



ORB™ and OFA™ Rupture Disks

US and International Patents Pending.

Introduction

The BS&B ORB & OFA rupture disks are an obround shape with a large length to width ratio designed for integration as a pressure relief device into equipment that is generally rectangular in shape such as prismatic battery cells. These obround rupture disks provide a large relief area from a compact design. Both the ORB and OFA rupture disks are domed to enhance their performance.

ORB = Obround Reverse Buckling

OFA = Obround Forward Acting

As the product names indicate, both a reverse buckling and forward acting configuration are available. This unique rectangular reverse buckling disk brings the stronger construction, improved resistance to operating pressure, and thicker material of construction (easier to handle and install) preferred by users of round rupture disk technology.

Technical Outline

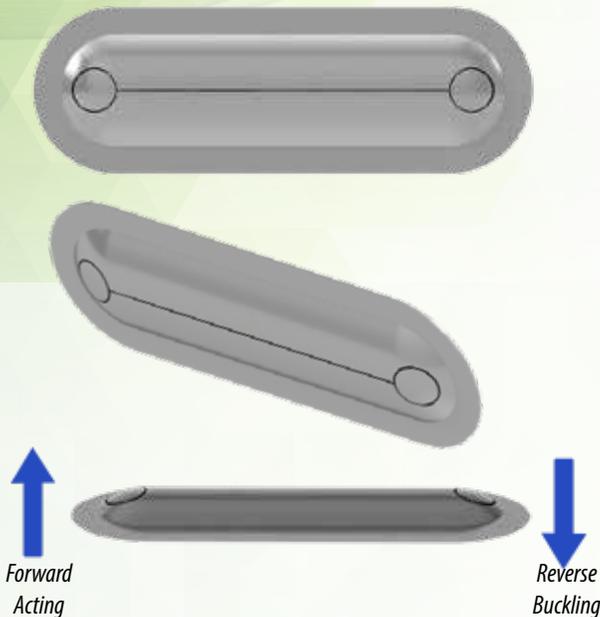
Both the ORB and OFA rupture disks comprise an obround shape (parallel sides with circular ends), a line or lines of weakness that contribute to burst pressure and opening, and a formed or domed shape that enhances the rigidity of the device and contributes to burst pressure control. ORB disks are typically manufactured from thicker material than OFA rupture disks, and available with a lower burst pressure rating. OFA disks are particularly suited to applications where internal cell volume is not available to accommodate the pressure relief device. Upon activation by overpressure, the disks open according to the pattern defined by the line(s) of weakness providing a large relief area that can be without fragmentation with appropriate installation.

Installation

The function of all rupture disk devices depends upon the relationship between the disk and its holding arrangement. ORB and OFA rupture disks are designed with installation by welding around the perimeter of the component in mind. The BS&B design team will work with each application to allow for normal differences that arise between component and user assembled burst pressure.

Rapid Prototyping

The BS&B PIT program (Prototype Introduction Track) is available for ORB and OFA type rupture disks. This uses state of the art manufacturing techniques to support prototypes without the delay of traditional mechanical tooling.



Forward
Acting

Reverse
Buckling

Materials

Solid metal construction with Stainless Steel & Aluminum being the primary materials. Also available made from Nickel and Nickel alloys 400 and 600 series.

Dimensions

Custom dimensions to suit the needs of the application are available. ORB and OFB rupture disks can be provided to fit within established prismatic cell lid dimensions.

Burst Pressures

Ranging from 3 bar to 50 bar depending upon dimensions and material selected.

Quality Systems

Quality certifications include ISO9001, AS9100, IATF16949

Country of Origin

Current BS&B manufacturing capabilities satisfy 'Made In European Union' and 'Made in USA' requirements.

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