

Modular Remote High-Relief Pilot Regulators

FULL-SIZE Series, Flow to 150 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.



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.

A control regulator (ordered separately) adjusts the outlet pressure of the pilot operated regulator. Any M/P regulator can be used as the pilot. The pilot regulator may be installed some distance from the main regulator for convenient, remote adjusting. Install the main unit as near as possible to the device it is to serve. Use the size pilot operated regulator that corresponds to the maximum flow required.

Filters should be installed immediately ahead of the regulator to insure a clean supply of air. The air pressure is regulated by force created due to the pilot pressure (Supplied by the control regulator) acting against the diaphragm, which opens and closes the supply poppet valve to maintain the set pressure with flow through the regulator. Overpressure is relieved thru the exhaust port when pressure on the top of the diaphragm exceeds the pilot pressure acting on the bottom of the diaphragm.

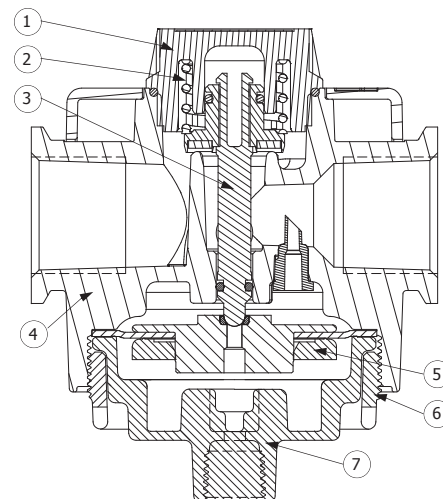
SERVICE

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.

MAINTENANCE:

If the air supply is kept clean, the regulator should provide long periods of uninterrupted service. Erratic operation or loss of regulation is usually due to dirt or a leaking seal. If repairs are needed, lock-out the air supply and exhaust trapped air. The supply valve can be removed by unscrewing the valve cap. Clean the valve seat with soap and water to remove any dirt.

The diaphragm must be pre-loaded after assembly for proper operation. Because of this, it is not recommended that the dome be removed. If the regulator cannot be repaired by cleaning the valve, and the pilot supply regulator is functioning properly, the regulator should be returned to the factory for repair.



KEY	DESCRIPTION
1	Cap kit
2	Spring (qty 5)
3	Valve kit
4	Head kit
5	Diaphragm kit
6	Retaining ring
7	Dome

REPLACEMENT PARTS

Pressure Gauges

Part Number	Dial Face	Calibrations	Mounting
R-200-BDD	2" (5.1 cm)	0-200 psi (0-14 bar)	1/4"-18 NPT Center Back
R-60BDD		0-60 psi (0-4 bar)	
R-200-SDDX		0-200 psi (0-14 bar)	1/4"-18 NPT Side

STANDARD SPECIFICATIONS

Construction: Diaphragm.
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: Adjustable 0 to 200 psig (0 to 14 bar).

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: Zinc.

Seals: Nitrile; Fluororelastomer seals optional, consult ROSS.

Valve: Brass.

Valve Cap: Nylon.

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

REPLACEMENT PARTS



KEY	DESCRIPTION	1/4 Port Size	3/8 Port Size	1/2 Port Size	3/4 Port Size
1	Cap kit	R-K37-57B	R-K37-57B	R-R-K37-57B	R-K37-57B
2	Spring (qty 5)	R-KV35-11M	R-KV35-11M	R-KV35-11M	R-KV35-11M
3	Valve kit	R-KA35-10BR	R-KA35-10BR	R-KA35-10BR	R-KA35-10BR
4	Head kit	R-KA37-01-1/4	R-KA37-01-3/8	R-KA37-01-1/2	R-KA37-01-3/4
5	Diaphragm kit	R-KA37-237RM	R-KA37-237RM	R-KA37-237RM	R-KA37-237RM
6	Retaining ring	R-37-249	R-37-249	R-37-249	R-37-249
7	Dome	R-A37-243K	R-A37-243K	R-A37-243K	R-A37-243K

Mounting Accessories	Part Number
Gauge port wall bracket	R-KA37-68
Gauge port extended wall bracket	R-KA37-68L

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)	Perchloroethylene	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 • Permaabond 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 • Titon • 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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