

Fusible Link Safety Shutoff Valves

Howell provides Firesafe API 607 ball and butterfly valves with BI-TORQ® fusible link assemblies. These thermal shutoff valves are designed for automatic shutoff in case of a fire. They are used in applications requiring media containment in systems conveying flammable gases or liquids, solvents, alcohols, toxic fluid or any other potentially dangerous media.

BASIC OPERATION

Ball Valves with torque up to 830 in/lbs



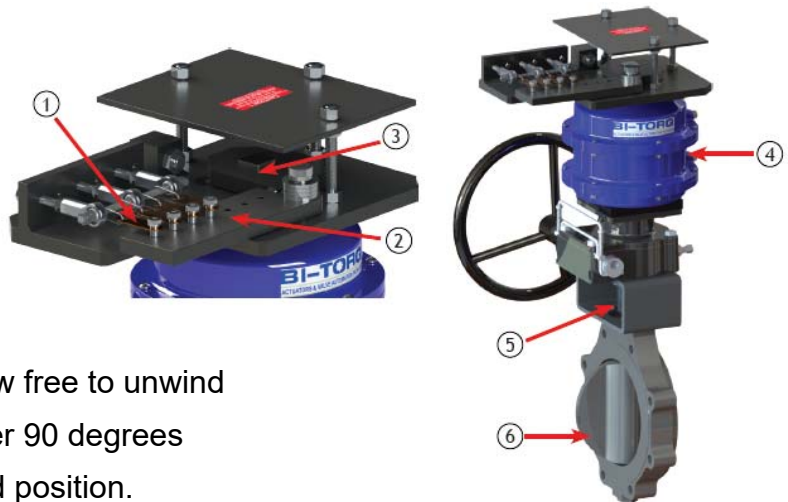
When the unit is armed, the valve is in the open position with the handle parallel to the pipeline. The valve can be manually operated even when armed.

Direct fire or localized high temperatures then cause the soldered fusible link to break. This releases the clock-spring and the tripper arm begins to close the valve.

The spring then releases completely and the handle reaches valve stop. The valve is now closed. The floating ball design and graphoil seals prevent leakage.

Butterfly & Larger Ball Valves

- 1) Fusible Links melt at designated temperature
- 2) Locking Trigger separates from fusible link retaining rod and rotates away.
- 3) Spring Stop Assembly is released by the Locking Trigger
- 4) Clock wound Spring Pack is now free to unwind
- 5) Springs rotate Extended Coupler 90 degrees
- 6) Valve shaft rotates to the closed position.



Fusible Link Safety Shutoff Valves

Fusible link safety shutoff valve assemblies are used in a wide variety of applications that require media containment in case of fire.

TYPICAL INSTALLATION

Common installation of a Howell Firesafe API 607 valve with a BI-TORQ® fusible link assembly on a self-sealing or flameproof tank. In the event of a fire, the outlet valve will be closed to stop media from continuing to flow into the pipeline.



STANDARDS & GUIDELINES

Factory Mutual (FM) standard 7440 for Top Assembly

Underwriters Laboratories (UL and C-UL) for Fusible Links

Canadian Registration Number (CRN) approved ball and butterfly valves

American Petroleum Institute (API) API 607 Firesafe Valves and RP 553 which details emergency block valve types.

Occupational Safety and Health Administration (OSHA Guidelines) 1926.152(i)(4)(iv)(C) stipulates that flammable liquid tanks located inside to have automatic-closing shutoff valve

Global Asset Protection Services (GAPS Guidelines) GAP.8.1.0 & GAP.8.0.1.3 guidelines for usage for automatically activated firesafe shutoff valves and emergency block valves

APPLICATIONS

Oil / Gas / Refining

- refineries, including LPG & LNG racks

Fuel Storage Tanks

- on the outlet of explosion proof tank

Chemical Lines

- processing lines & storage areas

Airports / Jet Fuel

- fueling equipment & de-icing systems

Solvents / Coolants / Lubricants

- combustible uses in manufacturing

Hospitals / Oxygen Lines

- shut down O2 lines in event of fire

Backup Generators / Natural Gas Lines

- on the inlet of gas line into a building

Food & Beverage

- flammable alcohols & phosphates

Hydraulics

- shutoff of petroleum-based fluids

Government / Military

- explosive areas & fueling systems