

Domed Explosion Vent - Standard Sizes

Type	External Dimensions mm	Internal Dimensions mm	Vent Area m ²	Product Code
Round Domed	1220	1100	0.93	VNT-XRD
Round Domed	1090	1000	0.77	VNT-XRD
Round Domed	990	900	0.62	VNT-XRD
Round Domed	890	800	0.49	VNT-XRD
Round Domed	784	700	0.37	VNT-XRD
Round Domed	695	610	0.28	VNT-XRD
Round Domed	640	550	0.23	VNT-XRD
Round Domed	578	500	0.19	VNT-XRD
Round Domed	553	450	0.15	VNT-XRD
Round Domed	473	400	0.12	VNT-XRD
Round Domed	440	350	0.09	VNT-XRD
Round Domed	390	300	0.07	VNT-XRD

Elfab can manufacture Explosion Vents outside of these standard sizes. Please contact us for other requirements.

Support Frames and Gaskets

Steel, stove enamelled frames are available for installation of all panels. The frames have built-in support bars to prevent panel implosion. Support bar configurations can be designed to suit specific vacuum and back pressure requirements.

Vent Sizing

Over the years, many methods have been adopted for sizing vents. At Elfab we are able to calculate sizes using any of the recognised methods. Our standard method is to use "Win-Vent" sizing software.

H and D

Height and diameter of vessel (or equivalent)

Kst

Maximum rate of pressure rise of media (dp/dt) as determined from tests in 1m³ vessel

Pred

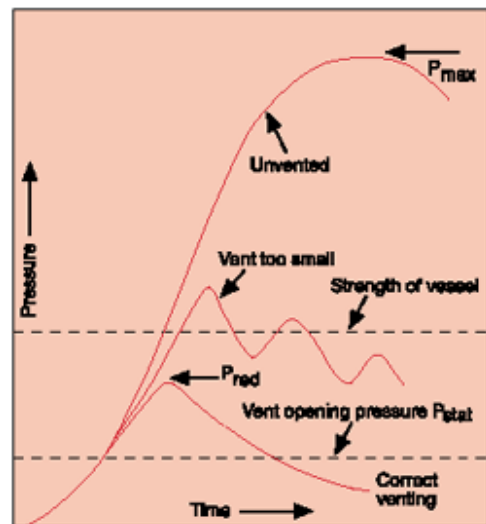
Maximum pressure permitted in the event of an explosion.

Pstat

is also required for sizing, being the set pressure of the panel. Elfab can provide this information.

Pmax

Maximum pressure reached during an explosion in a closed vessel, based on 1m³ vessel tests (is only required if using Scholl equation stated in VDI 3673)



Under severely turbulent conditions, an explosion may be much more violent than conditions assumed in the above methods. These circumstances need to be identified, as larger vent areas are required.

Explosions, when they occur, should be vented direct to atmosphere. The discharge must be to a safe place and may require a duct. The length and configuration of duct may significantly affect the relief and must be taken into account when calculating vent area.

Elfab are able to offer advice on the application and sizing of explosion vents, based upon many years of experience and involvement in the latest developments in this field.

Flo-Tel™ Detection

Elfab is unique in supplying a burst panel detection, ATEX approved to category II 1GD EEx ia IIC. EC-Type Examination Certificate ITS03 ATEX 11359, as standard with its panels. (Must be connected to an intrinsically safe circuit)

ELECTRICAL INFORMATION TEMPERATURE LIMITS

Panel Flo-Tel™ should be connected to an Intrinsically safe supply that is compatible with values:

$U_i = 30\text{v.}$

$I_i = 100\text{mA.}$

$P_i = 0.75\text{W.}$

Supplied with a 2m cable. -100°C to 200°C

