

Morrison Bros. Co.

General Product Specifications

Tank Mounted Spillbox

Description:

The spill containment device is manufactured to contain spills and drips that may occur at the fill point on aboveground storage tanks.

Requirements:

- Capacity of the device shall be 7.5 gallons.
- May be installed prior to tank testing.
- Shall be equipped with a lockable hinged cover that permits the use of a #3 Masterlock.
- Construction shall be spun hot rolled carbon steel to reduce weld seams.
- The entire device shall be powder coated white.
- Each device shall be equipped with a push type drain with a fluoroelastomer o-ring.
- Shall be listed by ULC as a spill containment device for flammable liquid storage tanks.

Recommendation:

The spill containment device shall be a Morrison Bros. Co. Fig. 518.

Ground Level Spillbox

Description:

The spill containment device is manufactured to contain spills and drips that may occur during remote tank filling operations.

Requirements:

- Capacity of the device shall be 15 gallons.
- Able to be configured to accommodate one or two, 2" fill openings or one or two, 3" fill openings.
- May be installed prior to tank testing.
- Equipped with a gas shock to hold the lockable hinged cover in the open position.
- Height shall be adjustable from 28 inches to 40 inches on a steel column base.
- Shall be designed to permit the continuous venting of the box to prevent the buildup of vapors while preventing precipitation from entering the device.
- Shall be designed with a 2" opening to permit the installation of an evacuation pump.
- The lid and container shall be constructed of 12 gauge hot rolled carbon steel.
- The entire device shall be powder coated white.
- Each spill containment device shall be listed by ULC as a spill containment device for flammable liquid storage tanks.

Recommendation:

The spill containment device shall be a Morrison Bros. Co. Fig. 515.

Overfill Protection Valve

Description:

The overfill protection device shall be installed at the fill port of an aboveground tank storage tank. Used in a tight fill application, the valve terminates the flow of product when the liquid level reaches a preset level (90% full).

Requirements:

- Shall be equipped with an adjustable vertical float that has separate delineations for gasoline or diesel (#2 Oil) applications.

- Fill adaptors shall be attached to the valve with a threaded schedule 40 pipe.
- The minimum flow requirements for the 2 inch overfill device shall be 3 PSI and 5 gallons per minute.
- The maximum flow requirements for the 2 inch device shall be 100 PSI and 125 gallons per minute.
- The minimum flow requirements for the 3 inch overfill device shall be 5 PSI and 5 gallon per minute.
- The maximum flow requirements for the 3 inch overfill device shall be 100 PSI and 300 gallons per minute.
- An aluminum drop tube shall be installed on the bottom of the device to extend within 6 inches of the bottom of the tank.
- Shall be ULC listed as a Overfill Protection Device.

Recommendation:

The overfill protection device shall be a Morrison Bros. Co. Fig. 9095A.

Emergency Vent

Description:

The emergency vent shall be installed on the top of the tank as required by the applicable fire code.

Requirements:

- Shall be sized in accordance with the wetted surface area of the tank (see Morrison Bros. Co. Venting Guide for wetted surface calculation).
- Shall be designed to relieve pressure in the tank and prevent tank failure when exposed to a fire.
- Shall be designed to lift when the opening pressure is achieved.
- The top of the vent will return to its normal position after the pressure has decreased.
- Shall have the opening pressure, venting capacity and UL mark permanently imprinted on the cover.
- Seat material shall be a Viton o-ring.
- Body shall be aluminum or cast iron.
- Shall be attached by threaded or flanged connections.
- The vent shall be UL listed as a Flammable and Combustible Liquid Tank Accessory.

Recommendation:

The vent shall be a Morrison Bros. Co. Fig. 244.

Pressure Vacuum Vent

Description:

Emergency vent with both pressure and vacuum relief for use on aboveground storage tanks.

Requirements:

- The pressure vacuum vent shall be installed on a 2 in NPT pipe, the height of vent shall be determined by the applicable fire code.
- The vent shall be sized to permit adequate air flow to prevent pressure or vacuum increases in the atmospheric storage tank.
- The vent body and pressure poppet shall be anodized aluminum, the vacuum poppet and screen shall be brass, the springs shall be stainless steel.
- The body seal shall be Buna-N.

Recommendation:

The pressure vacuum vents for small aboveground tanks and underground tanks shall be a Morrison Bros. Co. Fig. 749. The pressure vacuum vents for large aboveground tanks shall be a Morrison Bros. Co. Fig. 548.

Updraft Vent

Description:

The updraft vent is an open vent that permits adequate air flow to prevent pressure or vacuum increases in the atmospheric storage tank.

Requirements:

- The updraft vent will allow unrestricted evaporation of the product stored in the tank.
- The updraft vent shall be sized in accordance with the applicable fire code.
- The updraft vent shall be anodized aluminum with a 40 mesh brass screen.
- The updraft vent shall be third party tested to certify the venting capacity at 2.5 PSIG.

Recommendation:

The updraft vent shall be a Morrison Bros. Co. Fig. 354.

Aboveground Tank Gauge

Description:

An aboveground tank gauge indicates the liquid levels in a tank.

Requirements:

- The gauge shall be equipped with a fully mechanical liquid level indicator.
- The gauge shall be designed so the tank vapors are physically separated from the gauge face to inhibit fogging of the gauge face.
- The gauge shall have 2 hands on the face one hand reads the feet and the second hand reads the inches.
- The gauge shall be equipped with a stainless steel float, stainless steel swivel and a braided stainless steel cable.
- The gauge shall be installed in a 2 inch NPT opening.
- The gauge shall swivel 360 degrees.
- The gauge shall be able to be readable from a distance of 30 feet.
- The gauge housing shall be anodized aluminum.
- The gauge shall be vapor tight.
- The gauge shall be able to measure tanks up to 12 feet in diameter.

Recommendation:

The mechanical gauge shall be a Morrison Bros. Co. Fig. 818.

Aboveground Tank Gauge with High Level Alarm

Description:

An aboveground tank gauge indicates the liquid levels in a tank and sounds an audible alarm when the product reaches a high level.

Requirements:

- The aboveground tank shall be equipped with a fully mechanical liquid level indicator equipped with a high level alarm.
- The gauge shall be designed so the tank vapors are physically separated from the gauge face to inhibit fogging of the gauge face.
- The gauge shall have 2 hands on the face one hand reads the feet and the second hand reads the inches.
- The high level alarm level shall be set by a dial face on the main gauge.
- The gauge shall be equipped with a stainless steel float, stainless steel swivel and a braided stainless steel cable.
- The gauge shall be installed in a 2" NPT opening.
- The gauge shall swivel 360 degrees.
- The gauge shall be able to be readable from a distance of 30 feet.

- The gauge housing shall be anodized aluminum.
- The gauge shall be vapor tight.
- The gauge shall be able to measure tanks up to 12 feet in diameter.
- The battery powered high level alarm shall be ULC for installation in hazardous atmospheres.

Recommendation:

The mechanical gauge with a high level alarm shall be a Morrison Bros. Co. Fig. 918.

Solenoid Valve

Description:

A solenoid valve is installed on pipeline leading from an aboveground tank.

Requirements:

- The normally closed solenoid valve shall be installed in the piping to control the flow of a liquid.
- The valve will prevent the siphon flow from an aboveground tank.
- The valve is a normally closed valve and will open when the coil is energized by an electric signal from an exterior source.
- The valve shall be a zero differential valve and should not require pressure to open the valve.
- The valve shall be a hung piston valve and the solenoid must be installed vertical and upright.
- The solenoid enclosure shall be watertight and rated for hazardous locations; NEMA 3, 4, 7 and 9; groups C and D.
- The solenoid shall have a continuous duty Class H coil.
- The valve seals shall be Viton.
- The valve shall have built in expansion relief.
- The valve shall have forged bronze or stainless steel construction.

Recommendation:

The normally closed solenoid valve shall be a Morrison Bros. Co. Fig. 710.

External Emergency Valve

Description:

The external emergency valve should stop the product flow in a fire condition.

Requirements:

- The valve shall be installed in threaded or flanged piping.
- The valve body and valve poppet shall be manufactured with ductile iron.
- The valve shall be manufactured with stainless steel internal wetted parts.
- The valve shall be self closing when the fusible link activates.

Recommendation:

The valve shall be a Morrison Bros. Co. Fig. 346.

Ball Valve

Description:

The ball valve is for use with flammable and combustible liquids.

Requirements:

- The valve shall be a full port with ¼ turn valve handle.

- The valve shall be UL listed for use with flammable liquids.
- The valve temperature range shall be -40 degrees to 350 degrees.
- The valve shall have Teflon seals.
- The valve shall be equipped with a lockable handle.

Recommendation:

The valve shall be a Morrison Bros. Co. Fig. 691B.