

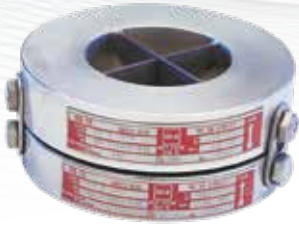
RB-90™

Reverse Buckling Rupture Disk

Safety Heads

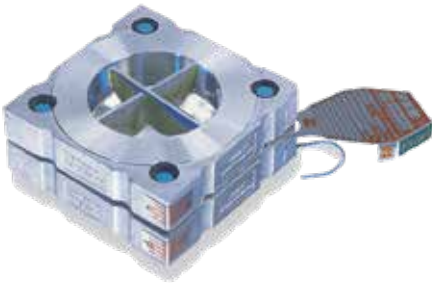
RB-7R™

Pre-assembled insert type safety head.



RB-7RS™

Pretorqued Safety Head



RB-7FS™

Pretorqued Full-Bolted Safety Head



All RB type safety heads are fitted with heat treated stainless steel knife blades in the outlet flange. Ring joint, raised face, and tongue and groove flange facings are available upon request.

For detailed information and specifications for the RB-7RS and RB-7FS Safety heads, please contact BS&B. RB-7R specifications are located on page 4 of this brochure.

Safety Head Standard Materials:

316 stainless steel and carbon steel. Also available Monel® alloy 400, Inconel® alloy 600, Hastelloy® alloy C and C-276, 316L stainless steel and titanium.

RB-90™ Reverse Buckling Disk

The RB-90™ rupture disk provides overpressure protection by reversing and snapping against precision stainless steel blades located in the safety head, cutting the disk into four distinct petals. The RB-90 disk also withstands back pressure and is resistant to full vacuum at all burst pressures. The RB-90 is a reverse buckling, compression loaded rupture disk and is available in a wide variety of burst pressures. Its design is for gas / vapor applications only.

Features

- Reverse buckling, solid metal design
- Designed for gas / vapor applications or gas driven liquid
- Withstands full vacuum
- Endures high back pressure
- Designed for non-fragmentation
- Available in sizes 1-42 inches (25-1,050mm)
- Standard 0% MDR; optional -5% and -10% MDR
- Wide range of standard materials
- Fluoropolymer liners available for process side of disk
- Stainless steel tag
- For use with BS&B type RB-7R, RB-7RS and RB-7FS safety heads. Types RB-7RS and RB-7FS are pretorqued design.

Burst Tolerance

Marked Burst Pressure	Burst Tolerance
≤ 40 psig (2.76 barg)	± 2 psig (0.138 barg)
> 40 psig (2.76 barg)	± 5%

Manufacturing Design Range (MDR)

- All standard disks are available with 0%, 5% and 10% manufacturing design ranges
- On disks with 5% and 10% MDR, the total range is placed on the minus side of the requested rating
- Disks with 0% MDR will be marked at requested rating

Example: If a 100 psi (6.9bar) burst pressure RB-90 disk is ordered with a zero manufacturing range, the disk will be tagged 100 psi (6.9bar) burst pressure

If a similar RB-90 disk is ordered with a 10% MDR, it may be marked at any pressure between 90 and 100 psi (6.2 and 6.9bar)

Note: damaged or improperly installed RB-90 rupture disks may activate above the marked burst pressure

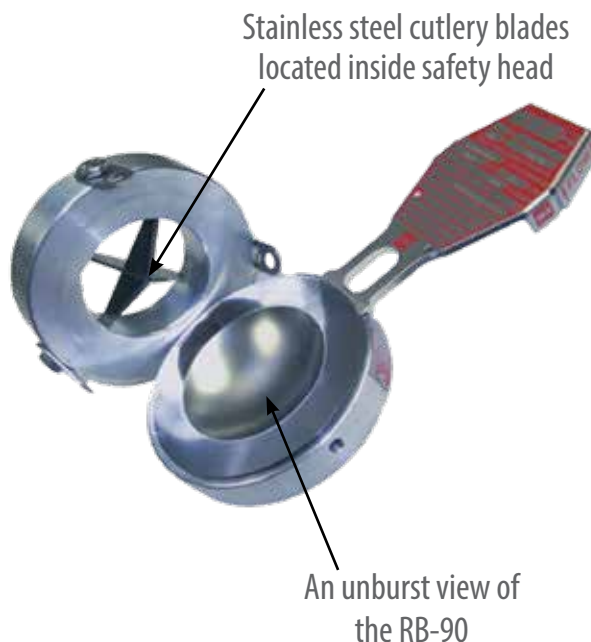
RB-90™ Disk Specifications Minimum / Maximum Pressure Rating at 72°F (22°C)

Disk Size		Aluminum				Nickel alloy 200 Monel® alloy 400				Tantalum				316ss Hastelloy® alloy C-276				Inconel® alloy 600			
in	mm	psig		barg		psig		barg		psig		barg		psig		barg		psig		barg	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1	25	30	250	2	17	100	1600	7	110	100	1600	7	110	100	1600	7	124	100	1800	7	124
1.5	40	25	200	2	14	80	1500	6	103	80	1500	5.5	103	80	1700	5.5	117	80	1700	5.5	117
2	50	22	150	2	10	50	1400	3.5	97	50	1400	3.5	97	50	1600	3.5	110	50	1600	3.5	110
3	80	20	125	1	9	45	1300	3	90	45	1300	3	90	45	1500	3	103	45	1500	3	103
4	100	20	100	1	7	40	1300	3	90	40	1300	3	90	40	1500	3	103	40	1500	3	103
6	150	20	80	1	6	35	800	2	55	35	800	2	55	35	850	2	59	35	850	2	59
8	200	15	60	1	4	25	750	2	52	-	-	-	-	30	800	2	55	25	800	2	55
10	250	15	60	1	4	25	750	2	52	-	-	-	-	30	800	2	55	25	800	2	55
12	300	15	60	1	4	25	750	2	52	-	-	-	-	30	800	2	55	25	800	2	55
14	350	15	60	1	4	25	750	2	52	-	-	-	-	30	800	2	55	25	800	2	55
16	400	15	60	1	4	25	750	2	52	-	-	-	-	30	800	2	55	25	800	2	55
18	450	13	40	1	3	25	500	2	35	-	-	-	-	30	500	2	35	25	500	2	35
20	500	13	40	1	3	25	500	2	35	-	-	-	-	30	500	2	35	25	500	2	35
24	600	10	35	1	2	25	500	2	35	-	-	-	-	30	500	2	35	25	500	2	35
30	750	10	35	1	2	25	250	2	17	-	-	-	-	30	250	2	17	25	250	2	17
36	900	10	35	1	2	25	250	2	17	-	-	-	-	30	250	2	17	25	250	2	17
40	1020	Consult BS&B																			
42																					

Note: Tantalum RB-90 rupture disks are available in sizes 1" to 6" (25mm to 150mm). Consult BS&B for applications where the disk may be rated with a coincident specified temperature below the maximum process temperature to which the disk may be exposed. Note: Hastelloy® is a trademark of Haynes International Inc. Monel® and Inconel® are registered trademarks of Special Metals Corporation and its subsidiaries.

Maximum Temperature

Material	Unlined Disks	Fluoropolymer Lined Disks
Aluminum	250°F (120°C)	250°F (120°C)
Nickel (alloy 200)	750°F (399°C)	400°F (204°C)
Monel® (alloy 400)	900°F (482°C)	400°F (204°C)
Inconel® (alloy 600)	1100°F (593°C)	400°F (204°C)
316 stainless steel	500°F (260°C)	400°F (204°C)
Hastelloy® C-276 (alloy C-276)	900°F (482°C)	400°F (204°C)





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RB-7R Safety Head Specifications

150# ANSI											
Nominal Pipe and Disk Size		Assembly height dimensions						Outside diameter			
		RB-7R		RB-7FF		RB-7FS		Assy RB-7R		Assy RB-7FF, RB-7FS	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1	25	1.5	38	1.6	41	1.5	38	2.5	64	4.3	108
1.5	40	1.6	40	1.8	46	1.6	40	3.3	83	5.0	127
2	50	1.7	43	1.9	48	1.7	43	4.0	102	6.0	152
3	80	2.1	54	2.3	59	2.1	54	5.3	133	7.5	191
4	100	2.7	68	2.8	70	2.8	70	6.8	172	9.0	229
6	150	3.4	87	3.6	90	3.4	87	8.6	219	11.0	279
8	200	4.4	113	4.4	113	4.4	113	10.9	278	13.5	343
10	250	5.1	130	5.1	130	5.1	130	13.3	337	16.0	406
12	300	5.9	149	5.9	149	5.7	149	16.0	406	19.0	483
14	350	6.4	164	6.4	164	-	-	17.6	448	21.0	533
16	400	7.2	183	7.2	183	-	-	20.1	511	23.5	597
18	450	7.9	202	7.9	202	-	-	21.5	546	25.0	635
20	500	8.8	222	8.8	222	-	-	23.8	603	27.5	699
24	600	11.3	286	11.3	286	10.5	267	28.1	714	32	813
30	750	12.12	308	12.1	308	-	-	34.6	879	38.8	984
36	900	15.00	381	15.0	381	-	-	41.1	1045	46	1168
300# ANSI											
4	100	2.7	68	2.8	70	2.8	70	6.8	172	9.0	229
6	150	3.4	87	3.6	90	3.4	87	8.6	219	11.0	279
8	200	4.4	113	4.4	113	4.4	113	10.9	278	13.5	343
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16	400	7.2	183	7.2	183	-	-	20.1	511	23.5	597
18	450	7.9	202	7.9	202	-	-	21.5	546	25.0	635
20	500	8.8	222	8.8	222	-	-	23.8	603	27.5	699
600# ANSI											
1	25	1.5	38	1.6	41	1.5	38	2.5	64	4.3	108
1.5	40	1.6	40	1.8	46	1.6	40	3.3	83	5.0	127
2	50	1.7	43	1.9	48	1.7	43	4.0	102	6.0	152
3	80	2.1	54	2.3	59	2.1	54	5.3	133	7.5	191
4	100	2.7	68	2.8	70	2.8	70	6.8	172	9.0	229
6	150	3.4	87	3.6	90	3.4	87	8.6	219	11.0	279
8	200	4.4	113	4.4	113	4.4	113	10.9	278	13.5	343
10	250	5.1	130	5.1	130	5.1	130	13.3	337	16.0	406
12	300	5.9	149	5.9	149	5.7	149	16.0	406	19.0	483
14	350	6.4	164	6.4	164	-	-	17.6	448	21.0	533
16	400	7.2	183	7.2	183	-	-	20.1	511	23.5	597