

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
- Wide range of standard and exotic materials available
- Sizes from 1" (25mm) through 12" (300mm)
- Burst ratings from 2 psig (0.14 barg) to 40 psig (2.76 barg)
- Unique alignment pin design ensures proper disk orientation into RAH Series disk holder
- 3-dimensional stainless steel tag permanently attached and engraved with complete disk specifications
- ASME UD, CE (PED), and TÜV compliance available

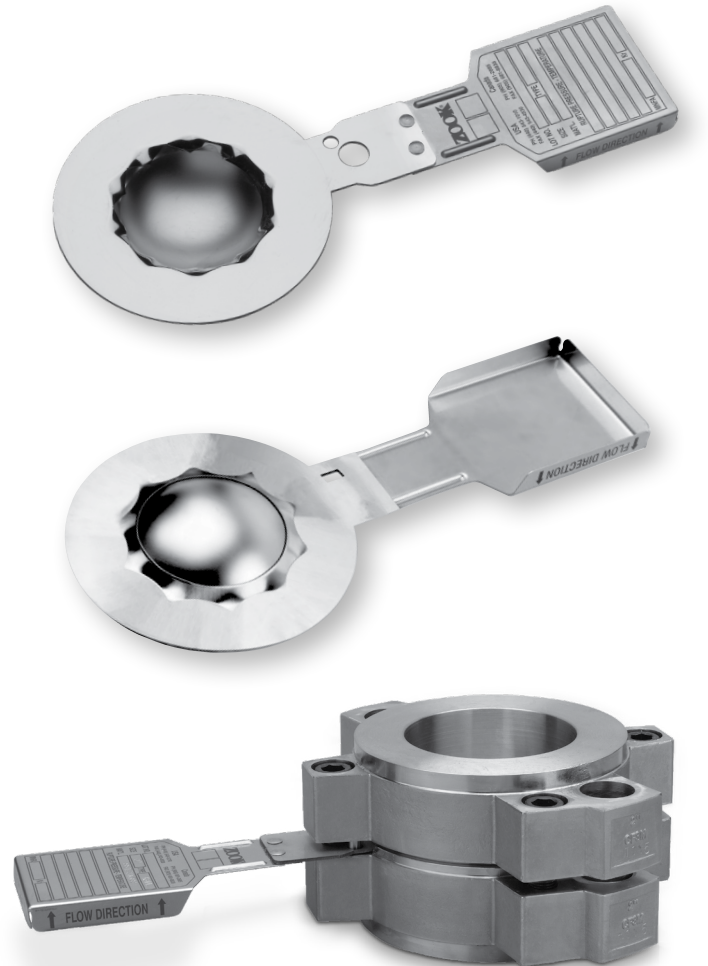
### Options

- RA4-L\*** A process side PFA Teflon liner provides protection from corrosive media. The process side liner is placed between the disk and process side ring
- RA4-BI\*** Equipped with ZOOK's Integral Burst Indicator
- RA4+** Factory tested to 100% of the low end of the tolerance to insure no disks will burst low

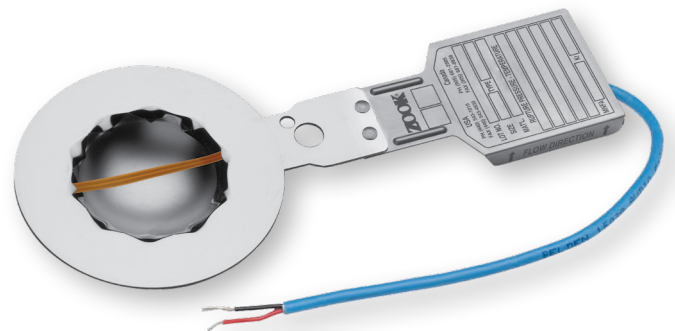
\*Note: The maximum temperature rating of rupture disks supplied with liners and BI's is lower than the base disk material

### 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.



RA4 Series disk mounts into RAH Series disk holder (refer to RAH Series data sheet)



# RA4 Series Specifications

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

Disk Size	Minimum Burst Pressure						Maximum Burst Pressure	MNFA in <sup>2</sup> (mm <sup>2</sup> )		
	316	Inconel 600	Monel 400	Nickel 200/201	Hastelloy C276	RA4-L <sup>1</sup>			RA4-BI	
1"	13	15	15	15	23	+5	Same as minimum material	40	0.86	
25 mm	0.897	1.035	1.035	1.035	1.586	0.345		2.757	554	
1-1/2"	9	10	10	10	15	+5		25	1.63	
40 mm	0.621	0.690	0.690	0.690	1.035	0.345		1.723	1,051	
2"	6	6	6	6	8	+2		25	2.78	
50 mm	0.414	0.414	0.414	0.414	0.552	0.138		1.723	1,793	
3"	4	5	5	5	6	+3		25	5.69	
80 mm	0.276	0.345	0.345	0.345	0.414	0.207		1.723	3,670	
4"	3	4	4	4	5	+2		20	9.51	
100 mm	0.207	0.276	0.276	0.276	0.345	0.138		1.378	6,135	
6"	2	4	4	3	5	+1		18	19.46	
150 mm	0.138	0.276	0.276	0.207	0.345	0.069		1.241	12,554	
8"	2	3	3	3	4	+1		18	33.28	
200 mm	0.138	0.207	0.207	0.207	0.276	0.069		1.241	21,470	
10"	2	3	3	3	4	+1		14	50.78	
250 mm	0.138	0.207	0.207	0.207	0.276	0.069		0.965	32,761	
12"	2	3	3	3	4	+1		14	71.97	
300 mm	0.138	0.207	0.207	0.207	0.276	0.069		0.965	46,432	
Max. Temp.	900°F (482°C)	900°F (482°C) <sup>2</sup>	800°F (427°C)	750°F (399°C)	900°F (482°C)	500°F (260°C)		400°F (204°C)		

Notes: For materials, sizes, burst ratings and temperatures not shown, contact ZOOK

<sup>1</sup> Add pressure to min for material

<sup>2</sup> 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%	±0.33 psig	0.069	<0.172	±50%	-	±0.023 barg
2.5	<5.0	-10%	-5%	-0%	±0.5 psig	0.172	<0.345	±30%	±25%	±0.035 barg
5.0	<7.0	-10%	-5%	-0%	±0.5 psig	0.345	<0.483	±20%	±17.5%	±0.035 barg
7.0	<11.0	-10%	-5%	-0%	±0.8 psig	0.483	<0.759	±20%	±15%	±0.055 barg
11.0	<15	-10%	-5%	-0%	±1.3 psig	0.759	<1.034	±20%	±15%	±0.090 barg
15.0	<26	-10%	-5%	-0%	±2.0 psig	1.034	<1.793	±20%	±15%	±0.138 barg
26.0	<40	-10%	-5%	-0%	±2.0 psig	1.793	<2.758	±15%	±12.5%	±0.138 barg
40.0	Max	-10%	-5%	-0%	±5%	2.758	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

Krl (Liquid)	Krg (Gas)
1.63	1.63

Teflon - Trademark of The Chemours Company  
 Inconel - Trademark of Special Metals Corporation  
 Monel - Trademark of Special Metals Corporation  
 Hastelloy - Trademark of Haynes International



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Safety through knowledge and performance.