

*Saf-T-Change™ Rupture Disk Replacement System is manufactured in conjunction with Onis Line Blind and BS&B Safety Systems and is patent pending.*

# ***Saf-T-Change™* Rupture Disk Replacement System**

# Saf-T-Change™ Rupture Disk Replacement System

From BS&B Safety Systems, the world's first and largest manufacturer of rupture disks, and ONIS, the world leader in the design and supply of quick-action line blinds.

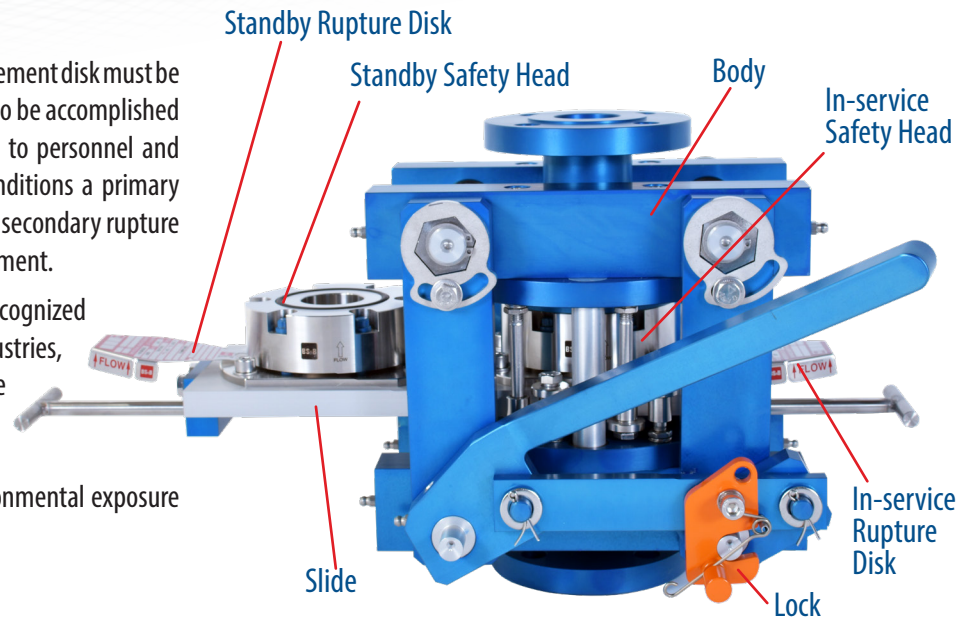
## THE CONCEPT

Following rupture disk device activation a replacement disk must be installed. The Saf-T-Change system allows this to be accomplished fast and with minimum process line exposure to personnel and the environment. Under normal operating conditions a primary rupture disk device is in process contact while a secondary rupture disk device is on standby for immediate deployment.

BS&B Safety Systems and Onis Line Blind, recognized technology leaders in their respective industries, collaborated and engineered this innovative Quick Disk Replacement (QDR™) solution to ensure plants optimize production, minimize downtime, and minimize personnel and environmental exposure to open process lines.

## FEATURES

- Sizes 1/2" (12mm) through 44" (1120mm) sizes available.
- ANSI, DIN, and JIS flange configurations.
- For use with liquid, vapor, steam, two-phase, and multiphase process media.
- Wide range of materials (carbon steel, stainless steel, alloy 400, alloy 600, Alloy C-276, and others).
- For use with forward acting (tension loaded) and reverse buckling (compression loaded) rupture disks.
- Operating pressures up to 95% of marked burst pressure (100% of minimum burst pressure).
- Protective cover provided for rupture disk device in standby.
- Manual and actuated models available.
- Self locking.
- No moving parts in the process flow path.
- Design pressures up to 6100 psig (420 barg).
- Temperature range of -155 F (-104 C) to 1200 F (650 C).
- Elastomer o-ring and graphite seals available.
- Leak tight, 100% leak tested to maximum operating pressure of each disk model.



Above: Saf-T-Change™ wetted parts include body, rupture disk, and rupture disk safety head. Standby disk and safety head is protected by a cover (not shown above).

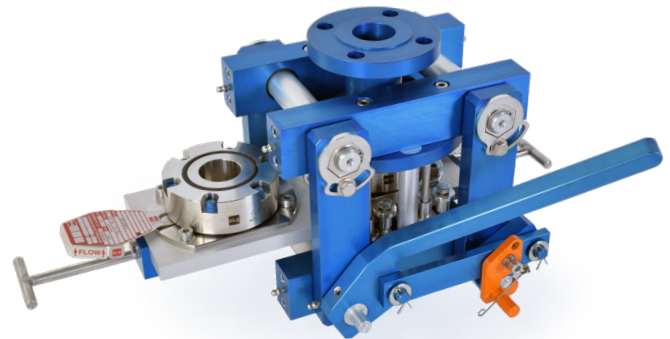
## BENEFITS

- Speed and efficiency. In small line sizes, rupture disks can be changed in less than 10 seconds.
- Downtime is reduced dramatically.
- Personnel and environmental exposure to process media is minimized.
- Only one operator is required to change a rupture disk, even in large line sizes.
- No tools, cranes, or other logistical considerations for larger sizes or difficult to access installations.
- No internal seals in process flow path.
- Pre-torqued safety heads with bite type seal ensure optimal leak tightness and performance.
- Each device is designed to the specific application where it will be utilized.
- Horizontal or vertical installation.
- Allows for inspection of rupture disks with minimal downtime.



## OPERATION

1. Shut off the upstream and downstream pressure.
2. Depressurize the pipe.
3. Unlock the Saf-T-Change™ system.
4. Release the load on the “in-service” rupture disk device (lever or gearbox) to separate the half bodies.
5. Move the slide to position the standby rupture disk device.
6. Apply the load to the replacement rupture disk device (lever or gearbox) clamping the half bodies.
7. Lock the device.



## Rupture Disks for Saf-T-Change™ Rupture Disk Replacement System

Multiple BS&B rupture disks models are available for use with the Saf-T-Change™ quick disk replacement system. The following models and corresponding BS&B catalog numbers are provided for reference.

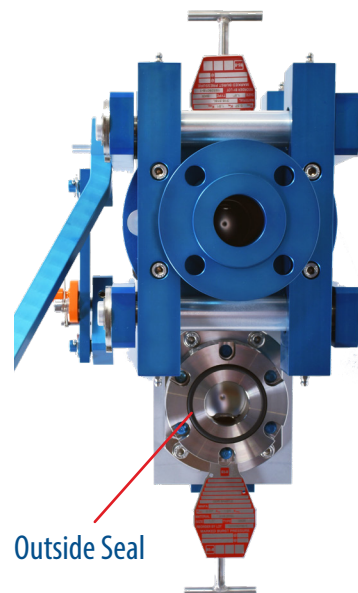
Forward Acting Rupture Disks	Reverse Buckling Rupture Disks
<b>GFN, XN85, XT, Scored B</b> <i>Refer to Catalog 77-5003 for more information.</i>	<b>SKr, Sigma/Sigma EXL, RLS, S90, JRS, FRS;</b> <i>Catalog 77-5003.</i> <b>CSR/CSI;</b> <i>Catalog 77-4009</i> <b>Eco-Saf;</b> <i>Catalog 77-4012</i> <b>SRD/SRD-L; CCS/CCS-L;</b> <i>Catalog 77-4018</i> <b>LPS;</b> <i>Catalog 77-4002</i> <b>UBR;</b> <i>Catalog 77-4020</i> <b>SKi;</b> <i>Catalog 77-4021</i>

Refer to catalog referenced for more information. Catalogs are located on [bsbsystems.com](http://bsbsystems.com) website. GFN, XN85, XT Scored B, SKr, SKi, Sigma, Sigma EXL, RLS, S90, JRS, FRS, CSR, CSI, Eco-Saf, SRD, SRD-L, CCS, CCS-L, LPS, and UBR are all registered trademarks of BS&B.

Rupture Disk Materials	Safety head Materials	Body and Slide Materials
316/316L Stainless Steel, alloy 600, Nickel, Titanium, Niobium, Tantalum	Carbon Steel, 316 / 316L Stainless Steel, AL6XN, Duplex Stainless Steel, Super-Duplex Stainless Steel, alloy C-276, alloy C-22. <i>Other materials available upon request.</i>	Carbon Steel, Stainless Steel, Lined (fluoropolymer, metal overlay, chemical vapor deposition), alloy C-276, and alloy 600. <i>Other materials available upon request.</i>

Above outlet view of a 1.5" (40mm) Saf-T-Change™ quick disk replacement. A lever or gear box is used to spread the half bodies by 5/32" (4mm). The slide is then moved to position the standby rupture disk. Only one operator is required to complete the task and the replacement rupture disk is able to be slid into position in seconds (small sizes) or minutes (large sizes).

The standby rupture disk is equipped with a protective cover (pictured right) to protect the disk from damage while not in service.



Process and vent side seals are on the safety head-body mating surface.

No internal seals. The seals are on the outside and are reusable. Seal material is dependent on process temperatures and media compatibility.



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