

FUSIBLE LINK ASSEMBLIES: AN OVERVIEW

WHAT IS A FUSIBLE LINK ASSEMBLY?

OSHA safety regulations and The National Fire Protection Association mandate that all storage tanks containing flammable, combustible or toxic materials be provided with a heat sensitive automatic closure valve on the inlet or discharge of the tank.* In order to meet these regulations, AVK Carbo-Bond has designed specialized fusible link assemblies for fail safe situations where high temperature heat from fire results in a main valve springing closed when a fusible link breaks. This restricts the flow of flammable liquids or gasses, reducing the spread of fire or explosion.

WHAT ARE SOME COMMON APPLICATIONS?

The most common application for a fusible link is as a **fail close valve** in a containment system on a gas line to shut off flow through the pipeline during a fire. Fusible link applications can be found at tank farms, airports, petroleum plants and the like. In particular, fusible links can be found on any storage tank, transport vessel or mixing vessel where automatic shut-off of flow is required in the event of fire.

In addition, fusible link assemblies are used as a **fail open valve** in fire safety protection systems. Any fire safety pipeline or fire suppression system can incorporate a fusible link assembly where the automatic opening of a valve would allow the flow of water or fire-suppressing chemicals to extinguish a fire or cool a storage tank.

WHAT ARE THE UNIQUE FEATURES OF OUR PRODUCT?

All of AVK Carbo-Bond's fusible link assemblies incorporate a unique design that eliminates the need for two valves in a single pipeline. Most other fusible link assemblies in the market require that a separate manual valve be put upstream. Our low torque and mid-torque duty are designed so that a single valve can function as a manually operated unit even while the fusible link is still armed. The high-torque series requires a simple disconnection of the fusible links in order to operate the valve manually.

WHAT DOES THE AVK CARBO-BOND FUSIBLE LINK ASSEMBLY CONSIST OF?

AVK Carbo-Bond/BI-TORQ's specially designed system incorporates:

- an API607 fire rated valve
- a spring loaded fail close or fail open operator
- fusible link(s) per your customer's temperature specifications
- our heavy duty AVK Carbo-Bond spring assembly mounting kit
- a special arming handle or manual override declutchable gear operator

In addition, our assemblies can be designed for a valve of your customer's choice. The valve can be sent to us for factory assembly and testing so that the unit is ready to put in line when your customer receives it.

**OSHA states that "flammable or combustible tanks located inside of buildings . . . shall be provided with an automatic closing heat-actuated valve on each withdrawal connection below the liquid level . . . to prevent continued flow in the event of fire in the vicinity of the tank."*

In addition, The National Fire Protection Association states that "emergency shutoff valves shall be approved and incorporate all of the following means of closing:

- a) automatic shutoff through thermal (fire) actuation. When fusible elements are used they shall have a melting point not exceeding 250 degrees F.
- b) manual shutoff from a remote location.
- c) manual shutoff at the installed location."