REGO®

Instruction Sheet BK9450-350 Rev. B

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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OPERATING INSTRUCTIONS FOR:

BK9452EE Series, BK9453ADA Series, BK9453F Series, BK9454DAB, BK9454EE Series, BK9475A Series, ES8453ADA Series, ES8454ADA Series and ES9475A Series

Brass Cryogenic Valves with Weld Connections for Portable Cylinders and Other In-Line Shut-Off Valve Applications

WARNING: Installation, usage and maintenance of this product must be in compliance with all RegO® instructions as well as all requirements and provisions of national, and local standards, codes, regulations, and laws. Inspection and maintenance on a periodic basis is essential. Only qualified personnel should perform installation and maintenance. Be sure all instructions are read and understood before installation, operation and maintenance. These instructions must be passed on to the end user of the valve.
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 gasses far from open flames or other sources of ignition to prevent fire or explosion.
Note: Suitable for use on Argon (Ar), Nitrogen (N_2), Nitrous Oxide (N_2O), Carbon Dioxide (CO_2), Oxygen (O_2), and Liquid Natural Gas (LNG). Maximum allowable working pressure 600 PSIG (42 bar).

Installation:

NOTE: RegO® recommends that valves in liquid cryogenic service be mounted in a horizontal pipeline with the stem vertical. This will keep the cryogenic liquid from contacting the stem seal. If liquid cryogen is allowed to contact the stem seal, the stem seal will shrink and may result in a packing leak. An adequate stem seal may be achieved if the stem is within 45° of the vertical position.

Before the valve can be welded into place, turn the handwheel counterclockwise to backseat the seat disc, minimizing potential damage to the seat during removal.

1. Remove the top works from the valve using the appropriate wrench, setting the topworks aside in a clean and debris free area. Remove and discard old gasket.
2. Ensure connections are clean and free of any debris.
3. Position the valve such that the flow arrow is in the proper direction for the intended application.
4. Weld the pipe connection of the valve body to the piping system. Follow all national, regional and/or local codes, standards and specifications for the proper welding procedures.
5. If the valve has a threaded inlet or outlet connection, apply a sealant that is appropriate for the intended service to the male threads of the connection.
6. Restrain the valve with a vise or suitable wrench, and using an appropriate wrench for the connection, tighten the connection to the body to the torque shown below. The torques shown are for reference only.
7. After welding the valve body into place, install the new gasket supplied with the valve and reinstall the topworks with 900-1100 in-lbs (102-124 N-m) of torque to the bonnet connection.
8. Follow all local or national codes and standards for pressure testing and leak checking the installation before start up of the system.

NPT Size	Torque (±10%)	
	Value	Unit
1/4"	22	ft-lbs
	(30)	(N-m)
3/8"	38	ft-lbs
	(52)	(N-m)
1/2"	55	ft-lbs
	(75)	(N-m)

Operation:

RegO® valves are designed to provide positive shut off and offer a long, low maintenance service life for vapor and liquid service. They are capable of stopping flow in either direction. They are ideally suitable for use on containers, transports, cylinder filling plants, and plant piping.

1. Follow your company's established operating procedures.
2. Wear eye protection and suitable gloves to prevent freeze burns.
3. When making a connection to a valve that includes a threaded adapter fitting, you must use two wrenches; one to hold or restrain the adapter installed on the valve and the other to tighten the mating fitting onto the adapter.
4. Ensure all threads engage smoothly and easily. Do not hammer or force the valve in any manner.
5. When opening the valve, turn the handwheel counterclockwise, and ensure that it is opened fully (back seated). **Do not partially open the valve.** With the valve pressurized, inspect the connections for signs of leakage - no leakage permissible.
6. To close the valve, turn the handwheel clockwise until it stops. This indicates that the seat disc has contacted the seat. **Do not over torque the handwheel after the seat disc has engaged the seat, doing so may cause seat damage.**
7. If the valve must be removed from the system, **evacuate internal pressure before uncoupling valve connections.**
8. Valves installed in piping systems such that vapor or liquid could be isolated from a pressure relief device require installation of a suitable pressure relief device.

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 valve bonnet area, body, and end connections of the valve.

Keep all equipment clean, and replace damaged equipment immediately.

Hazards:

1. These valves are capable of stopping flow in both directions, however, the flow arrow on the valve indicates inlet to outlet orientation. The inlet should be positioned towards the side typically under higher pressure than the outlet.
2. Be aware of piping systems that confine gas without the appropriate protection against over pressurization.
3. Never uncouple any part of the valve without relieving all pressure in the system.