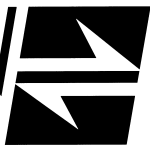


# HALOGEN

VALVE SYSTEMS, INC.



Halogen Valve Systems, Inc  
17961 Sky Park Circle, Suite A, Irvine, CA 92614  
Phone (949) 261-5030 Fax (949) 261-5033  
Toll free (877) 476-4222 www.halogenvalve.com

## Quickly Closes Cl<sub>2</sub> & SO<sub>2</sub> Valves

# Emergency Gas Shutoff System

## FOR SAFETY AND SITE SECURITY:

- Low Cost Shutoff System.
- Actuator installs easily with no special tools.
- Fire Code Approved replacement for gas scrubber system.
- Helps to mitigate the impact of HAZMAT gas leak as required by a Risk Management Plan .
- All NEMA 4X rated enclosures .
- Quickly terminates leak to prevent gas exposure to personnel and community.
- Self-contained battery power assures operation, even during a power failure.
- Uses 115 or 230 VAC, only to recharge battery.



**Exclusively for 150-lb. Cylinders**



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## Exclusively For 150-lb. Cylinders

**Specification:** Emergency automatic-closing fail-safe shutoff system with the Terminator Actuator™ for 150-lb. chlorine cylinders.

### 1. Scope

This specification describes the emergency automatic-closing fail-safe shutoff system with the Terminator Actuator™ manufactured by Halogen Valve Systems, Inc. only for 150-lb. chlorine cylinders.

### 2. Typical Specification For Chlorine Valve Emergency Shutoff System

An emergency automatic-closing fail-safe shutoff actuator shall be provided for each 150 lb. cylinder in the chlorine feed system comprised of an electrically driven actuator that acts directly on the cylinder valve stem. The Actuator shall mount upon each cylinder valve stem by means of a drive bushing and two parallel rods that straddle the gas valve nozzle so as to be removable during cylinder changes. The Terminator Actuator™ shall deliver 40-50 ft.-lb. of closing torque to the valve stem upon receipt of an emergency shutdown signal. The actuator shall be powered only in the closing direction and will deliver industry recommended torques to the valve stem. An uninterruptable 12 volt gel-cell lead-acid battery power supply and a computer controller system shall supply power for the actuator.

Each actuator shall couple by means of a bronze drive bushing to the valve stem and provide stabilization on both sides of the valve by means of metal rods that secure the unit to provide the torques. The extension and drive shaft shall be coupled to the drive motor by means of a one-way, positive engagement ratchet assembly that drives the shaft to the closed position and then applies the required torque to the shaft. The valve stem for each cylinder must be manually opened by means of a wrench and leak tested prior to mounting the actuator.

All metal components shall be coated with a fusion bonded polyester for corrosion resistance. Shaft entrances to the actuator mechanism shall be sealed with "O" ring seals of Viton and/or Teflon. The Xenoy PC/PBT alloy motor canister and Fiberglass Polyester main electrical enclosure will be sealed with static, Viton seals and NEMA-4X rated.

The electronic control circuits are contained within a single electrical enclosure. All cables, connectors, switches and fittings shall be of a NEMA-4X rating to resist the chemical environment. Each control panel shall have a dedicated power source (battery) and microprocessor controller. Electrical power shall be delivered to each actuator by means a flexible cable. Each individual control panel shall have indicator lights to display the status of key system elements. The control panel shall accept signals from sources such as gas detectors, remote station alarms, seismic or fire sensors and manual switches to trigger the actuator to automatically close the 150-lb. cylinder valves.

An electronic circuit board in the control panel shall contain a microprocessor programmed to precisely control the valve closing cycle time to apply the required torques to the valve stem. The batteries shall be of the gel-cell lead-acid type rated at 7 ampere-hours. Each charging system shall provide a variable controlled charge current that is temperature compensated to optimize battery performance and service life. The control panel enclosure shall have a membrane panel attached to the front which the operator may observe the status lights. The power supply to operate the control panel shall be 115 / 230 volts ac, 60 Hz single phase. Current consumption shall be 0.5 amp at 115 volts ac.

An optional control system, upon completion of the actuator closing cycle, can provide up to three separate output signals rated at 5.0 amp @ 115 volt ac/dc power to indicate actuator operation. Emergency Shutoff System shall be by Halogen Valve Systems, Inc., 17961 Sky Park Circle, Ste. A, Irvine, CA 92614 USA or equal.

- Test Torque-----20-30 ft.-lb.
- Emergency Torque-----40-50 ft.-lb.
- Charge current @ 115 VAC---0.5 amp.
- Battery Rating----- 7 amp-hr.
- Electric enclosure ---- 14.5" x 13" x 8.5"
- Actuator Weight (approx.) ----- 8.2 lb.

