

Inline Remote Pilot Regulators

HIGH-CAPACITY Series, Flow to 850 scfm



Thank You! You have just purchased a premium-quality ROSS® Air Preparation product. With care in its installation and maintenance, you can expect it to have a long and economical service life. Before you go any further, please take a few minutes to look over this information, then save it for future reference and for the useful service information it contains.

OPERATION

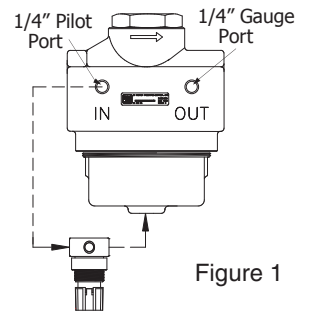
Outlet pressure of Regulator is dependent on the Control Regulator. To increase the regulator pressure, increase Control Regulator, or to decrease the regulator pressure decrease Control Regulator. To adjust the Control Regulator, turn clockwise to increase pressure and counter-clockwise to decrease. For more details see specific Installation and Maintenance Sheet for chosen Control Regulator. The Control Regulator pressure setting may need to be a few psi higher than desired pressure for outlet of Regulator.



INSTALLATION

Please read and make sure you understand all installation instructions before proceeding with the installation.
If you have any questions about installation or servicing your product, 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.

1. Depressurize and lockout air pressure.
2. Upstream pipes must be free of dirt and liquids.
3. Filters should be installed immediately ahead of Regulators to insure a clean supply of air.
4. Install the Regulator as near as possible to the device it is to serve.
5. Install the Regulator so that air flows from inlet to outlet as shown on the head.
6. The Regulator can be installed in any orientation.
7. The Regulator requires a Control Regulator to operate.
8. The Control Regulator can be installed at a distance from the Regulator for easier adjustment. The Regulator has two pilot ports on front and back of inlet side of head. Connect inlet of Control Regulator to one of the pilot ports, and install pipe plug into the other. Connect outlet port of Control Regulator to port on bottom of the regulator dome. See Figure 1.
9. The Regulator has two gauge ports on front and back of outlet side of head. It is necessary to install a pressure gauge or pipe plugs into each port before operating.
10. Regulators should be installed upstream of any Lubricators in the airline.



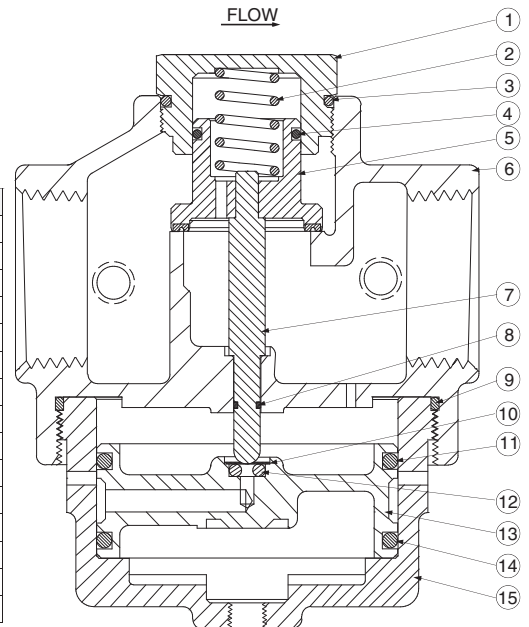
SERVICE

If you need to service your product, turn off any electrical power to the system, shut off the air supply, exhaust the air in the system, and lock-out all power sources before beginning any disassembly operation.

TO CLEAN OR REPAIR:

Depressurize and lockout air pressure. Remove Dome by turning counter-clockwise. Piston can now be removed. Remove Cap by turning counter-clockwise. Valve Spring and Valve can now be removed. When re-assembling, be sure that all seals are correctly located. Torque Cap and Dome to 80-100 ft-lbs. If the regulator cannot be repaired by cleaning with soap and water, the parts should be replaced.

KEY	DESCRIPTION
1	Cap
2	Valve Spring
3	O-Ring
4	O-Ring
5	Valve
6	Head
7	Valve Stem
8	O-Ring
9	O-Ring
10	Retaining Ring
11	O-Ring
12	O-Ring
13	Piston
14	O-Ring
15	Dome



STANDARD SPECIFICATIONS

Construction: Piston.

Self-relieving.

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

Fluid Media: Compressed air.

Inlet Pressure: 300 psig (21 bar) maximum.

Outlet Pressure: 0 to 200 psig (0 to 14 bar).

NOTE: Outlet pressure depends on the selection of the pilot regulator.

Pilot Ports: 1/4 NPTF.

Pressure Gauge: 0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear.

Body and Dome: Aluminum.

Seals: Nitrile.

Valve: Brass on 1/2" & 2" ports; Aluminum on 3" ports.

Valve Cap: Aluminum.

IMPORTANT NOTE: Please read carefully and thoroughly all the **CAUTIONS** and **WARNINGS** on page 2.

REPLACEMENT PARTS



O-Ring & Assembly Kits	Part Number
O-Ring Kit (Includes all 7)	R-KAR200
Valve Assembly Kit	R-A37-89
Valve Assembly Kit - Viton	R-A37-89V
Piston Assembly Kit	R-A37-83
Piston Assembly Kit - Constant Bleed	R-A37-83Q

LUBRICANTS, POLYCARBONATE BOWL CAUTIONS

COMPATIBLE LUBRICANTS

Although air line lubrication is not required for most ROSS valves, other mechanisms in the system may need such lubrication. When a lubricator is used, it should be supplied only with oils which are compatible with the materials used in the valves for seals and poppets. Generally speaking, these are petroleum base oils with oxidation inhibitors, and aniline point between 180°F (82°C) and 220°F (104°C) and an ISO 32, or lighter, viscosity. Oils with phosphate type additives, such as zinc dithiophosphate, must be avoided because they can harm polyurethane valve components. The best oils to use in pneumatic systems are those specifically compounded for air line lubricator service.

CAUTIONS ON THE USE OF POLYCARBONATE BOWLS

Use Only with Compressed Air. Filters and lubricators with polycarbonate bowls are specifically designed for compressed air service, and their use with any other fluid (liquid or gas) is a misapplication. The use with or injection of certain hazardous fluids in the system (e.g., alcohol or liquefied petroleum gas) could be harmful to the polycarbonate bowl or result in a combustible condition or hazardous leakage. Before using with a fluid other than air, or for nonindustrial applications, or for life support systems, consult ROSS.

Use Metal Bowl Guard When Supplied. A metal bowl guard is supplied with all but the smallest bowls, and must always be used to minimize danger from fragmentation in the event of failure of a polycarbonate bowl.

Avoid Harmful Substances. Some compressor oils, chemical cleaners, solvents, paints, and fumes will attack polycarbonate bowls and can cause bowl failure. Do not use with or near these materials. When a bowl becomes dirty, replace the bowl or wipe it with a clean dry cloth. Immediately replace any polycarbonate bowl which is crazed, cracked, or deteriorated.

SUBSTANCES HARMFUL TO POLYCARBONATE BOWLS

Acetaldehyde	Benzyl alcohol	Cresol	Ethylene dichloride	Milk of lime (CaOH)	Sodium sulfide
Acetic acid	Brake fluids	Cyclohexanol	Ethylene glycol	Nitric acid	Styrene
Acetone	Bromobenzene	Cyclohexanone	Formic acid	Nitrobenzene	Sulfuric acid
Acrylonitrile	Butyric acid	Cyclohexene	Freon (refrigerant & propellant)	Nitrocellulose lacquer	Sulfural chloride
Ammonia	Carbolic acid	Dimethyl formamide	Gasoline (high aromatic)	Perchlorethylene	Tetrahydronaphthalen
Ammonium fluoride	Carbon disulfide	Dioxane	Hydrazine	Phenol	Thiophene
Ammonium sulfide	Carbon tetrachloride	Ethane tetrachloride	Hydrochloric acid	Phosphorous hydroxyl chloride	Toluene
Anaerobic adhesives & sealants	Caustic potash solution	Ethyl acetate	Lacquer thinner	Phosphorous trichloride	Turpentine
Antifreeze	Caustic soda solution	Ethyl ether	Methyl alcohol	Propionic acid	Xylene
Benzene	Chlorobenzene	Ethylamine	Methylene chloride	Pyridine	
Benzoic acid	Chloroform	Ethylene chlorohydrin	Methylene salicylate	Sodium hydroxide	

TRADE NAMES OF SUBSTANCES HARMFUL TO POLYCARBONATE BOWLS

- Atlas Perma-Guard • Buna N • Cellulube #150 & #220 • Crylex #5 cement • Eastman 910 • Garlock 98403 (polyurethane) • Haskel 568-023
- Hilgard Company's hil phene • Houghton & Co. oil 1120, 1130, 1055 • Houtosafe 1000 • Kano Kroil • Keystone penetrating oil #2
- Loctite 271, 290, 601 • Loctite Teflon sealant • Marvel Mystery Oil • Minn. Rubber 366Y • National Compound N11 Nylock VC-3
- Parco 1306 Neoprene • Permabond 910 • Petron PD287 • Prestone • Pydraul AC • Sears Regular Motor Oil • Sinclair oil "Lily White"
- Stauffer Chemical FYRQUEL 150 • Stillman SR 269-75 (polyurethane) • Stillman SR 513-70 (neoprene) • Tannergas • Telar
- Tenneco anderol 495 & 500 oils • Titan • Vibra-tite • Zerex

STANDARD WARRANTY

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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ROSS CONTROLS INDIA Pvt. Ltd.	India	TEL: 91-44-2624-9040	email: ross.chennai@rosscontrols.com
ROSS CONTROLS (CHINA) Ltd.	China	TEL: 86-21-6915-7961	www.rosscontrolschina.com
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