



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 type holder.



Features

- Designed for Non-fragmentation
- Scoreless design offers higher cycle life when compared to scored reverse acting disks
- Standard operating ratio of 90% of the marked rating on disk tag. May be extended to 95% of the minimum burst pressure. (Contact ZOOK for operating ratio on pressures below 40 psig)
- Certified for liquid, gas, or two-phase applications
- Standard manufacturing ranges of 0%, -5%, and -10% 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 24" (600mm)
- Burst ratings from 26 psi (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 holder
- 3-dimensional stainless steel tag permanently engraved with complete disk specifications
- ASME UD, CE, and TUV compliance available

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.

Option Liners

TFE liners are available to provide protection from corrosive media.

Note that the maximum temperature ratings for disks supplied with liners is lower than an unlined disk.

RA8 Series Minimum and Maximum Pressure Ratings – psig (barg) @ 72°F (22°C)

Disk Size	With Liner (RA8-L)	Minimum Burst Pressures – psig @ 72°F (barg @ 22°C)								Maximum Burst Pressure		MNFA in ² (cm ²)
		316SS		Inconel		Monel		Nickel		Liquid	Gas	
		Liquid	Gas	Liquid	Gas	Liquid	Gas	Liquid	Gas			
1"	144	200	144	200	144	200	144	200	144	1000	720	0.86
25 mm	(9.93)	(13.79)	(9.93)	(13.79)	(9.93)	(13.79)	(9.93)	(13.79)	(9.93)	(68.97)	(49.66)	(5.5)
1-1/2"	120	167	120	167	120	167	120	167	120	1000	720	2.00
40 mm	(8.28)	(11.52)	(8.28)	(11.52)	(8.28)	(11.52)	(8.28)	(11.52)	(8.28)	(68.97)	(49.66)	(12.90)
2"	100	118	100	118	100	118	100	118	100	850	720	3.36
50 mm	(6.9)	(8.14)	(6.9)	(8.14)	(6.9)	(8.14)	(6.9)	(8.14)	(6.9)	(58.62)	(49.66)	(21.70)
3"	65	68	65	68	65	68	65	68	65	425	285	7.25
80 mm	(4.48)	(4.69)	(4.48)	(4.69)	(4.48)	(4.69)	(4.48)	(4.69)	(4.48)	(29.31)	(19.66)	(46.80)
4"	55	69	55	69	55	69	55	69	55	425	285	12.53
100 mm	(3.79)	(4.76)	(3.79)	(4.76)	(3.79)	(4.76)	(3.79)	(4.76)	(3.79)	(29.31)	(19.66)	(80.80)
6"	45	67	45	67	45	67	45	67	45	350	225	26.59
150 mm	(3.1)	(4.62)	(3.1)	(4.62)	(3.1)	(4.62)	(3.1)	(4.62)	(3.1)	(24.14)	(15.52)	(171.50)
8"	35	54	35	54	35	54	35	54	35	300	180	45.48
200 mm	(2.41)	(3.72)	(2.41)	(3.72)	(2.41)	(3.72)	(2.41)	(3.72)	(2.41)	(20.69)	(12.41)	(293.40)
10"	30	46	30	46	30	46	30	46	30	150	100	70.52
250 mm	(2.07)	(3.17)	(2.07)	(3.17)	(2.07)	(3.17)	(2.07)	(3.17)	(2.07)	(10.34)	(6.9)	(455.00)
12"	26	38	26	38	26	38	26	38	26	110	75	98.33
300 mm	(1.79)	(2.62)	(1.79)	(2.62)	(1.79)	(2.62)	(1.79)	(2.62)	(1.79)	(7.59)	(5.17)	(634.40)
Max. Temp.	500°F (260°C)	900°F (482°C)		900°F (482°C)		900°F (482°C)		750°F (399°C)				

NOTES: For materials, sizes, burst ratings and temperatures not shown, contact ZOOK
Process medium must be specified at time of order for sizes 6" and above

Manufacturing Range / Burst Tolerance psig (barg) @ 72°F (22°C)

Specified Burst Pressure Rating	Manufacturing Ranges	Burst Tolerance
1 to below 5 (0.07 to below 0.34)	0%, -5%, -10%	+/-0.50 (+/-0.03)
5 to below 10 (0.34 to below 0.69)		+/-0.80 (+/-0.06)
10 to below 15 (0.69 to below 1.03)		+/-1.30 (+/-0.09)
15 to 40 (1.03 to 2.76)		+/-2.00 (+/-0.14)
Above 40 (Above 2.76)		+/-5% (+/-5%)

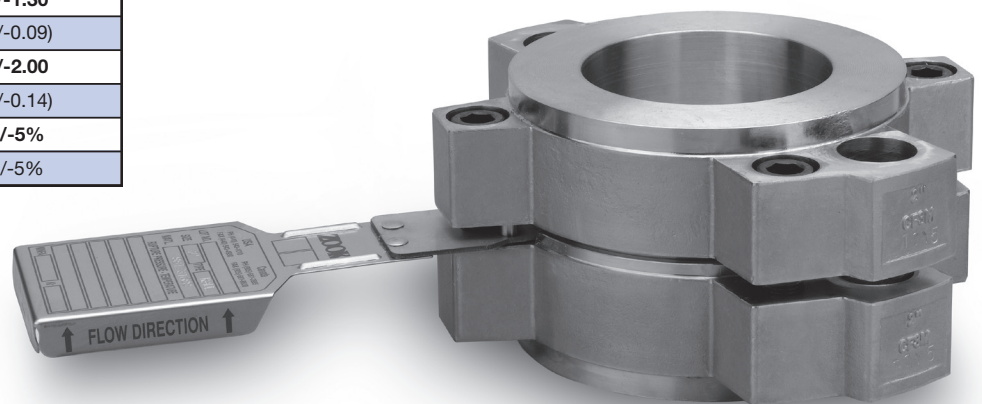
Notes:

- 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

Disk Type	K _{rl} (Liquid)	K _{rg} (Gas)
RA8 Series	1.16	0.59

RA8 Series Disk mounts into RAH Series Disk Holder (refer to ZOOK product bulletin 475100)



Monel – TM Huntington Alloys
Inconel – TM International Nickel



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