Explosion Relief Vent Panels

Explosion Protection System Components

Advantages:
- Proven design provides fast and reliable operation.
- Complete range of vent panel sizes, configurations and ratings enable custom, leak-tight fitting for each process volume to be protected.
- Choice of flat or domed vent panels provide the right venting protection for each application.
- Easy to install and maintain, vent panels reduce plant operating costs.
- Optional rugged, carbon steel and stainless steel vent panel frames are available to withstand severe industrial environments.
- Can withstand normal clean-in-place (CIP) procedures

Application
IEP Technologies Explosion Vent Panels are designed to minimize damage to process vessels, ducts, and other industrial structures in the event of a deflagration involving combustible materials. They are relief devices designed to rupture at a predetermined pressure which allows the fireball and pressure from a deflagration to vent into a safe area. These highly efficient vent panels fit into the walls of a process volume and are available in a variety of sizes, configurations, ratings, and materials to suit specific applications.

Descriptions

Rectangular Domed – The rectangular domed explosion vent is designed for high vacuum and high-cycling applications, such as in dust collectors and bag houses that experience vacuum pressures up to 9 psig (0.6 barg). The vent mounts on enclosures where dust explosions may occur, and will activate to safely relieve pressure in the event of a deflagration, thereby preventing a large explosion. The rectangular domed vent can also be used on bulk storage units and in ductwork applications requiring a rectangular explosion vent.

Rectangular Flat - The rectangular flat explosion vent is an all metal design using a stainless steel controlling membrane. No holes or slits are visible which makes the rectangular flat vent is excellent for applications where product build-up may be a concern. The rectangular flat vent is also available with internal insulation for high temperature applications.

Rectangular Flat (Food Grade) - The rectangular flat vent is also offered with a food grade silicone gasket. The vent is used in sanitary application and in applications where elevated operating temperatures are required. The food grade rectangular flat vent is also available with internal insulation for high temperature applications.

Round Domed – The round domed vent is a crowned, round explosion vent designed for use with round ductwork. The perimeter stitching of the top section allows utilization of much thicker materials than other domed designs, which results in a much more damage resistant vent panel. The round domed vents are designed to withstand vacuum pressures up to 14.7 psig (1.0 barg). The round domed vent is also available with internal insulation for high temperature applications.

Rectangular Domed (for high cycling service) – The rectangular domed for high cycling service is a heavy duty, domed, rectangular vent that withstands higher positive or negative system operating pressures than flat designs. Positive system pressure should be limited to 70% of set pressure. This vent is also available with internal insulation for high temperature applications.
Mounting Options

Mounting Frames for Bolted Installations

Mounting Frames for Welded Installations

Burst Sensor
All vents are available with an optional magnetically activated sensor which provides an immediate indication that the vent panel has ruptured.

- Initial Contact Resistance: 0.200 Ohms (max)
- Contact Rating: 10.0 Watts (max)
- Switching Current: 0.50 Amps (max)
- Switch Voltage: 200.0 VDC (max)
- Environment: Indoor and Outdoor
- Operating Temperature: -40°F to 221°F

Ordering Information
IEP Technologies explosion vents and venting systems are designed in accordance with NFPA 68 Guide for Venting of Deflagrations. Information required for product selection includes volume of enclosure to be protected, process temperature and pressure ranges, details of material(s) processed, and the required reduced explosion pressure. Consult IEP Technologies for technical design assistance in selecting the proper vent panel(s) for your specific application.

For additional information, please contact one of the following locations:

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