



RAX Series Cross-Scored 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 gas service only
- 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" (25mm) through 12" (300mm)
- Burst ratings from 27 psig (1.86 barg) to 1480 psig (102.04 barg)
- Resists product build-up. The smooth convex side of the disk is exposed to the process media
- 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

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

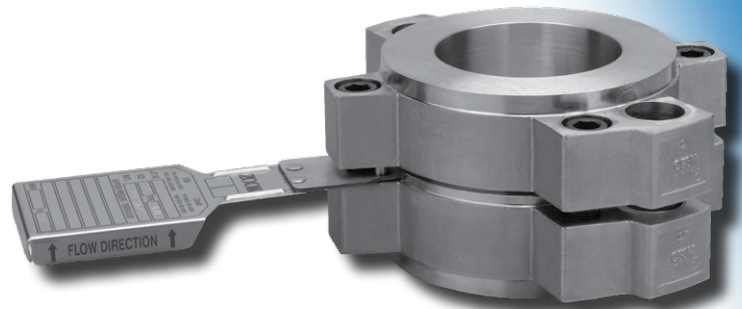
RAX-BI* Equipped with ZOOK's Integral Burst Indicator.

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

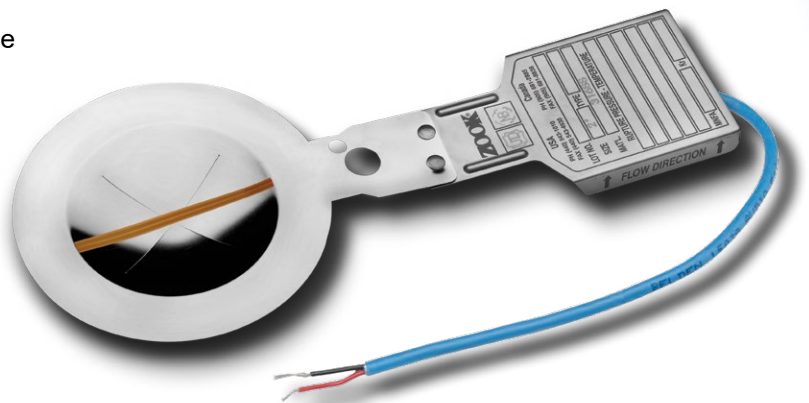
*Note: The maximum temperature rating of rupture disks supplied with liners and BI's is lower than the base disk material.

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.



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



RAX 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	Monel	Nickel	Hastelloy C276	RAX-L	RAX-BI			
	Gas Services Only - A gas pocket is required below disk for liquid applications - Contact ZOOK for additional information									
1"	221	141	122	92	221	Same as minimum material	Same as minimum material	1480	0.86	
25 mm	15.24	9.72	8.41	6.34	15.24			102.04	554	
1-1/2"	234	98	98	81	234			1480	2.04	
40 mm	16.14	6.76	6.76	5.59	16.14			102.04	1,316	
2"	188	83	83	60	188			1480	3.36	
50 mm	12.97	5.72	5.72	4.14	12.97			102.04	2,167	
3"	154	66	65	55	154			1480	7.39	
80 mm	10.62	4.55	4.48	3.79	10.62			102.04	4,767	
4"	122	54	55	48	122			1480	12.73	
100 mm	8.41	3.72	3.79	3.31	8.41			102.04	8,212	
6"	94	47	44	35	94			1480	28.89	
150 mm	6.48	3.24	3.03	2.41	6.48			102.04	18,638	
8"	42	44	41	33	42			700	50.03	
200 mm	2.89	3.03	2.83	2.28	2.89			48.28	32,277	
10"	36	40	39	30	36			700	78.85	
250 mm	2.48	2.76	2.69	2.07	2.48			48.28	50,870	
12"	33	37	36	27	33			600	112	
300 mm	2.28	2.55	2.48	1.86	2.28			41.38	72,257	
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)	

Notes: 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%	±0.33 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

Krg (Gas)
2.00

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



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Safety through knowledge and performance.