



REGO IS A LEADING MANUFACTURER OF GAS AND CRYOGENIC VALVES, REGULATORS AND RELIEF VALVES FOR GAS AND CRYOGENIC STORAGE/DISTRIBUTION SYSTEMS.

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INSTALLATION & OPERATING INSTRUCTIONS
FOR ECL SERIES
CRYOGENIC ECONOMIZERS

WARNING: Installation and use of this product must be in compliance with all RegO® instructions as well as requirements and provisions of all applicable national and local standards, codes, regulations and laws. Inspect regularly. Replace as required. The safe useful life of a regulator is less than 15 years in most applications. Only qualified personnel should perform installation, maintenance and inspections; and all instructions read and understood before installation, operation and maintenance. It is required to pass these instructions to the end user of the products.

CAUTION: Avoiding the inhalation of, or skin contact with compressed and cryogenic gases is advised. Many of these gases can cause asphyxiation, serious injury, or death. See MSDS for specific information regarding the safe handling of the service gas. Evacuation of gas should take place in a well-ventilated area to ensure dispersion. Keep gases far away from open flames or other sources of ignition to prevent fire or explosion.

NOTE: Suitable for use on Hydrogen (H₂), Helium (He), Oxygen (O₂), Argon (Ar), Nitrogen (N₂), Nitrous Oxide (N₂O), Carbon Dioxide (CO₂), Liquefied Natural Gas (LNG), Air, and mixtures of these gases. Maximum allowable pressure 550 PSIG (38 bar).

Installation:

1. Refer to RegO® catalog for sizing and selection information.
2. Check inlet port to ensure screen/filter is installed and properly positioned.
3. Clean dirt and foreign material from all piping and fittings, inside and out.
4. Apply a pipe joint compound suitable for gas service (such as PTFE tape) to the male threads on the piping. Take care not to apply any compound, or tape to first thread, in order to avoid minute particles from breaking off and lodging on seat.
5. Be sure the inlet and outlet of the economizer are correctly installed in-line according to the designed flow pattern and markings on the economizer body.
6. Position Economizer to protect vents from the elements of ice, snowdrifts, rain, dirt, bugs, paint or other foreign material.
7. Follow all local and national codes and standards for pressure testing and leak testing the installation.

Operation:

Note: RegO® economizers are pressure accessories according to the European Pressure Equipment Directive (97/23/EC). Should the design pressure of the downstream system(s) be lower than the pressure that can occur upstream, protect the lowest design pressure element from the highest overall system pressure.

The ECL Series Economizers have a design that specifically utilizes the gas pressure in a liquid cryogenic otherwise lost to the atmosphere through a pressure relief valve. They are also applicable in cryogenic lines, vaporizers and converters. The economizer is factory set for the pressure labeled on the bonnet. The table shown below shows the set pressure range, along with the corresponding close off pressure drop and maximum allowable leakage. The economizer does not function as a regulator, thus it cannot be adjusted for a specific outlet pressure.

Maintenance and Inspection:

Periodically check for:

1. Any signs of corrosion due to water, salt, industrial pollutants, chemicals, and roadway contaminants;
2. Any physical damage that would prevent proper sealing and usage or that may cause product failure under pressure;
3. Leaks in the end connections of the economizer;
4. Proper operation as foreign matter may affect the performance of the economizer.

Keep work environment clean, and replace damaged equipment immediately.

Hazards:

These economizers are suitable for use in gas service. However, when used in gas service where the application involves confining gas between the economizer and the shut-off valve, either upstream or downstream of the economizer, a relief valve of appropriate size to the system must be installed.

Piping systems that confine gas without appropriate protection against over pressurization.

Never uncouple the economizer from the piping system until all pressure has been released from the lines.

Set Pressure	Maximum Leakage	Close off ΔP from Set
PSIG (bar)	sccm	PSIG (bar)
15-24 (1.0-1.7)	5	5 0.35
25-100 (1.7-6.9)	10	10 0.69
101-350 (7.0-24.0)	10	10 0.69