



Installation Instructions

Type GCR-S™, GCR-SS™, GCR-SM™, GCR-SMS™, GCR-SE™ Rupture Disks GR-C™ and FM-C™ Safety Heads

DANGER: Rupture disks are intended to provide a pressure relief opening. This rupture disk is designed to burst at a specified temperature and pressure, thereby relieving excess pressure or preventing excessive vacuum in a system. **IT IS IMPERATIVE THAT THIS RUPTURE DISK BE PROPERLY INSTALLED AND SAFELY VENTED IN ORDER TO AVOID BODILY INJURY, DAMAGE TO PROPERTY, POLLUTION AND LOSS OF PRODUCT.** BS&B Safety Systems, Inc and BS&B Safety Systems Ltd supply disks selected by their customers which are manufactured in reliance upon information and specifications supplied by the customer. BS&B Safety Systems, Inc and BS&B Safety Systems Ltd are not liable for any damage resulting from improper installation, improper system design, unsafe venting, or other factors beyond BS&B Safety Systems, Inc and BS&B Safety Systems Ltd control.

ORDER REPLACEMENT DISKS BY LOT NUMBER (shown on disk tag).

BEFORE YOU INSTALL A RUPTURE DISK Inspect Safety Head

1. Inspect Safety Head's mating surfaces for foreign material. Pits, dirt or grit can damage the rupture disk affecting disk performance or cause leakage. Clean if necessary.
2. The rupture disk and Safety Head must not be machined or modified in any way except with the approval of BS&B Safety Systems, Inc. or BS&B Safety Systems Ltd. Failure to obtain such approval voids the warranty on this product.

Inspect the Rupture Disk

1. Handle the rupture disk carefully holding the disk by the tag and the perimeter only. Examine seating and domed surfaces for nicks, dents, scratches and foreign material which can damage the disk or cause leakage or affect the burst pressure. **Do not install a damaged disk.** Installation of a damaged disk may result in a premature bursting of the disk. The GCR-S™ series uses SAF™ technology (Structural Apex Forming) and the designed precision indentation in the center of the disk is present in all cases to assist operating accuracy.

Safety Precautions

CAUTION: Provide adequate support for piping and connections to absorb recoil/reaction forces when the disk ruptures.

The rupture disk and Safety Head should not be subjected to bending stresses.

Do not locate the disk where it may be subjected to thermal shock. Moisture, rain, condensation or snow may cause a thermal shock to the disk causing the disk to burst below its marked Burst Pressure. A protector is recommended for temperature above 212°F (100°C), consult BS&B Safety Systems, Inc or BS&B Safety Systems Ltd.



Worldwide patents pending

When the disk ruptures, the resulting shock wave may affect the operating performance of downstream equipment.

WARNING: Do not locate the rupture disk where personnel, equipment or property will be exposed to released product and pressure through the disk. Handle carefully, disk and tag may have sharp edges.

Note: Corrosion and process conditions may affect disk deterioration and necessitate more frequent replacement. The installation of the rupture disk must be carried out by trained and competent personnel.

Disk and Safety Head Types

Disk Types	Safety Head
GCR-S™	GR-C™
GCR-SS™	GR-C™
GCR-SM™	Between standard ferrules
GCR-SMS™	Between standard ferrules
GCR-SE™	FM-C™

Assemble Rupture Disk in GR-C™ or FM-C™ Safety Heads, or between standard ferrules.

1. Arrange safety head outlet in position shown.
2. Place undamaged rupture disk on inlet fitting. The convex side of the disk, the dome, faces the inlet.
3. Carefully place Safety Head outlet in position shown in Figure 1 or Figure 2. Ensure that the disk gasket's larger seal bead (Types GCR-S™, GCR-SE™ and GCR-SS™) mates properly with the outlet groove. **Ensure flow arrows on the disk tag end on the Safety Head outlet point in the same direction.** In the case of type GCR-SM™ and GCR-SMS™, the seal bead has a symmetric gasket configuration on both sides of the disk and fits between standard Tri-Clamp® (or equivalent) ferrules.
4. Assemble unit with sanitary clamp. Ensure sealing of rupture disk in Safety Head by applying the torque value to the hexagon nut as shown below. Hexagon nuts are available from BS&B Safety Systems, Inc or BS&B Safety Systems Ltd.

Sanitary Fittings and Nominal Disk Size		Torque	
in	mm	in. lbs.	Nm
1.5	40	40	5
2	50	50	6
3	80	60	7

Sanitary Fittings

As the dimensions of the internal bore and groove are critical to the performance of the rupture disk, Tri-Clamp® ferrules and clamps are recommended. A Tri-Clamp 13 MHHS (or equivalent) sanitary clamp is recommended. Consult manufacturers for ferrule and clamp pressure and temperature service ratings.

GR-C™ Safety Head with GCR-S™ Rupture Disk

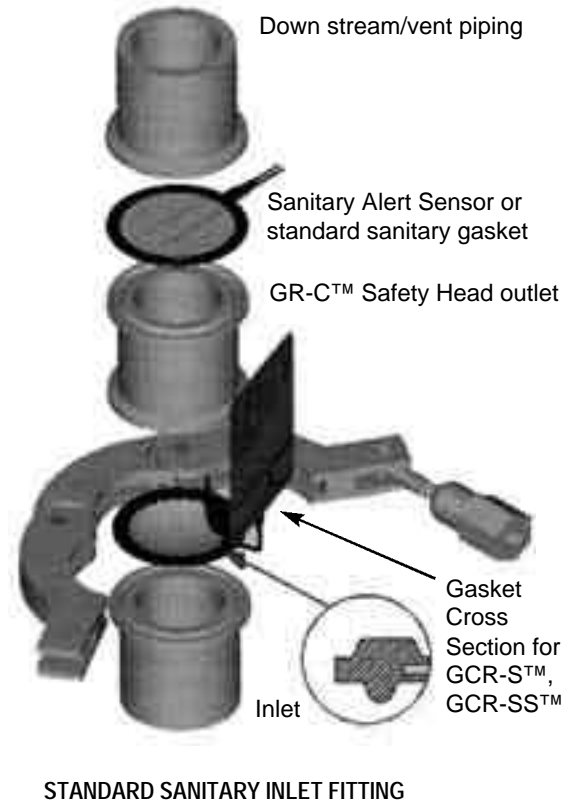


FIGURE 1

FM-C™ Safety Head with GCR-SE™ Rupture Disk



The FM-C™ Safety Head is welded to the vessel wall and permits the rupture disk to be installed flush with the interior wall of the vessel.

FIGURE 2

Limitations of Warranties – BS&B Safety Systems, Inc. and BS&B Safety Systems Ltd warrants their products, when properly installed, used and maintained by the original purchaser, against defective workmanship and materials for a period of twelve (12) months from the date of shipment. Purchaser's failure to use this product in strict compliance with all material operating specifications provided to BS&B Safety Systems, Inc. or BS&B Safety Systems Ltd by purchaser prior to BS&B Safety Systems, Inc. or BS&B Safety Systems Ltd. production or shipment of this product shall void this warranty. Rupture disks are warranted solely to burst within specified pressure ranges at temperatures specified at the time of sale.

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