



Vent-Line / In-Line

4950 FLAME ARRESTERS

Item code: 4950

The Protectoseal Series 4950 Vent-Line / In-Line Flame Arresters are designed to be installed in open vent pipes from storage or processing tanks, bleed lines or other vapor conveying lines.

The arresters are used to prevent propagation of an external flame source through the vent opening and into the tank. These arresters provide maximum air-flow consistent with operating efficiency and safety.

FEATURES:

- Sizes: 1" (DN 25) through to 10" (DN 250).
- UL Listed in sizes 1" to 10"
- FM Approved in all sizes.
- Arrester plates fabricated from heavy gauge metal.
- Removable elements simplify inspection and maintenance.
- Interchangeable elements minimize "down-time" for maintenance.

SPECIAL FEATURES:

- **Fast Inspection, Easy Maintenance.**

Removal of screws allows easy access to the flame arrester element assembly for inspection and maintenance. A spare element can be quickly inserted into the housing to protect the tank's interior while the original is being serviced. The element can be removed without breaking the flanged pipe line mounting connections.

- **Automatic Condensate Drainage.**

Vertically mounted, circular plate-type flame arrester is employed for self-drainage of condensate. This prevents accumulation of condensate subject to freezing and consequent clogging of the arrester under low temperature conditions.

- **Positive Flame Arresting.**

The Series 4950 Vent-Line / In-Line Flame Arrester employs the circular-plate, precisely-spaced, type flame arrester to protect tank contents by preventing the propagation of fire into the tank. A series of sturdy, round plates are assembled on aligning bolts within the housing.

Correct, uniform spacing between the individual plates is provided. Plates are fabricated from 1/16" to 3/32" heavy gauge metal, depending on material of construction, to resist distortion and bending during cleaning, assuring maintenance of factory inspection standards.



TECHNIQUE:

When properly mounted in an open vent pipe line, the 4950 Series Flame Arrester allows vapors to discharge into the atmosphere and allows air to be drawn into the pipe through the specially designed flame arrester grid assembly. In the event of a fire source outside the tank, the flame arrester provides protection for the tank's contents. The flame arresters are suitable for locations varying from 20' to 50' from the open end of the vent pipe depending upon size.

The 1" size is approved for installation at distances up to 50' from the open end of the pipe. The 2" and larger sizes are suitable for installations up to 20' from the open end of the pipe. All arresters can be mounted vertically in the pipe line. The 1", 2", 3" and 6" sizes can also be installed in horizontal pipe lines with the grid opening in the upward position to prevent trapping of condensate.

GENERAL:

Flame arresters are at times mounted directly upstream of pressure / vacuum relief vents, or are connected to short runs of open vent outlet piping. These devices, known as "VENT-LINE / IN-LINE" flame arresters are designed with flanged or threaded mounting connections on both the inlet and outlet. It is possible for a flammable vapor / air mixture to ignite within the confined space of the short outlet pipe or within the vent body.

Such an ignition is referred to as a confined deflagration. The flame speed is slow and pressures within the vent piping are relatively low. The Vent-Line / In-Line Flame Arrester is designed to stop this type of flame front. Note: these arresters have very specific limitations as to where they can be properly located within the system.

