

SAFETY SYSTEMS DEMAND RELIABILITY - BRAY CONTROL SOLUTIONS DELIVER



Automated Isolation Valves are a fundamental part of the safety systems associated with oil and gas, utility and other hazardous processes. These valves are not intended for controlling the process itself but provide personnel and asset protection.

In order to operate safely, facilities must evaluate their systems from a safety and isolation perspective. What happens if a pump seal fails and must be replaced, what if there is a process upset which needs to be controlled quickly to avoid a dangerous event. All these scenarios are evaluated by the facility management and further scrutinized by a risk management team typically from an insurance company.

The key factor of this type of evaluation is Isolation or Containment. In planning the what if scenarios, the read/reaction response is programmed into the process control system. The process control system is the intelligence and automated isolation valving is the final safety element. Process plants especially those handling flammable or hazardous media now designate certain valves in their system as Emergency Isolation Valves (EIV), Emergency Block Valve (EBV), and Emergency Shutdown Valve (ESDV).

Bray Controls can provide reliable fast closing or opening valves to meet the performance requirements of these demanding applications.

Bray Isolation Valves for emergency applications and are designed for accuracy and dependability. Our Flow-Tek ball valves, M-1 severe service metal seated ball valve or Tri Lok metal seated triple offset butterfly valve designs provide low emissions packing, anti-blowout stem and combined with Bray Series 98 scotch yoke pneumatic fail-safe spring return actuator, provides a reliable one source solution.



Flow-Tek Trunnion with Series 98 Actuator



Bray Tri Lok with Series 98 Actuator

Bray Emergency Shutdown Valves offer the following features:

- > **Tight Shut Off** - Tri Lok triple offset butterfly valves offer zero leakage performance and our Flow-Tek ball valves can offer up to Class VI bubble-tight shutoff.
- > **Fugitive Emissions** - Bray rotary Isolation valves are certified to meet the requirements of API-641 Fugitive Emissions.
- > **Fire Safe** - In the event of an emergency, your process plant may be exposed to fire, Tri Lok and Flow-Tek valves are firesafe and certified to API-607.
- > **Fast-Acting** - The Bray Series 98 scotch-yoke pneumatic actuator can provide quick response if speed is critical to reducing escalation of hazards, the Bray Series 98 is capable of full-open to full-close in less than a second if required.
- > **Rugged Design** - The Bray Series 98 scotch-yoke pneumatic actuator has been tested to EN15714-3 qualified (Actuator Performance Standard) and cycle tested 3 to 4 times required by the standard. Designed for reliability and high cycle life.
- > **Customizable Configurations**

Bray offers our application solutions to meet your specific requirements with accessories like Bray Valve Status Monitors for position confirmation.

- > **Certified Safety Integrity Level (SIL) per IEC 61508** - Bray offers both valves and Series 98 scotch yoke pneumatic actuators certified to SIL Level 3. SIL is a measure of risk reduction provided by a Safety Instrumented Function (SIF), based on four levels. Each level represents an order of magnitude of risk reduction. Every Safety Instrumented Function (SIF) has a SIL assigned to it.

Capable of both local and remote Partial Stroke Test

Bray offers both an electronic or mechanical partial stroke test to prevent and diagnose potential operational problems. Bray Model 6A positioner offers an electronic means of partial stroke testing, Bray also offers a mechanical stroke test device. Typical Emergency Valve Applications include:

- > **Pump Suction Isolation** - Pump suction fail closed if a pump seal blows out or has a leak.
- > **Compressor Suction Isolation** - Provides fail closed if the flammable gas compressor has to be isolated from the process.
- > **Compressor Discharge Isolation** - Provides sealing of the compressor outlet to isolate the compressor from back pressure from the gas pipeline.
- > **Flare block valve** - Emergency flare block valve fails open to release flammable gas to the flare. This valve requires zero leak tightness when it is closed which can be most of the time when the process is running.
- > **Turbine Trip Valve** - A turbine trip valve shuts off flow to the turbine to prevent damage to the turbine in an upset condition to prevent reverse flow.
- > **Over Pressure Protection Valve** - This process valve will fail open to prevent safety relief valves lifting.



Flow-Tek M1 Severe Service Ball Valve with Series 98 Actuator



Bray 6A Positioner Hazardous Housing



Bray 6A Positioner Intrinsically Safe

