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## Safety Features

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Bulletin 970.00

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### **No Interference with Manual Operation**

The actuator shaft provides a rigid mechanical connection to the valve stem which extends through the top of the actuator to accept a standard (3/8") chlorine wrench. This ingenious design enables access to the valve so that it may be manually operated while the actuator is in place! This makes it easy to reopen the valve after testing, and eliminates the apprehension of operators that they may not be able to manually access the valve in the event of an actuator failure or seizure. An additional feature designed with operator convenience in mind, is that the actuator and mounting clamps are offset to the rear of the valve to allow easy access to the valve packing nut and yoke for adjustment.

### **Local, Remote or Automatic Shut-Off**

Local and/or remote mounted "Panic Buttons" (unlimited number) enable operators to promptly initiate an emergency shutdown from inside or outside the hazardous environment. Systems may also be automatically shut down by leak detectors, fire or seismic sensors. Upon receipt of a shut down signal, the controller triggers the actuator to close the appropriate valve in less than one second. The microprocessor detects valve closure by sensing the torque rise as the valve stem engages the valve seat. The actuator applies rapidly increasing torque for a brief moment to insure a tight shut off, and then cuts off power to the motor and generates a signal to report the shut off cycle.

### **Fail-Safe Battery Operation**

The battery is trickle charged from 115/230 VAC or 12 volt DC solar power. However, in the event of a prolonged power failure, the battery will have sufficient charge for the actuator to fully close the valve for a period of 3-4 days. Should the microprocessor detect a declining battery charge, it will initiate shut off automatically, and issue an alarm signal indicating the valve closure cycle. There is no requirement to power up and switch on backup devices as in other systems in the event of a power failure. The battery coupled with constant monitoring by the microprocessor is an inherently uninterruptable power supply.

### **Fully Tested at Each Cylinder Change**

By performing the test procedure described on the control panel label, the actuator system may be fully tested under "real world" conditions at each and every cylinder change. This is an observable, tangible assurance to operating personnel of dependability and proper actuator operation. By using this test feature every time a cylinder valve is closed, operators are assured of a consistent valve closure, and gain confidence in the reliability of the Halogen Emergency Shutoff System.