON® valve combines shut-off certainty with gradual pressurization upon start-up. Special labels and adjustment screw indicates EEZ-ON® function.

The ROSS L-O-X®/EEZ-ON® valve is the newest addition to ROSS' renowned family of safety-related products. Combining two functions critical to safety concerns in any application, the ROSS L-O-X®/EEZ-ON® valve provides the shutdown and the gradual start-up (or, "soft start") capabilities today's systems require. In addition, because the L-O-X®/EEZ-ON® valve is two units in one, you eliminate the need for multiple components. And that means easier installation and less cost.

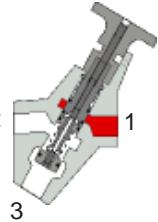
The new valve permits the gradual increase of downstream pressure in the pneumatic circuit that has just been actuated. The same unit also features a shut-off and lockout of system air to limit inadvertent actuation. For years, ROSS products have been the industry benchmark in safety-related pneumatic controls, and the tradition continues with the new L-O-X®/EEZ-ON® valve. The exhaust port is threaded for the installation of a silencer or a line for remote exhausting. Two mounting holes are provided to simplify the installation of the L-O-X®/EEZ-ON® valve.



VALVE OPERATION

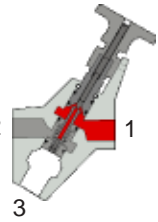
VALVE CLOSED

With a short push of the 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®/EEZ-ON® valve be padlocked in this position to prevent the handle from being pulled outward inadvertently when potential for human injury exists or servicing machinery.



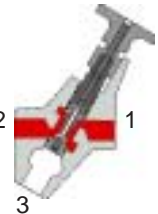
EEZ-ON® VALVE FUNCTION

With the handle pulled out, the adjustable needle valve (accessed through top of handle) setting determines the rate of pressure buildup.



VALVE OPEN

After the 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. See "Toggle Open Pressure" under standard specifications.



VALVE MODEL NUMBERS & OVERALL DIMENSIONS

| Port Size In-Out | Exhaust | Valve Model Numbers* | Average C _v 1 to 2 | Average C _v 2 to 3 | Dimensions A | Dimensions B | Dimensions C | EEZ-ON® Valve C _v ** | Weight lb. (kg) |
|------------------|---------|----------------------|-------------------------------|-------------------------------|--------------|--------------|--------------|---------------------------------|-----------------|
| 3/8 | 3/4 | 1523A3102 | 6.0 | 8.0 | 6.4 (163) | 8.8 (224) | 2.0 (51) | 0.6 | 1.5 (.7) |
| 1/2 | 3/4 | 1523A4102 | 7.1 | 8.3 | 6.4 (163) | 8.8 (224) | 2.0 (51) | 0.6 | 1.5 (.7) |
| 3/4 | 3/4 | 1523A5112 | 8.0 | 9.5 | 6.4 (163) | 8.8 (224) | 2.0 (51) | 0.6 | 1.5 (.7) |
| 3/4 | 1-1/4 | 1523A5102 | 12.0 | 10.9 | 7.7 (196) | 10.8 (274) | 2.3 (58) | 3.0 | 3.3 (1.5) |
| 1 | 1-1/4 | 1523A6102 | 13.7 | 12.0 | 7.7 (196) | 10.8 (274) | 2.3 (58) | 3.0 | 3.2 (1.5) |
| 1-1/4 | 1-1/4 | 1523A7112 | 16.2 | 12.8 | 7.7 (196) | 10.8 (274) | 2.3 (58) | 3.0 | 3.2 (1.5) |

*ROSS L-O-X®/EEZ-ON® products come standard with gold body and blue handle. These products can also be ordered with yellow-colored body. For NPT thread models with yellow bodies, prefix the number with a "Y" (Y1523C3102). For G thread models with yellow bodies, substitute the center letter with an "X" (D1523X3102). **C_v from port 1 to port 2 during pressure buildup (before valve opens fully).

L-O-X® Sensing Port

L-O-X® Sensing Port - Series 15 L-O-X® and L-O-X®/EEZ-ON® valves are now provided with 1/8 NPT sensing ports, enabling installation of a pressure sensing device such as the Pop-Up Indicator or Pressure Switch shown below. Standards suggest that machine design should include a method for verifying the release of energy after lock-out.

The ROSS 988H30 Pop-Up Indicator is constructed for the industrial environment with a brass body and 1/8" NPT connection. It offers 360° visibility and a redundant verification feature. By pushing on the red plunger, the operator can "feel" the presence of pressure.



The ROSS 586A86 Pressure Switch offers an electronic pressure sensing option that can be integrated into a safety monitoring system, which confirms energy isolation throughout the circuit.



STANDARD SPECIFICATIONS

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). Toggle Open Pressure = Inlet - 25 psig. If different toggle pressure is needed, contact ROSS Technical Services.

Port Threads: NPT standard. Prefix the model number with the letter "D" for parallel G threads, e.g. D1523A3102.

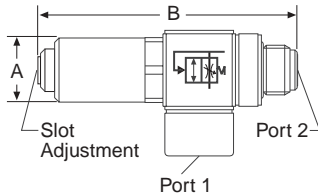
NOTE: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

Right-Angle EEZ-ON® Valves

EEZ-ON® Valves

EEZ-ON® Valves are used to gradually apply air pressure downstream when supply is initially applied. Select the model you need to operate with supply pressure at either port 1 or port 2.

Right angle design with banjo for easy positioning of pipe or tubing.



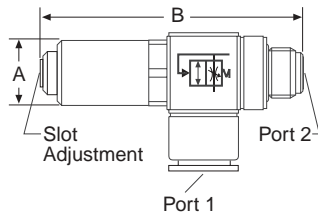
Threaded Banjo

Models with Threaded Banjo

| Port Size | | Valve Model Numbers | | Average C _v | Dimensions inches (mm) | | Tightening Torque Max. Ft-lb (Nm) |
|-----------|----------|---------------------|------------|------------------------|---------------------------|----------|---|
| Port 1* | Port 2** | Primary Pressure | | | A | B | |
| | | At Port 1 | At Port 2 | | | | |
| G1/8 | G1/8 | D1969A1010 | D1969A1011 | 0.7 | 0.5 (13) | 2.3 (57) | 7.38 (10) |
| G1/4 | G1/4 | D1969A2010 | D1969A2011 | 1.1 | 0.7 (17) | 2.4 (61) | 8.85 (12) |
| G3/8 | G3/8 | D1969A3010 | D1969A3011 | 1.9 | 0.9 (22) | 2.7 (67) | 14.75 (20) |
| G1/2 | G1/2 | D1969A4010 | D1969A4011 | 2.2 | 1.1 (27) | 2.9 (72) | 22.13 (30) |
| 1/8 | 1/8 | 1969A1010 | 1969A1011 | 0.7 | 0.5 (13) | 2.3 (57) | 11.06 (15) |
| 1/4 | 1/4 | 1969A2010 | 1969A2011 | 1.1 | 0.7 (17) | 2.5 (63) | 14.75 (20) |
| 3/8 | 3/8 | 1969A3010 | 1969A3011 | 1.9 | 0.9 (22) | 2.8 (69) | 22.13 (30) |
| 1/2 | 1/2 | 1969A4010 | 1969A4011 | 2.2 | 1.1 (27) | 2.9 (74) | 29.50 (40) |

* Threads in port 1 are female.

** Port 2 threads are male.



**Push-to-Connect
Fitting**

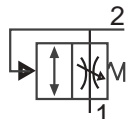
Models with Push-to-Connect Fitting

| Port Size | | Valve Model Numbers | | Average C _v | Dimensions inches (mm) | | Tightening Torque Max. Ft-lb (Nm) |
|--------------------|---------|--|--|------------------------|---------------------------|----------|---|
| Port 1** | Port 2# | Primary Pressure | | | A | B | |
| | | At Port 1 | At Port 2 | | | | |
| 4.0 6.0 8.0 | G1/8 | D1969A1020 D1969A1030 D1969A1040 | D1969A1021 D1969A1031 D1969A1041 | 0.5 | 0.5 (13) | 2.3 (57) | 7.38 (10) |
| 6.0 8.0 10.0 | G1/4 | D1969A2020 D1969A2030 D1969A2040 | D1969A2021 D1969A2031 D1969A2041 | 0.6 | 0.7 (17) | 2.4 (61) | 8.85 (12) |
| 8.0 10.0 | G3/8 | D1969A3020 D1969A3030 | D1969A3021 D1969A3031 | 1.5 | 0.9 (22) | 2.7 (67) | 14.75 (20) |
| 5/32" 1/4" | 1/8 | 1969A1020 1969A1030 | 1969A1021 1969A1031 | 0.5 | 0.5 (13) | 2.3 (57) | 11.06 (15) |
| 1/4" 3/8" | 1/4 | 1969A2020 1969A2030 | 1969A2021 1969A2031 | 0.6 | 0.7 (17) | 2.5 (63) | 14.75 (20) |
| 3/8" | 3/8 | 1969A3020 | 1969A3021 | 1.5 | 0.9 (22) | 2.8 (69) | 22.13 (30) |

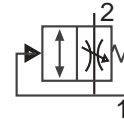
Port 1 tubing size in mm () or inches (").

** Port 2 threads are male.

Primary Pressure
at port 1



Primary Pressure
at port 2



IMPORTANT NOTE

Please read carefully and thoroughly all of the **CAUTIONS** on page 89.

STANDARD SPECIFICATIONS:

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

Flow Media: Filtered air. 5 micron recommended.

Operating Pressure: 45 to 150 psig (3 to 10 bar).