



# SB Series Snap Back Reverse-Acting Rupture Disks

## Features

- Non-fragmenting solid metal disk design
- Resists product buildup. Only a smooth convex surface is exposed to the process medium
- Operates to 90% of the marked burst pressure on disk tag
- Excels in gas service\*
- Burst ratings 10 to 1700 psig
- Sizes 1" thru 24"
- Temperature ratings to 900°F (482°C)
- Materials of construction: 316SS, Inconel, Monel, Nickel, or Aluminum
- 3-dimensional Stainless Steel tag is standard
- Withstands full vacuum without additional support
- ASME UD marking available (gas service only)

\*Contact ZOOK if liquid service is required.

## Safety Relief Valve Protection

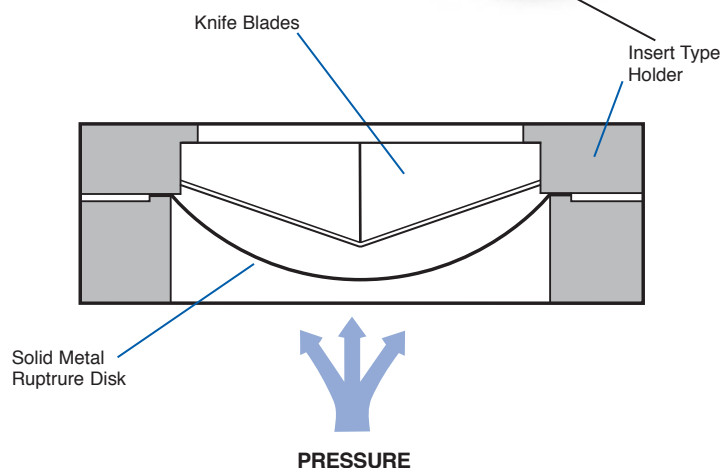
When the SB Series Disk is mounted under a SRV, the valve will be isolated from hostile environments.

## Option

**Liners** TFE liners are available to provide protection from corrosive media if required. Refer to Table 1 for maximum temperature ratings for disks and liners.



SB7A  
Disk Holder



SB Series Disks mount with the convex surface facing the process media. As pressure increases above the recommended operating ratio, the compressive stress in the disk material increases until a point of instability is reached. At that point the disk begins to buckle and it will reverse with a "snap" action. As the disk hits the knife blades (mounted in the outlet holder) it is then cut into four (4) segments which completes the rupture of the disk.

**Table 1** – SB Series Minimum and Maximum Pressure Ratings  
– psig (bar) @72° F (22°C)

Disk Size	Disk Materials									
	Aluminum		Nickel		Monel		Inconel		316SS	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
1"	30	250	100	1500	100	1000	100	1700	100	1500
25 mm	2.07	17.24	6.90	103.45	6.90	68.97	6.90	117.24	6.90	103.45
1-1/2"	25	200	80	1500	80	1000	80	1600	80	1500
40 mm	1.72	13.79	5.52	103.45	5.52	68.97	5.52	110.34	5.52	103.45
2"	22	150	50	1200	50	1000	50	1500	50	1500
50 mm	1.52	10.34	3.45	82.76	3.45	68.97	3.45	103.45	3.45	103.45
3"	20	125	45	1200	45	900	45	1200	45	1500
80 mm	1.38	8.62	3.10	82.76	3.10	62.07	3.10	82.76	3.10	103.45
4"	19	100	40	1000	40	600	40	1000	40	1200
100 mm	1.31	6.90	2.76	68.97	2.76	41.38	2.76	68.97	2.76	82.76
6"	18	90	35	600	35	500	35	800	35	1200
150 mm	1.24	6.21	2.41	41.38	2.41	34.48	2.41	55.17	2.41	82.76
8"	15	70	30	500	30	400	30	700	30	800
200 mm	1.03	4.83	2.07	34.48	2.07	27.59	2.07	48.28	2.07	55.17
Max. Temp.	250°F (121°C)		750°F (399°C)		800°F (427°C)		900°F (482°C)		900°F (482°C)	

MONEL - TM Huntington Alloys  
INCONEL - TM International Nickel

**Table 1 – notes**

- Minimum rating will support full vacuum without additional vacuum support.
- For larger sizes or sizes not shown, Contact ZOOK.
- Alternate materials and lower burst ratings are available on request. Contact ZOOK for more information.

# SB7A Series Disk Holder

**Features**

- Insert type Rupture Disk Holder – designed exclusively to be used with the SB Series Rupture Disk
- The SB7A Holder and Rupture Disks are assembled using safety designed side clips
- Standard materials of construction: 316SS and carbon steel. Other materials available upon request
- Permanently attached stainless steel nameplates are standard. Nameplates indicate flow direction and provide visual verification that holder assembly is properly oriented in the piping system

**Available options include:**

Gauge tap; nipple and tee; excess flow valve; pressure gauge; special facings and coatings

**Manufacturing Range  
Burst Tolerance @ 72°F (22°C)**

Specified Burst Pressure Rating psig (bar)	Available Manufacturing Ranges	Burst Tolerance
40 (2.76) and below	0%, -5%, -10%	± 2 psig (0.14)
Above 40 (2.76)	0%, -5%, -10%	± 5%

**Notes:**

- 0% manufacturing range is not available in all materials
- Burst tolerances are the maximum expected variation from the disk's marked burst pressure

**TFE liner may be added to provide additional protection against corrosive media**

Requirements/Limitations when TFE liner is added:

1. Max. temperature of 500°F (260°C)  
– Limitation of liner material
2. Liner may be applied to all ratings.



Holder  
Dimensions  
Inches (mm)

Nominal Size	ASME B16.5 Flange Classes ■		Height
	Class 150 O.D.	Class 300 O.D.	
1"	2-1/2"	2-3/4"	1-1/2"
25 mm	63.50	69.85	38.1
1-1/2"	3-1/4"	3-5/8"	1-9/16"
40 mm	82.55	92.08	39.7
2"	4"	4-1/2"	1-11/16"
50 mm	101.60	107.95	42.9
3"	5-1/4"	5-3/4"	2-1/8"
80 mm	133.35	146.05	54.0
4"	6-3/4"	7"	2-11/16"
100 mm	171.45	177.80	68.3
6"	8-5/8"	9-3/4"	3-7/16"
150 mm	219.08	247.65	87.3
8"	10-7/8"	12"	4-7/16"
200 mm	276.23	304.80	112.7

■ Available to fit DIN and JIS flanges



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Servicing Rupture Disk needs worldwide from manufacturing facilities located in 3 countries on 2 continents

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