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Find the *Ross Controls 1523-C-3002* at our website: *Click HERE*

15 Series

Manual Lockout L-O-X® Valves (w/ Red handle) *and* L-O-X® Valves with Soft Start EEZ-ON® Operation (w/ Blue handle)

Thank You!

You have purchased a premium-quality ROSS® pneumatic valve. It is a high quality energy isolation valve for international standards compliance designed for in-line mounting. With care in its installation and maintenance you can expect it to have a long and economical service life.

Before you install this valve read the information in this folder completely, and save it for future reference.



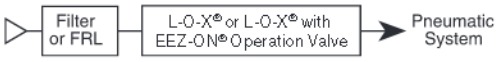
VALVE INSTALLATION

Please read and make sure you understand all installation instructions before proceeding with the installation.
Additional technical documentation is available for download at www.rosscontrols.com.
If you have any questions about installation or servicing your valve, please contact ROSS or your authorized ROSS distributor, see contact information listed at the back of this document, or visit www.rosscontrols.com to find your distributor.

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

Pneumatic equipment should be installed only by persons trained and experienced in such installation.

A L-O-X® valves or L-O-X® valves with EEZ-ON® operation can be installed in the main or a branch line of an air system.



NOTE: The L-O-X® valves and the L-O-X® valves with EEZ-ON® operation are similar in appearance, but different in that the L-O-X® valve has a red handle, and the L-O-X® valve with EEZ-ON® operation has a blue handle. The operating functions of the two types of valve differ in the following ways:

L-O-X® Valve: Pushing the *RED* handle inward cuts off the supply of air to downstream components, and at the same time exhausts the air in the downstream lines to the next obstruction. The L-O-X® valve is *NOT* an emergency stop device, but simply an energy isolation device. When the red operating handle is pulled outward, supply air is again allowed to flow into the downstream lines.

L-O-X® valve with EEZ-ON® Operation: When its *BLUE* operating handle is pushed inward this valve functions like the L-O-X® valve described above. In addition, when the blue handle is pulled outward, the flow of air to the downstream lines is gradual. When outlet pressure reaches approximately 25 psi (1.7 bar) less than inlet pressure, the valve will then open fully until the upstream pressure is exhausted or the handle is pushed down.

Air Lines: Before installing this valve in a new or existing system, the air lines must be blown clean of all contaminants.

It is recommended that an air filter be installed in the inlet line close to the valve.

Valve Inlet (Port 1): Be sure that the supply line is of adequate size and does not restrict the air supply.

Valve Outlet (Port 2): For quick pressurizing and exhausting of downstream components, the downstream lines must be of adequate size and be free of crimps and sharp bends.

Valve Exhaust (Port 3): Do not restrict the air flow from the exhaust port as this can adversely affect the speed with which downstream lines and components can be exhausted. To reduce exhaust noise, an efficient silencer may be used. ROSS silencers reduce impact noise by as much as 25 dB, and produce little back pressure.

L-O-X Sensing Port: A 1/8 NPT sensing port allows installation of either the Pop-Up Indicator (model number 988A30) or Pressure Switch option (model number 586A86) to verify pressure is released.

Operating Pressures and Temperatures: Allowable ranges for pressure and temperatures are given in the *Valve Specifications* on page 2. Exceeding these values can shorten valve life.

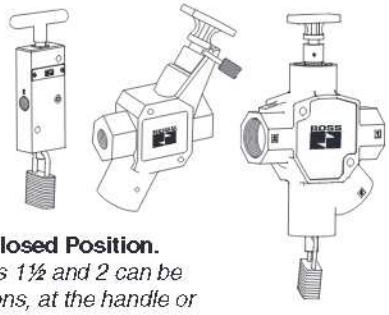
Pipe Installation: To install pipe in valve ports, engage pipe one turn, apply pipe thread sealant (tape not recommended), and tighten pipe. This procedure will prevent sealant from entering and contaminating the valve.

EEZ-ON® Adjustment: If using a L-O-X® valve with EEZ-ON® operation (valve with a blue handle), push the handle fully inward before applying line pressure to the inlet port. Turn the brass adjusting screw in the top of the blue handle clockwise until resistance is felt. *DO NOT TIGHTEN OR THE SCREW MAY BE DAMAGED.* Now turn the adjusting screw counterclockwise 1/2 turn. This will serve as a preliminary setting for the rate of pressure buildup. Further adjustment can then be made to suit the needs of your application.

VALVE MAINTENANCE

Pneumatic equipment should be maintained only by persons trained and experienced in the maintenance of such equipment.

IMPORTANT NOTE: To service downstream equipment, the handle of the L-O-X® valve or L-O-X® valve with EEZ-ON® operation must be pushed inward to cut off the air supply. The valve should then be padlocked in this position to ensure that supply air is not inadvertently turned on.



Valves Padlocked in Closed Position.
L-O-X® Valves port sizes 1½ and 2 can be padlocked in two locations, at the handle or at the end of the spool.
Follow correct lockout procedure as prescribed by industry or your company's lockout/tagout standards.

Observe the following general guidelines for the care and maintenance of the L-O-X® valve or L-O-X® valve with EEZ-ON® operation.

Supply Clean Air. Foreign material lodging in valves is a major cause of breakdowns. The use of a 5-micron rated air filter located close to the valve is strongly recommended. The filter bowl should be drained regularly, and if its location makes draining difficult, the filter should be equipped with an automatic drain.

COMPATIBLE LUBRICANTS

Maker	Brand Name
Amoco	American Industrial Oil 32
	Amoco Spindle Oil C, Amolite 32
Citgo	Pacemaker 32
Exxon	Spinesstic 22, Teresstic 32
Mobil	Velocite 10
Non-Fluid Oil	Air Lube 10H/NR
Shell	Turbo T32
Sun	Sunvis 11, Sunvis 722
Texaco	Regal R&O 32
Union	Union Turbine Oil

Compatible Lubricants. Although this valve does not require air line lubrication, it may be used with lubricated air being supplied to other mechanisms. Some oils contain additives that can harm seals or other valve components and so cause the valve to malfunction. Avoid oils with phosphate additives (e.g., zinc dithiophosphate), and diester oils; both types can harm valve components. The best oils to use are generally petroleum base oils with oxidation inhibitors, an aniline point between 180°F (82°C) and 220°F (104°C), and an ISO 32 or lighter viscosity.

Some compatible oils are listed above. These oils, although believed to be compatible, could change without notice because manufacturers sometimes reformulate their oils. Therefore, use oils specifically compounded for air line service. If it is a synthetic oil, contact the oil manufacturer for compatibility information.

Cleaning the Valve/Replace Worn Components. ROSS does not recommend disassembling the 15 Series valves for cleaning or repair.

If you have any questions about installing or servicing your valve, call ROSS *Technical Services* at your nearest ROSS location (see page 4) or in the U.S.A. at: **1-888-TEK-ROSS(835-7677)**.

VALVE SPECIFICATIONS

Construction: Spool and sleeve.
Mounting Type: Base.
Temperature Range: 40° to 175°F (4° to 80°C).
Flow Media: Filtered air.
Inlet Pressure:
Port sizes 1/4 to 3/4 (Modular L-O-X®):
0 to 200 psig (0 to 13.8 bar).
Port sizes 1/4 to 3/8 (Slim L-O-X®):
0 to 145 psig (0 to 10 bar).
Port sizes 3/8 to 2 (Classic & High Capacity L-O-X®):
0 to 300 psig (0 to 20 bar).
L-O-X® valve with EEZ-ON® operation:
0 to 150 psig (0 to 10.3 bar).

Slim, Modular, and High-Capacity L-O-X®:
Lock Hole Diameter: 0.27 inch (7.0 mm).
Length of Hole: 0.43 inch (10.9 mm).

Safety-related Standards that Apply to Pneumatic Air Systems

All standards are subject to revision. Parties are encouraged to investigate and apply the most recent editions of the standards indicated below.
OSHA 29 CFR 1910.147; ANSI/ASSE Z244.1
ANSI B.11.0, RIA 15.06, ISO 13849,
ANSI/PMMI B155.1, ANSI B11.2, EN 13736.
ANSI B11.3, ANSI B11.19, ANSI B11.TR6.

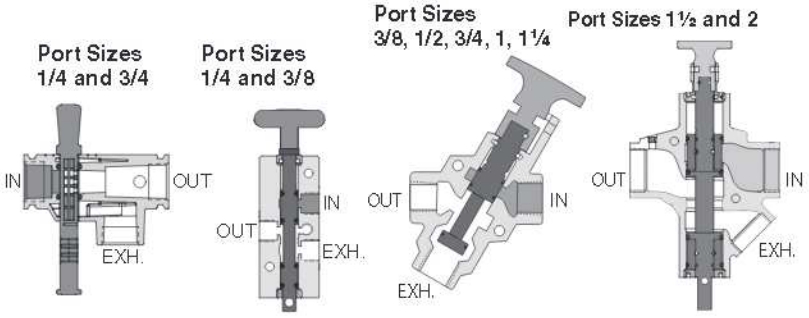
IMPORTANT NOTE: *Please read carefully and thoroughly all the* ***CAUTIONS*** *and* ***WARNINGS*** *on page 4.*

VALVE OPERATION

L-O-X® Valve (*RED* Handle)

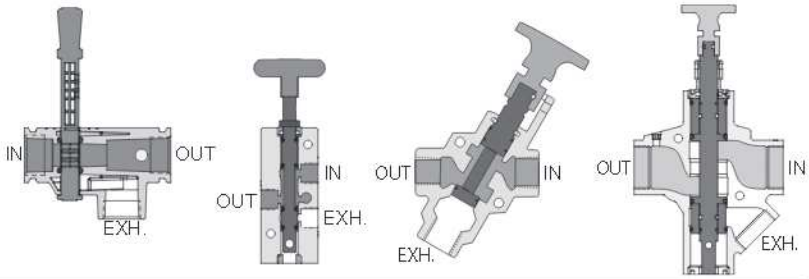
VALVE CLOSED

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

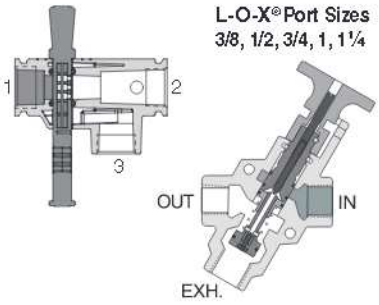
When the red handle is pulled outward supply air flows freely from inlet to outlet and flow to exhaust is blocked. A detent keeps the handle in the open position.



L-O-X® Valve with EEZ-ON® Operation (*BLUE* Handle)

Port Sizes
1/4 and 3/4

L-O-X® Port Sizes
3/8, 1/2, 3/4, 1, 1¼

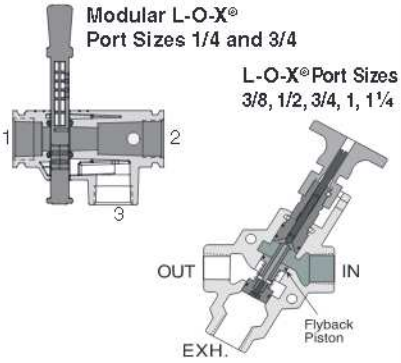


VALVE CLOSED

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.

Modular L-O-X®
Port Sizes 1/4 and 3/4

L-O-X® Port Sizes
3/8, 1/2, 3/4, 1, 1¼



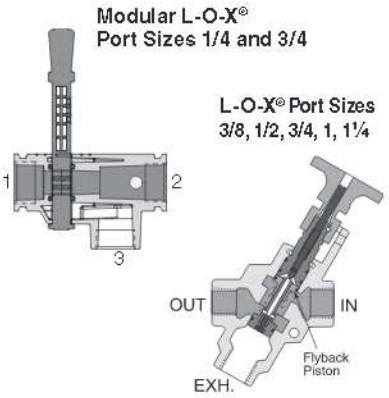
EEZ-ON® FUNCTION

For modular L-O-X® valve: 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.

For other L-O-X® valves: With the blue handle pulled out, the adjustable needle valve (accessed through top of handle) setting determines the rate of pressure buildup.

Modular L-O-X®
Port Sizes 1/4 and 3/4

L-O-X® Port Sizes
3/8, 1/2, 3/4, 1, 1¼



VALVE OPEN

For modular L-O-X® valve: Pressing the mechanical stop button allows the blue handle to be shifted completely open allowing full flow from inlet to downstream.

For other L-O-X® valves: 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.

CAUTIONS And WARNINGS

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 in the table below.

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

WARNINGS: 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.

WARNINGS:

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®** valves and **L-O-X®** valves with **EEZ-ON®** operation 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.

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