



The SLP-S™ Series Low Pressure Reverse Buckling Disk



UD

SLP-S™ Low Pressure Sanitary Reverse Buckling Rupture Disk

The SLP-S offers the lowest pressure, solid metal, reverse buckling disk that is resistant to vacuum. Designed for installation into sanitary / aseptic piping using the GR-C outlet fitting. The SLP-S disks includes an outlet side hinge to control fragmentation when the disk bursts.

Features

- Low burst pressures from 5 psi (0.34bar)
- Solid metal design
- Designed for gas, liquid or two-phase service
- Stainless steel, 316L is standard (hinge 316)
- "Fail-safe" design – damage safety ratio <1
- Designed for non-fragmentation
- Vacuum / back pressure resistant
- High operating ratio; up to 90% of minimum burst pressure
- Sizes 1.5 -3 inch nominal size connections
- Ideal for CIP / SIP (clean in place / steam in place) service
- Available KBA-S burst disk sensor option
- Utilizes SAF™ technology (structural apex forming) for enhanced performance



SLP-S Rupture Disk

Min / max burst pressure @ 72°F (22°C)					
Disk size		psig		barg	
in	mm	Min	Max	Min	Max
1.5	40	15	70	1.03	4.82
2	50	6	55	0.41	3.79
3	80	5	40	0.34	2.76

* For 1.5 inch (40mm) size a GCR Disk is available with 10 psig (0.69 barg) burst pressure.

Burst Pressure Tolerance Options

The approach to SLP-S disk burst tolerance depends upon which international code is being followed.

- For disks to comply with the ASME code, please select a "manufacturing design range" and the "burst tolerance" applicable to the required burst pressure
- For disks to comply with EN or ISO standards, please select either a "performance tolerance" or a minimum / maximum burst pressure (use tables). Selecting the available "ultimate" tolerance option provides the most economical disk

Burst Tolerance

Burst pressure		Burst tolerance
psig	barg	
≥28	≥1.93	+/-5%
20 < 28	1.38 < 1.93	+/-7%
10 < 20	0.69 < 1.38	+/-10%
< 10	< 0.69	+/-15%
Alternate < 40	Alternate <2.76	+/-2 psi (+/-0.138bar)

This is the +/- range of pressure over which a rupture disk can be expected to burst. Burst tolerance is a function of SLP-S burst pressure

Manufacturing Design Range

Burst pressure		MDR
psig	barg	
All catalog burst pressures		0
All catalog burst pressures		-5%
All catalog burst pressures		-10%

This is a range of pressure, always applied to the minus side of the user requested burst pressure for the SLP-S disk. The standard SLP-S MDR values are 0%, -5%, and -10%.

SLP Series Disk Types

There are eight variants of the SLP reverse buckling disk, defined in the table below. The rupture disk technology is the same for all eight SLP types, the differences arise from the connections intended and the pressure of an integral sensor or not.

Vacuum Resistance / Back Pressure Resistance

The SLP-S disk will resist vacuum without any additional vacuum support. Back pressure resistance is limited to 15 psi (1.03bar) for disks rated to burst at 15 psi (1.03bar) or less. For higher burst pressures, back pressure resistance is limited to the minimum burst pressure of the ordered SLP-S disk.

Sensors

Optional KBA-S and SAS Sensors are available for use between standard sanitary / aseptic fittings to provide warning of a burst rupture disk.

KBA-S™ Sensor

Features

- PTFE film
- Tantalum conductor wire
- Dual path conductor
- Low burst pressures

KBA-S family sensors use standard sanitary/aseptic gasket materials such as Viton®, Silicone and EPDM.

SAS™ Sensors

Features

- Polyimide film
- Tantalum conductor wire
- Dual path conductor
- Higher burst pressures

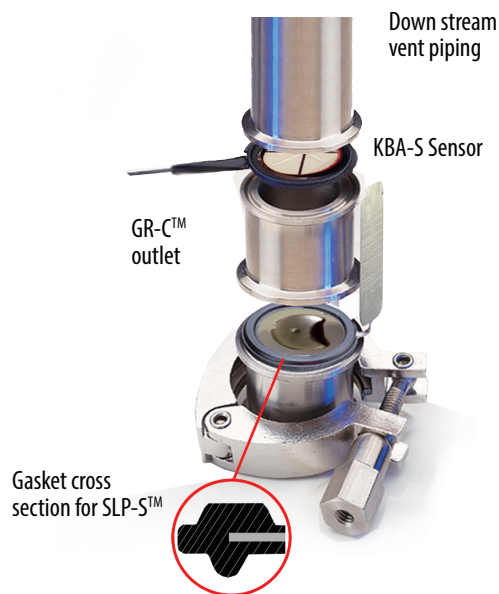
Consult BS&B for minimum applicable rupture disk burst pressure. Standard sanitary/aseptic gasket materials such as Viton®, Silicone and EPDM are available.

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Disk Type	Connection	Integral Sensor
SLP-S	GR-C Outlet	No
SLP-SS	GR-C Outlet	Yes
SLP-SM	Standard*	No
SLP-SMS	Standard*	Yes
SLP-SE	FM-C or FT-C	No
SLP-SES	FM-C or FT-C	Yes
SLP-N	NovAseptic®	No
SLP-NS	NovAseptic®	Yes

* Standard assumes Tri-Clover® or equivalent sanitary ferrule connections. Tri-Clover is a registered trademark of Alfa Laval Corporate AB.

NovAseptic® is a registered trademark of Millipore Corporation



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