Catalog # 77-8002



# Type ITC<sup>™</sup> and RTC<sup>™</sup> Rupture Disks



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## **Transportation Disks**

## **ITC**<sup>TM</sup>



The BS&B Safety Systems ITC rupture disk is specifically designed for protection of intermodal tank containers. The ITC conforms with the latest norms IMO, ADR, RID, US DOT, DOT blue book and ISO. The ITC is a scored tension loaded rupture disk assembly.

### Performance

The ITC disk has been flow tested with most major world tank valve manufacturers.

### Installation

The ITC disk slips into the tank flange bore. The codes require that the space between the future disk and relief valve be fitted with a gauge or a suitable telltale indicator to detect a ruptured or a leaking disk.



The ITC disk in series with a relief valve

### **Features**

- Available in standard AAR burst ratings
- Simple installation
- Accurate
- Superior cycle life under pressure cycling condition



### **Standard Pressure Ranges of Rupture Disks**

| Size |    | Burst<br>pressure |      | Tempe<br>rat | erature<br>ing | Part number   |  |  |
|------|----|-------------------|------|--------------|----------------|---------------|--|--|
| in   | mm | psig              | barg | °F           | °C             |               |  |  |
| 2.5  | 65 | 54.4              | 3.75 | 68           | 20             | 77-31-2500-26 |  |  |
|      |    |                   |      | 140          | 60             | 77-31-2503-26 |  |  |
|      |    | 63.8              | 4.4  | 68           | 20             | 77-31-2501-26 |  |  |
|      |    |                   |      | 140          | 60             | 77-31-2502-26 |  |  |
| 3    | 80 | 63.8              | 4.4  | 68           | 20             | 77-31-3000-26 |  |  |
|      |    |                   |      | 140          | 60             | 77-31-3001-26 |  |  |

Burst tolerance:  $\pm 5\%$  of stamped burst pressure Consult BS  $\mathfrak{CPB}$  for other materials and pressure ratings

## Materials

- Scored rupture disk: nickel 200
- Centering ring: 316 stainless steel
- Inlet ring: 316 stainless steel
- Process slide liner: Fluoropolymer
- Gaskets: Fluoropolymer
- Name tag: 316 stainless steel

Consult BS&B for other materials and pressure ratings.

## Type RTC™ Rupture Disk

## **Protection of IM05 Intermodal Tank Containers from overpressure**



#### Type RTC™ Rupture Disk

The RTC rupture disk has been developed for the protection of intermodal tank containers from overpressure during storage and transportation of liquefied gases. This bursting disk used in series with a safety relief valve, protects the vessel by reversing at its burst pressure and shearing along cross score lines provides a full pressure relief opening. The RTC disk can be used to isolate the relief valve and prevents leakage through the valve.

#### Installation

The RTC rupture disk is easily installed by bolting the disk between the relief valve disk holder and a disk support flange. International codes require that the space between the disk and the safety relief valve is monitored using a pressure gauge to detect a burst or leaking disk.



The RTC disk in series with a relief valve

#### **RTC Features**

- Available in nominal 3 inch (80mm) size and in burst pressures to meet regulatory requirements 72.5 to 500 psig (5 to 34.5barg) in Monel<sup>®</sup> alloy 400 and 181 to 500 psig (12.5 to 34.5barg) in 316ss materials
- · Permanent marking on disk for retraceability
- Integral gaskets designed for minimal cold flow
- Helium leak tested disk assembly
- Resists full vacuum
- Designed for non-fragmentation on bursting
- Resists pressure cycling and surges
- Suitable for gas / vapor service
- Simple one-piece construction for easy installation on the inlet of a safety relief valve
- Non-torque sensitive installation



### **Standard Pressure Ranges of Rupture Disks**

| Rating psig / barg at 72°F (22°C) |            |                    |      |      |      |                              |      |      |      |       |      |      |      |
|-----------------------------------|------------|--------------------|------|------|------|------------------------------|------|------|------|-------|------|------|------|
| D<br>si                           | isk<br>ize | Inconel° alloy 600 |      |      |      | Monel <sup>®</sup> alloy 400 |      |      |      | 316ss |      |      |      |
| in                                | mm         | Min                |      | Max  |      | Min                          |      | Max  |      | Min   |      | Max  |      |
|                                   |            | psig               | barg | psig | barg | psig                         | barg | psig | barg | psig  | barg | psig | barg |
| 3                                 | 80         | 181                | 12.5 | 500  | 34.5 | 72.5                         | 5    | 500  | 34.5 | 181   | 12.5 | 500  | 34.5 |

#### **Materials**

- Disk and outlet ring material: 316ss or Monel<sup>®</sup> alloy 400 - Other materials are available on request
- Gaskets are glass impregnated fluorocarbon film
  - Maximum temperature 500°F (260°C)

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