



BS&B SAFETY SYSTEMS, L.L.C.  
BS&B SAFETY SYSTEMS LTD.

# MRB\* MACHINED REVERSE BUCKLING RUPTURE DISK

CATALOG  
77-4007

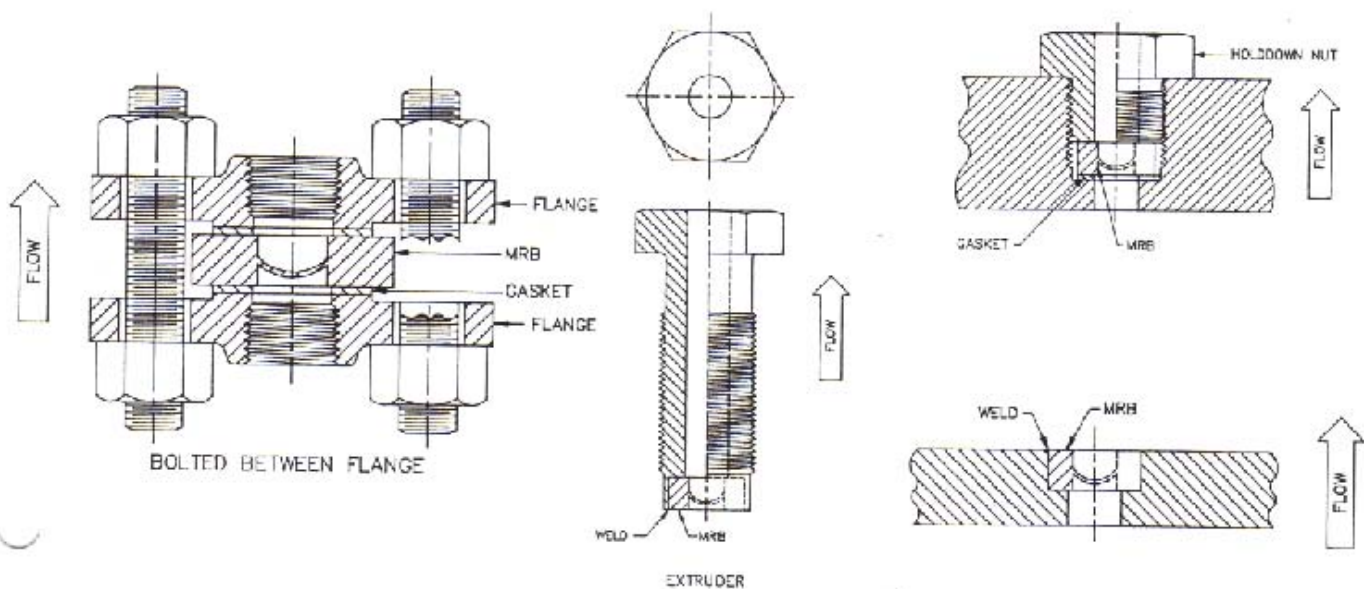
SECTION D-4

A Reverse Buckling Rupture Disk particularly well suited for high pressure applications. The MRB is a one-piece design including both disk and housing. It is a uniform metal slug machined to a thin diaphragm in the center and then formed. When the reversal pressure is reached, the disk snaps through and shears out completely at the disk/housing junction.

## FEATURES:

- Sizes 3/8" to 4"
- Pressure ratings available up to 70,000 psig
- Opens full bore with no flow restrictions
- Design assures long service life with a very high resistance to fatigue.
- Non-torque sensitive
- Operates up to 90% of disk pressure rating
- No knife blades required for opening
- Use in gas or liquid service
- Designed to adapt to customer's unique application

## SAMPLE MRB INSTALLATIONS:



\*Patent No. 4,102,167



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# SELECTION DATA

## SPECIFICATIONS FOR STANDARD MRB RUPTURE DISKS

### Min/Max Pressure Ratings at 72° F (psid)

Disk Size (Inches)	Disk Material*					
	Hastelloy C-276		Inconel/Alloy 600		304L SS	
	Min	Max	Min	Max	Min	Max
3/8	4300	49,000	4500	55,000	6000	70,000
1/2	3800	48,000	4000	54,000	4900	70,000
5/8	3500	46,000	3500	52,000	4400	66,000
3/4	2900	44,000	3100	49,000	3900	62,000
1	2500	39,000	2500	43,000	3400	56,000
1-1/2	2100	31,000	1900	35,000	2800	45,000
2	1900	25,000	1800	29,000	2500	37,000
3	1600	18,000	1500	21,000	2200	27,000
4	1500	14,000	1500	16,000	2000	21,000

### ENGINEERING INFORMATION

Minimum and maximum pressure ratings are applicable at 72°F.

#### Manufacturing Range:

Available with either 2%, 5% or 10% manufacturing range. The total range is placed on the minus side of the requested rating.

#### Example.

If a 20,000 psig MRB is ordered with a 10% manufacturing range, it may be tagged at any pressure between 20,000 psig and 18,000 psig.

#### Burst Tolerances: ± 5%

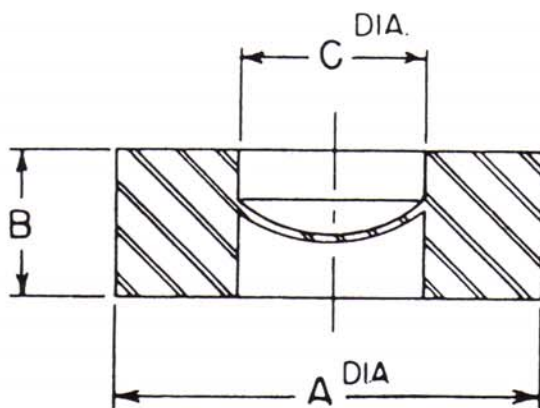
Burst tolerances are the maximum variation from the above tagged burst pressure.

Recommended maximum temperatures for each metal are:

Hastelloy C-276	.....900°F
Inc/Alloy 600	.....900°F
304L SS	.....900°F

\*Consult factory for availability of other materials or pressure ratings.

### Standard Design



### DIMENSIONS

Nominal Size (Inches)	A (Inches)	B (Inches)	C (Inches)
3/8	.965	.375	.375
1/2	1.000	.375	.500
5/8	1.250	.375	.625
3/4	1.500	.500	.750
1	2.000	.625	1.000
1-1/2	2.750	1.000	1.500
2	3.500	1.250	2.000
3	4.750	1.750	3.000
4	6.000	2.500	4.000

Consult factory for dimensions other than listed above.

**NOTE:** Products, specifications, and all data in this literature are subject to change without notice. Questions regarding product selection and specifications for specific applications should be directed to BS&B, Attn: Customer Service Dept.