



RA8 Series Reverse Acting Metal Rupture Disks

The RA Series of rupture disks are complementary designs to cover the majority of rupture disk applications and are designed to be used in the RAH Series disk holder.

Features

- Designed for Non-fragmentation
- Operating ratios up to 95% of the low end of burst tolerance
- Disk design offers high cycle life
- Suitable for liquid, gas, or two-phase applications
- Standard manufacturing design range and total tolerance ensures marked rating on disk tag does not exceed the MAWP of equipment
- Withstands full vacuum without vacuum support
- Wide range of standard and exotic materials available
- Withstands back pressure up to the positive set pressure of the disk
- Sizes from 1" (25 mm) through 12" (300 mm)
- Burst ratings from 26 psig (1.79 barg) to 1000 psig (68.97 barg)
- Resists product build-up. The smooth convex side of the disk is exposed to the process media
- Damage ratio of 1.0 or less
- Unique alignment pin design ensures proper disk orientation into RAH Series disk holder
- 3-dimensional stainless steel tag permanently engraved with complete disk specifications
- ASME UD, CE (PED), and TÜV compliance available

Options

RA8-L* A process side PFA Teflon liner provides protection from corrosive media.

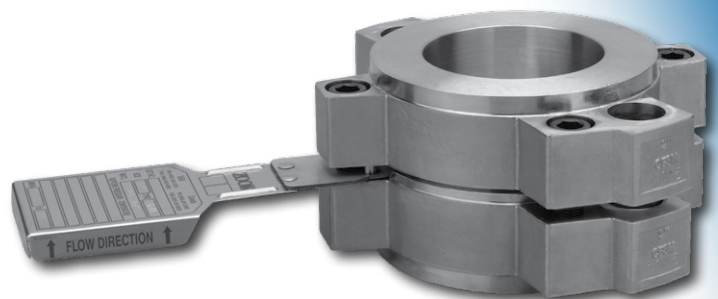
RA8-BI* Equipped with ZOOK's Integral Burst Indicator.

RA8+ Factory tested to 100% of the low end of the tolerance to insure no disks will burst low.

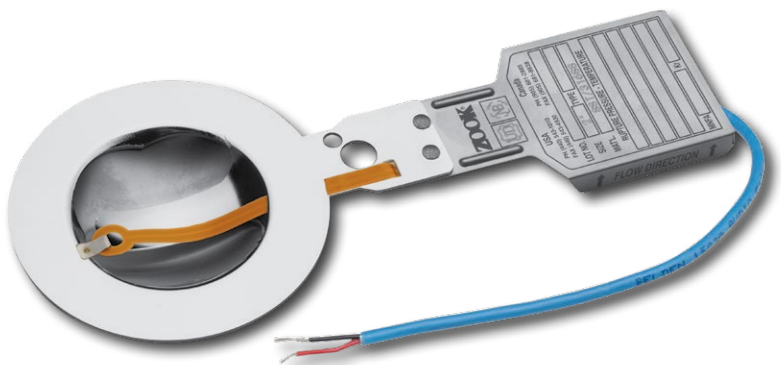
*Note: The maximum temperature rating of rupture disks supplied with liners and BI's is lower than the base disk material.

Safety Relief Valve Protection

When a disk is mounted under a Safety Relief Valve, the working components of the valve are isolated from hostile environments.



RA8 Series disk mounts into RAH Series disk holder (refer to RAH Series data sheet)



Safety through **knowledge** and **performance**.

RA8 Series Specifications

Minimum and Maximum Pressure Ratings - psig (barg) @ 72°F (22°C)

Disk Size	Minimum Burst Pressure										Maximum Burst Pressure		MNFA in ² (mm ²)			
	316		Inconel 600		Monel 400		Nickel 200/201		Hastelloy C276		RA8-L	RA8-BI		Liquid	Gas	
	Liquid	Gas	Liquid	Gas	Liquid	Gas	Liquid	Gas	Liquid	Gas						
1"	200	144	200	144	200	144	200	144	200	144	Same as minimum material	Same as minimum material	1000	720	0.86	
25 mm	13.79	9.93	13.79	9.93	13.79	9.93	13.79	9.93	13.79	9.93			68.97	49.66	554	
1-1/2"	167	120	167	120	167	120	167	120	167	120			1000	720	2.00	
40 mm	11.52	8.28	11.52	8.28	11.52	8.28	11.52	8.28	11.52	8.28			68.97	49.66	1,290	
2"	118	100	118	100	118	100	118	100	118	100			850	720	3.36	
50 mm	8.14	6.90	8.14	6.90	8.14	6.90	8.14	6.90	8.14	6.90			58.62	49.66	2,167	
3"	68	65	68	65	68	65	68	65	68	65			425	285	7.25	
80 mm	4.69	4.48	4.69	4.48	4.69	4.48	4.69	4.48	4.69	4.48			29.31	19.66	4,677	
4"	69	55	69	55	69	55	69	55	69	55			425	285	12.53	
100 mm	4.76	3.79	4.76	3.79	4.76	3.79	4.76	3.79	4.76	3.79			29.31	19.66	8,083	
6"	67	45	67	45	67	45	67	45	67	45			350	225	26.59	
150 mm	4.62	3.10	4.62	3.10	4.62	3.10	4.62	3.10	4.62	3.10			24.14	15.52	17,154	
8"	54	35	54	35	54	35	54	35	54	35			300	180	45.48	
200 mm	3.72	2.41	3.72	2.41	3.72	2.41	3.72	2.41	3.72	2.41			20.69	12.41	29,341	
10"	46	30	46	30	46	30	46	30	46	30			150	100	70.52	
250 mm	3.17	2.07	3.17	2.07	3.17	2.07	3.17	2.07	3.17	2.07			10.34	6.9	45,496	
12"	38	26	38	26	38	26	38	26	38	26			110	75	98.33	
300 mm	2.62	1.79	2.62	1.79	2.62	1.79	2.62	1.79	2.62	1.79			7.59	5.17	63,438	
Max. Temp.	900°F (482°C)		900°F (482°C)*		800°F (427°C)		750°F (399°C)		900°F (482°C)				500°F (260°C)	400°F (204°C)		

Note: For materials, sizes, burst ratings and temperatures not shown, contact ZOOK
* Contact ZOOK for higher temperatures

Manufacturing Design Range & Total Performance Tolerance

ASME						PED				
Burst Pressure (psig)		Manufacturing Design Range			Burst Tolerance	Burst Pressure (barg)		Total Performance Tolerance		
Minimum	Maximum	Good	Better	Best		Minimum	Maximum	Good	Better	Best
1.0	<2.5	-10%	-5%	-0%	±0.5 psig	0.069	<0.172	±50%	-	±0.035 barg
2.5	<5.0	-10%	-5%	-0%	±0.5 psig	0.172	<0.345	±30%	±25%	±0.035 barg
5	<7.0	-10%	-5%	-0%	±0.8 psig	0.345	<0.483	±20%	±17.5%	±0.055 barg
7	<10.0	-10%	-5%	-0%	±0.8 psig	0.483	<0.690	±20%	±15%	±0.055 barg
10	<15	-10%	-5%	-0%	±1.3 psig	0.690	<1.034	±20%	±15%	±0.090 barg
15	<26	-10%	-5%	-0%	±2.0 psig	1.034	<1.793	±20%	±15%	±0.138 barg
26	<40	-10%	-5%	-0%	±2.0 psig	1.793	<2.759	±15%	±12.5%	±0.138 barg
40	Max	-10%	-5%	-0%	±5%	2.759	Max	±10%	±7.5%	±5%

Notes:

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

Certified Flow Resistance Factors

K _{rl} (Liquid)	K _{rg} (Gas)
1.16	0.59

Inconel - TM Special Metals Corporation
Monel - TM Special Metals Corporation
Hastelloy - TM Haynes International



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