

Thermal Explosion Vent

Reduce costly temperature and energy loss without affecting the efficiency of explosion vent relief on a wide range of safety critical applications

Dusty conditions commonly associated with the storage and handling of grains and powders can potentially lead to dangerous explosions. Applications which need to be maintained at a higher temperature have the additional complication of maintaining the temperature of the vessel while ensuring they are equipped with reliable yet cost-effective explosion venting protection.

Elfab's Thermal Explosion Vent offers superior explosion venting characteristics while preventing expensive energy and heat loss from the vessel. As its not it's not affected by condensation or product build-up the Thermal Explosion Vent is a cost-effective solution for customers operating at higher temperatures.

Cost-effective design offering reliable performance

The Thermal Explosion Vent combines a solid thermal insulator of low density silica within a stainless steel explosion panel construction. As the insulation is integral to the panel construction the vent relief is not affected by the design. Unlike other designs requiring the purchase of additional components Elfab's Thermal Explosion Vent is a single product solution ensuring minimal space is required while reducing on-going purchasing costs. Suitable for use on processes with temperatures up to 600c the Thermal Explosion Vent is available in various shape and size configurations. For temperatures above 600c please contact your sales engineer for further technical advice.

Custom manufactured using outstanding in-house processes to meet your requirements

Elfab's outstanding in-house manufacturing capabilities and unique process efficiency means that it is able to offer customers a very quick product turn around to minimise down time in the case of an emergency. The Thermal Explosion Vent is available on an industry best lead-time ensure effective management of its customer's supply chain.

Elfab's competitively priced, certified opening explosion vents are available in a wide range of configurations and bolt patterns. The range combines Elfab's unique design and manufacturing process with the ability to tailor the solution to suit your exact needs.

To meet the relief area requirements of a wide variety of high temperature applications, Elfab offers its Thermal Explosion Vent in either a square, round or rectangular design in either flat or domed constructions. Due to its construction, this unique range of bursting panels represents a cost-effective solution, while continuing to offer high performance under temperature complete with condensation related product build-

up resistance. This non-fragmenting design is available in a wide range of sizes with wide temperature compatibility and its standard burst pressure is 0.1 BarG @ 15/30°C with a 25% tolerance.

Optional integral burst detection for immediate shut-down

Dependent on the process temperature and conditions many applications will continue to be suitable to benefit from Elfab's failsafe burst detection system giving instantaneous notification when panel has burst.* Elfab's unique ATEX-approved burst detection system, Vent-Tel, was specifically designed for its range of explosion venting panels to further ensure onsite safety for its customers. Vent-Tel is a non-invasive, fail safe, burst detection system providing an excellent solution for identifying when an explosion panel has functioned.

Operating on a simple reed switch and magnet technology, Vent-Tel is designed to offer a practical solution for explosion vent burst detection. The magnet is pulled away from the sensor in the event of a panel burst, giving an open circuit signal. It signals a burst within the installation and in turn, can trigger an immediate shut-down of the process.

When connected to an intrinsically safe circuit this ExII 1GD EEx ia IIC detection device ensures a safe and compliant plant that fulfils the demanding regulatory developments within the bulk handling industry. An EC-Type Examination Certificate ITS03 ATEX 11359 is available.

- Suitable for temperatures up to 600c
- Helps reduce temperature and energy loss
- Maintenance Free
- Dust tight seal
- Integral insulation
- External insulated panels available on request
- Not susceptible to condensation related by product build-up
- Vent-Tel burst detection system available for most applications

The Thermal Explosion Vent is available in a variety of sizes, burst pressures and temperature ranges to suit your specific requirements.

*Cold face temperature must not exceed 200c

Capability	Thermal Explosion Vent (Flat & Domed Variants with Integral Thermal Insulation)
Size Range	See Product Download
Vent Area	0.01m ² to 1.18m ² (Rectangular) 0.05m ² to 1.13m ² (Round)
Temperature Range	-40°C/600°C as standard*
Operating Ratio	60%
Tolerance	+/-25%
Burst Pressure Range	0.05barg to 0.49barg
Standard Burst Pressure Offering	0.1barg @ 15/30°C
Level of vacuum capability	Limited (Flat) – Full Vacuum (Domed)**
Torque Dependent (Y/N)	N
Vent-Tel Detection	Optional, temp dependent
Optional Accessories	Frame, Gasket
Shape Designs	Round, Rectangular, Square – Flat & Domed constructions available
Materials	Stainless Steel as standard. For higher temperatures other metals may be required

*Higher temperatures available on request

**Higher available if supplied with implosion bars

For round domed/flat schematics, please contact sales@elfab.com