

## REGO Cryo-Flow Products Operating Instructions for 1682 Series Heavy Duty Pressure Regulators Suitable for use on Ar, He, H<sub>2</sub>, Ne, N<sub>2</sub>, N<sub>2</sub>O, O<sub>2</sub>, CO<sub>2</sub>, Xe Compressed Air, and Mixtures of these gases

### Maximum Allowable Pressure 28 bar

**WARNING:** Installation and use of this product must be in compliance with all Engineered Controls International, Inc. 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:** Contact or vapor inhalation of Ar, He, H<sub>2</sub>, Ne, N<sub>2</sub>, N<sub>2</sub>O, CO<sub>2</sub> and Xe can cause serious injury or death! Vent gases outdoors in air currents that will insure dispersion to prevent exposure to people and livestock. H<sub>2</sub> gas must be kept far enough from any open flame or other source of ignition to prevent fire or explosion! While O<sub>2</sub> gas is not flammable, it is an accelerator, therefore keeping it from open flames and materials that may promote auto ignition - such as hydrocarbon fuels and oil - is highly advised.

**NOTE:** All REGO products are mechanical devices that will eventually become inoperative due to wear, contaminants, corrosion and aging of components made of materials such as metal and rubber. As a general recommendation, replace regulators in 15 years or less depending on the type of service and environment. The environment and conditions of use will determine the safe service life of these products. Periodic inspection and maintenance are essential.

Because REGO products have a long and proven record of quality and service, dealers may forget the hazards that may occur because a regulator is used beyond its safe service life. The environment surrounding the regulator determines the useful life of that regulator. Therefore the dealer knows more about this environment, and the effect that environment will have on the life of a regulator.

### Installation:

1. Refer to REGO Cryo-Flow Products catalog for sizing and selection information.
2. Apply a pipe joint compound suitable for use of the gas service (such as PTFE tape) to the male threads on the piping.
3. Clean dirt and foreign material from all piping and fittings.
4. Be sure the inlet and outlet of the regulator is correctly installed in-line according to the designed flow pattern and markings on the regulator body.
5. Pressure gauges must also be suitable for this service.
6. Position Regulators 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 regulators 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 up stream, protect the lowest design pressure element from the highest overall system pressure.*

The 1682 Series Regulators are designed to reduce maximum inlet pressure of 28 bar to a delivery pressure between .34 and 17 bar. They are accurate and dependable over a wide range of operating

conditions; come in a variety of sizes, capacities and designs to suit your needs; and are ideal as a second stage regulator. The 1682

| Regulator Series | Service  | Part No. Suffix | Delivery Pressure Range |         |
|------------------|--|-----------------|-------------------------|---------|
|                  |  |                 | BAR                     | PSIG    |
| 1682M            | O <sub>2</sub> , N <sub>2</sub> , H <sub>2</sub> , Ar, He, Ne, Xe, N <sub>2</sub> O, Air, Mixtures | S & SG          | 6.9-17.2                | 100-250 |
|                  |  | M & MG          | 3.5-8.6                 | 50-125  |
|                  |  | L & LG          | .3-3.5                  | 5-50    |
| C-1682M          | CO <sub>2</sub>  | S & SG          | 6.9-17.2                | 100-250 |
|                  |  | M & MG          | 3.5-8.6                 | 50-125  |
|                  |  | L & LG          | .3-3.5                  | 5-50    |

Series Regulator delivers any pressure within the range of the spring size selected. Please follow the recommended ranges shown in the chart.

1. To make adjustments loosen the lock nut on the adjusting screw in the bonnet.
2. Turning the adjusting screw down (clockwise) increases the delivery pressure.
3. Turning the adjusting screw up (counterclockwise) decreases the delivery pressure.
4. When installed in a gas system, a hydrostatic relief valve must be installed both up steam and down stream between the regulator and a shutoff valve.
5. When the system is under pressure, observe the end connections for leaks. If leaks are detected close all line valves and correct the problem.
6. Should the regulator be disconnected from the system, ensure all pressure is bled before uncoupling.

### Maintenance and Inspection:

Periodically check for:

1. Any signs of corrosion due to salt water, 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 regulator.
4. Proper operation as foreign matter may affect the performance of the regulator.

**Keep all equipment clean, and replace damaged equipment immediately.**

### Hazards:

- These regulators are suitable for use in gas service. Caution must be exercised with gas service where the application involves trapping gas between the regulator and a shut-off valve, either upstream or downstream of the regulator
- Piping systems that confine gas without appropriate protection against over pressurization
- Never uncouple the regulator from the piping system until all pressure is bled from the lines

### General Warning:

All REGO products are mechanical devices that will eventually become inoperative due to wear, contaminants, corrosion, and aging components. Periodic inspection and maintenance are essential. The safe useful life of this product can vary greatly depending on the environment it is exposed to, and the inspection/maintenance program that is used. For more information, refer to REGO Cryo-Flow Products catalog or [www.regoproducts.com/cryoflow](http://www.regoproducts.com/cryoflow).

REGO GmbH  
Industriestrasse 9  
D- 35075 Gladenbach Germany  
Tel-49-6462-9147-10  
Fax- 49-6462-9147-29  
E-mail [Info@rego-europe.de](mailto:Info@rego-europe.de)