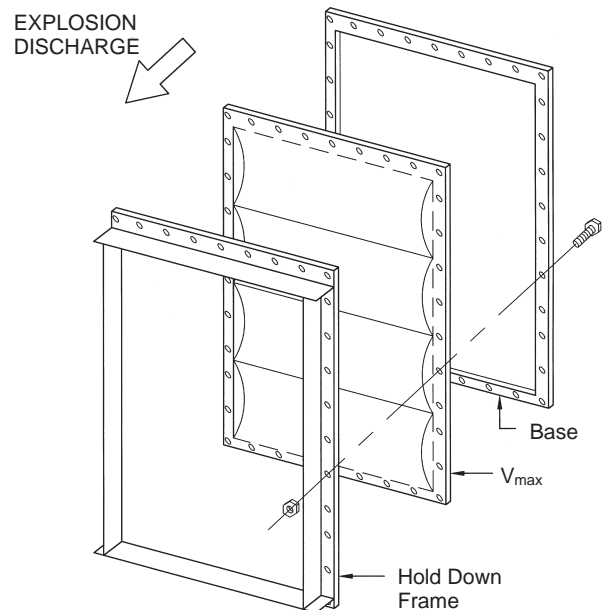
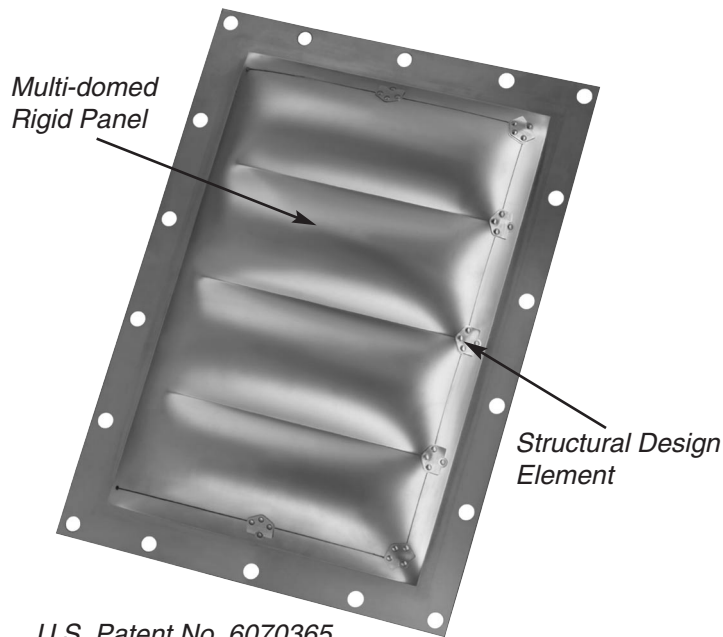




# V<sub>max</sub><sup>TM</sup> Explosion Vent

Explosion Protection Component Sheet #C3740



## Description:

V<sub>max</sub> is a single membrane, high performance explosion vent. This multi-domed vent has excellent service life, allows high operating pressures, is vacuum rated, and provides stable performance over a wide range of temperatures. The integral gasket/seal will allow the vent to be mounted on most equipment without additional sealants.

V<sub>max</sub> is lightweight and is specifically designed for dynamic non-fragmenting operation during venting of explosions from industrial equipment.

**Service Life:** Service life of an explosion vent can be characterized by two types of pressure cycles; positive pressure cycles due to normal system operating pressures, and vacuum to positive pressure cycles that typically occur in a dust collector cleaning cycle. V<sub>max</sub> has been proven to perform accurately even after 100,000 positive pressure cycles from 0 to 80 percent of the minimum stamped burst pressure, and after 1,000,000 positive to negative dust collector cleaning cycles.

**Operating Ratio:** Burst pressures are typically set higher than maximum process operating pressures. The ratio of maximum operating pressure to minimum stamped burst pressure is defined as the operating ratio. High operating ratios allow lower burst pressures and allow more flexible vessel operation and safer vent design. V<sub>max</sub> has an operating ratio of 80% and provides greater flexibility without compromising safety.

**Vacuum Rating:** Explosion vents are often used on equipment that operate under vacuum conditions. The rigid V<sub>max</sub> design provides high vacuum ratings even for low burst pressures. With standard vacuum ratings ranging from -3 to -7 psig, the V<sub>max</sub> is suitable for virtually all material handling equipment.

**Temperature Stability:** Explosion vents are commonly required to perform over a wide range of temperatures. Temperature variations during system transients as well as fluctuations due to seasonal or daily changes can result in operating temperatures much different than the specified operating temperature. V<sub>max</sub> has been proven to provide consistent performance over a process temperature range of 0° to 350°F.

### Superior Dynamic Performance:

To use NFPA 68 vent area correlations, venting devices must have a mass per unit area of 2.5 lb/ft<sup>2</sup> or less. V<sub>max</sub> has superior dynamic performance during explosions and provides faster response than other devices due to its lower mass per unit area.

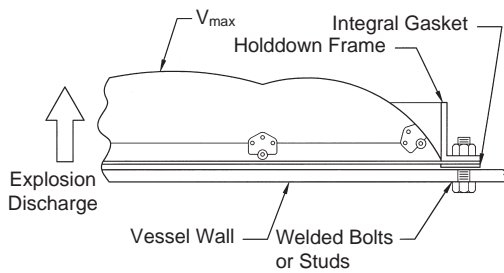
### Hygienic Design:

V<sub>max</sub> is designed with an integral gasket/seal constructed of FDA approved silicone rubber.

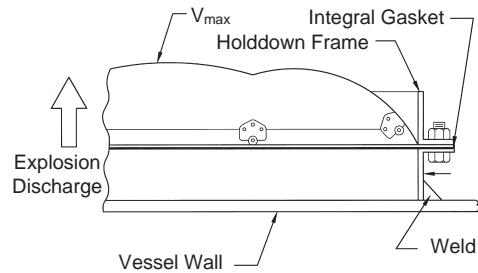


# Specifications

Vent Size, in	12 x 18	18 x 35	24 x 36	36 x 44
Available Burst Pressures, psig			1.00 1.50*	0.50 1.00 1.50*
* 2 day shipment ARO	1.50* 2.00 2.50 3.00 3.50 4.00 4.50 5.00	1.50* 2.00 2.50 3.00 3.50 4.00 4.50	2.00 2.50 3.00 3.50	2.00 2.50
Burst Tolerance	<ul style="list-style-type: none"> <li>± 0.25 psig for Burst Pressures 1 psig or less</li> <li>± 0.50 psig for Burst Pressures greater than 1 psig</li> </ul>			
Vacuum Rating, psig	-7.0	-3.0	-3.0	-3.0
Relief Area, in <sup>2</sup>	196	595	823	1527
Operating Temperature Range	<ul style="list-style-type: none"> <li>0° to 350°F</li> <li>Static burst pressure does not vary with temperature</li> </ul>			
Operating Pressure	<ul style="list-style-type: none"> <li>Operating pressures up to 80% of the minimum stamped burst pressure are allowable</li> </ul>			
Materials of Construction	<ul style="list-style-type: none"> <li>FDA approved</li> <li>316 Stainless Steel with 2B finish on process side</li> <li>Integral gasket/seal — Silicone Rubber</li> </ul>			



VESSEL ASSEMBLY WITH BOLTS WELDED TO VESSEL



VESSEL ASSEMBLY WITH ANGLE BASE WELDED TO VESSEL

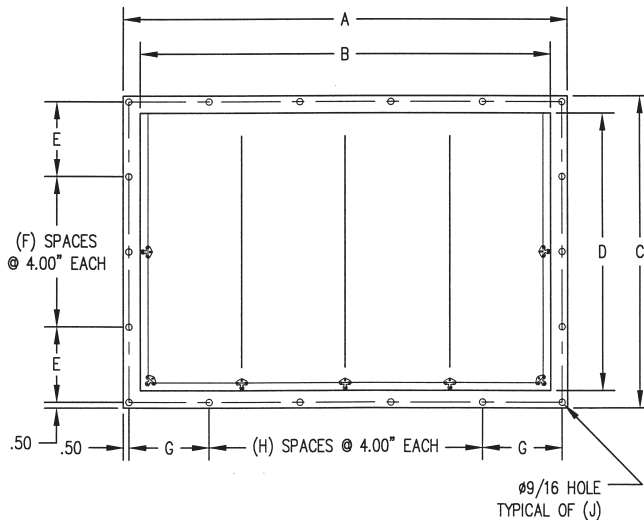


Table 1, V<sub>max</sub> Dimensions

Vent Size Inches	12 x 18	18 x 35	24 x 36	36 x 44
A Inches	21.00	38.00	39.00	47.00
B Inches	18.00	35.00	36.00	44.00
C Inches	15.00	21.00	27.00	39.00
D Inches	12.00	18.00	24.00	36.00
E Inches	3.00	4.00	3.00	3.00
F Number	2	3	5	8
G Inches	4.00	4.50	3.00	3.00
H Number	3	7	8	10
J Total Number	18	28	34	44