INSTALLATION AND MAINTENANCE INSTRUCTIONS

Explosion Vents

WARNING

- Read these instructions carefully and completely before attempting to unpack, install or service the explosion vent.
- Handle the explosion vent with extreme care. DO NOT bend, poke, or in any way distort the explosion vent.
- Do not locate vent assembly where personnel are exposed to the vent or the area above or in front of the vent, as they may be injured by the release of pressure, flame, noise, particles, and/or process material.
- Locate the explosion vent so that the discharge does not ignite other combustibles, resulting in an ensuing fire or secondary explosion.
- Interfacing equipment and/or machinery must also be protected.
- Flow arrows on round explosion vent tags, or explosion vent tag for square and rectangular vents must be directed to the atmospheric side of the process. Provisions shall be made to prevent personnel from standing or walking on vents, as they risk falling through.
- The vent opening is to be left free and clear. Nothing, i.e. goods or products, is allowed to obstruct the vent area as this will decrease vent efficiency.
- Install the enclosed DANGER sign in a conspicuous location near the zone of potential danger.

GENERAL

An explosion vent is a pressure relief device, designed to give an instantaneous opening at a predetermined pressure. Its purpose is to protect the equipment from excessive pressures caused by dust or gas deflagrations.

INSPECTION/PREPARATION

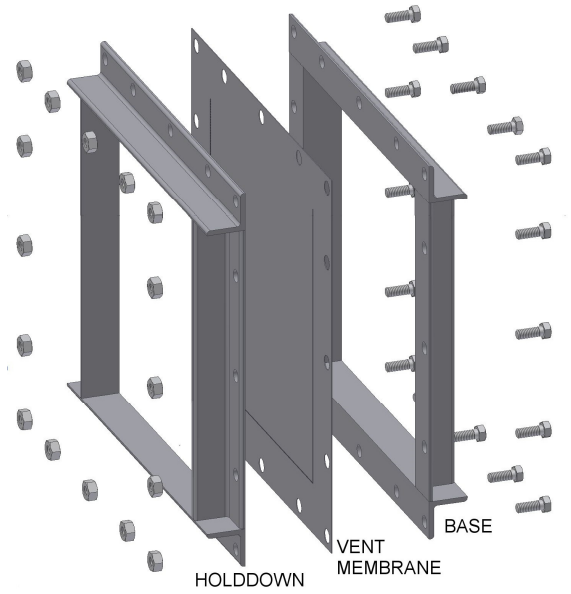
WARNING: Always handle the explosion vent with extreme caution. Handle the explosion vent by its edges only. Damage to the functional area (center) or seat area of the explosion vent may adversely affect the performance of the explosion vent. Read the explosion vent tag completely before installing to confirm that the size and type are correct for your system.

1. Carefully remove the explosion vent from its packaging container.
2. Inspect the explosion vent for damage.
3. If foreign material is present, carefully clean the explosion vent with a solvent that is compatible with your media.
4. Two personnel are recommended for handling of all vents larger than 24” x 30” (600 x 1000 mm) (rectangular) and 30” (800 mm) (round) or larger.
5. CV-SF vents require vent frames with back-up bars to properly function (consult Fike for back-up bar design requirements).

CAUTION: The CV-SF vent frame may prohibit bag filters/cages to pass through the vent opening, thereby limiting the effectiveness of the venting process. Consult Fike.

INSTALLATION - OPEN DISCHARGE

WARNING: The vent opening should be left free and clear. Do not insulate any part of the explosion vent or frame without consulting Fike.



IMPORTANT: When explosion vents are installed horizontally, the use of drainage/weep holes in the holddown frame is required.

1. Use base/inlet of explosion vent frame as a template to indicate placement of explosion vent on the vessel or duct to be protected.

2. Cut the vessel or duct opening to the marked size. The marked size should match the size identified on the vent tag.
3. Weld or bolt the inlet angle frame to the vessel or duct.

IMPORTANT: The explosion vent frame must be installed such that the seat area is flat and bolt holes remain perpendicular (square and rectangular vent frames) or circular (round vent frames).

4. If sealing is a particular concern due to the nature of the process, apply a process compatible silicone sealant or gasket to provide seal between explosion vent and inlet frame.
5. If using a gasket, select a gasket material that is compatible with the process, with a suggested thickness of 1/16" (1.5 mm). The gasket is to have the same inside diameter and outside diameter as the explosion vent frame. Gaskets may or may not be included with the selected explosion vent; consult Fike for details.
6. Install the explosion vent and outlet flange aligning the bolt holes. DO NOT force the explosion vent hole alignment.
7. Apply light oil to the threads and install the nuts and bolts hand tight.
8. Torque each bolt to the value identified on the explosion vent tag.

CAUTION: The torque values should not be exceeded as this may cause failure of the bolt and/or damage to the vent.

INSTALLATION – WITH FLAMQUENCH II SQ (FQIISQ)

For additional information, refer to FQIISQ installation instructions, E06-085.

WARNING: The vent opening should be left free and clear. Do not insulate any part of the explosion vent or frame without consulting Fike.

1. Use base/inlet of explosion vent frame as a template to indicate placement of explosion vent on the vessel or duct to be protected. Cut the vessel or duct opening to the marked size. The marked size should match the size identified on the vent tag.

IMPORTANT: The FQIISQ uses an alignment hole feature to ensure proper orientation of the hinge of the explosion vent. The alignment hole must be included on the mounting frame so the explosion vent and FQIISQ can be mounted in only the prescribed orientation. Consult factory for FQIISQ bolting pattern.

2. Weld or bolt the inlet angle frame to the vessel or duct.

IMPORTANT: The explosion vent frame must be installed such that the seat area is flat and bolt holes remain perpendicular (square and rectangular vent frames).

3. Install gaskets on both sides of the explosion vent. Select a gasket material that is compatible with the process, with a suggested thickness of 1/16" (1.5 mm). The gasket is to have the same inside diameter and outside diameter as the explosion vent frame. Gaskets may or may not be included with the selected explosion vent; consult Fike for details.
4. Install the explosion vent and outlet flange aligning the bolt holes. DO NOT force the explosion vent hole alignment.
5. Apply light oil to the threads and install the nuts and bolts hand tight.
6. Torque each bolt to the value identified on the explosion vent tag.

CAUTION: The torque values should not be exceeded as this may cause failure of the bolt and/or damage to the vent.

BURST INDICATOR

The explosion vents can have as an option an integrated electric burst indicator designed for intrinsically safe service. Refer to Burst Indicator Instructions / Drawing for electrical and dimensional specifications.

CAUTION: Unacceptably high voltage or currents will permanently damage the electrical system and the use of a non approved intrinsically safe power supply may even be the eventual ignition source of a dust or gas explosion. All burst indicators must be installed in an intrinsically safe circuit which conforms to the applicable national standard.

WARNING: Do not bend the electrical cable at any angle at a distance of less than 8 inch (20cm) from the mechanical bracing part and do not lift the explosion vent by the electrical cable, as this may damage the electrical circuit.

WARNING: The maximum torque values as mentioned on the nameplate must not be exceeded as this will permanently damage the electrical circuit.

MAINTENANCE

The explosion vent is maintenance-free due to its basic design and concept. Periodic visual inspections should be performed in accordance to the operating parameters and severity of service. All operational system parameters should be observed as a standard maintenance practice. The explosion vent must be replaced if they appear damaged, corroded, or leaking.

NOTE: Severe service is defined as rapid changes in pressure, high pressure, high temperature, or corrosive process.