



RA4 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
- 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

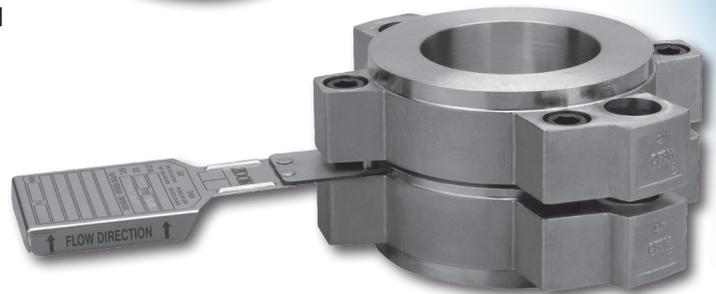
Options

- 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.

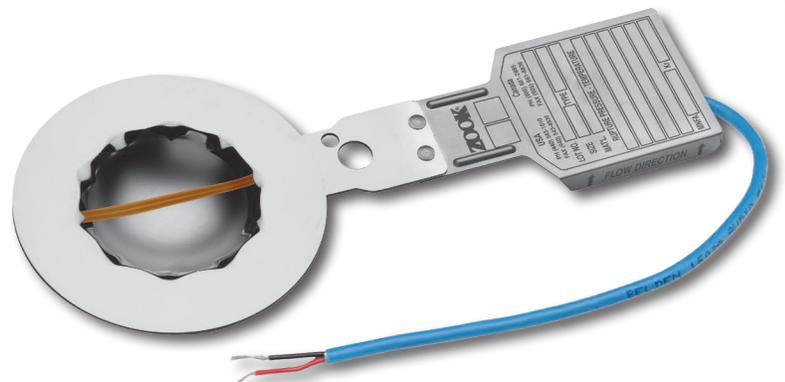
*Note: The maximum temperature rating of rupture disks supplied with liners and BI's is lower than the base disk material.

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 ² (mm ²)	
	316	Inconel 600	Monel 400	Nickel 200/201	Hastelloy C276	RA4-L ¹	RA4-BI			
1"	13	15	15	15	23	+5	Same as minimum material	40	0.86	
25 mm	0.89	1.03	1.03	1.03	1.58	+0.34		2.76	554	
1-1/2"	9	10	10	10	15	+5		25	1.63	
40 mm	0.62	0.69	0.69	0.69	1.03	+0.34		1.72	1,051	
2"	6	6	6	6	8	+3		25	2.78	
50 mm	0.41	0.41	0.41	0.41	0.55	+0.21		1.72	1,790	
3"	4	5	5	5	6	+2		25	5.69	
80 mm	0.27	0.34	0.34	0.34	0.41	+0.14		1.72	3,670	
4"	3	4	4	4	5	+2		20	9.51	
100 mm	0.21	0.28	0.28	0.28	0.34	+0.14		1.38	6,135	
6"	2	4	4	3	5	+1		18	19.46	
150 mm	0.14	0.28	0.28	0.21	0.34	+0.07		1.24	12,554	
8"	2	3	3	3	4	+1		18	33.28	
200 mm	0.14	0.21	0.21	0.21	0.28	+0.07		1.24	21,470	
10"	2	3	3	3	4	+1		14	50.78	
250 mm	0.14	0.21	0.21	0.21	0.28	+0.07		0.97	32,761	
12"	2	3	3	3	4	+1		14	71.97	
300 mm	0.14	0.21	0.21	0.21	0.28	+0.07		0.97	46,432	
Max. Temp.	900°F (482°C)	900°F (482°C) ²	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

¹ Add pressure to min for material

² 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 - TM The Chemours Company
Inconel - TM Special Metals Corporation
Monel - TM Special Metals Corporation
Hastelloy - TM Haynes International



RA4_122019

Visit us at www.zookdisk.com

SERVING AMERICA, CENTRAL & SOUTH AMERICA

16809 Park Circle Drive
Chagrin Falls, Ohio 44022
United States

Toll Free: +1 800 543 1043
Phone: +1 440 543 1010
Fax: +1 440 543 4930
E-mail: sales@zookdisk.com

SERVING EUROPE, MIDDLE EAST & AFRICA

Navigation House, Bridge St.
Killamarsh, Sheffield, S21 1AL
United Kingdom

Phone: +44 (0) 1909 560999
Fax: +44 (0) 1909 560860
E-mail: sales.europe@zookdisk.com

SERVING CANADA

4400 South Service Road
Burlington, Ontario, L7L 5R8
Canada

Toll Free: +1 800 370 6057
Phone: +1 905 681 2885
Fax: +1 905 681 8838
E-mail: sales.canada@zookdisk.com

SERVING ASIA PACIFIC

Unit No. 23A-05, Menara Landmark
No.12, Jalan Ngee Heng
80000 Johor Bahru, Johor,
Malaysia

Phone: +60 (7) 2910099
Fax: +60 (7) 2910096
E-mail: sales.asia@zookdisk.com



Safety through knowledge and performance.