









RD500 ATLAS® RUPTURE DISC

DESCRIPTION

The RD500 ATLAS is a reverse-acting rupture disc, suitable for the most challenging industrial pressure relief applications. Utilizing Fike's patented G2 Manufacturing Technology, this rupture disc is pre-engineered and will provide highly accurate and reliable burst pressure protection.



PERFORMANCE ATTRIBUTES

Performance Attributes				Process Media		Bolted Type Rupture Disc Holders	
Operating Ratio	Non-Fragmenting	Vacuum Resistant	Pulsating / Cyclic	Liquid	Vapor/Gas	Insert Type (GI)	Pre-Torque Type (TQ/TQ+)
							
100% CE 95% ASME	YES	YES	YES	YES*	YES	ATLAS / ATLAS-LO	

*Sizes 14 in (DN350) and up are suitable for use in liquid systems only with listed volume of compressible vapor against the disc at the time of opening. See table below for the minimum vapor volume requirement.

FEATURES

- Operating Ratio
 - 95% of marked burst pressures over 40 psig (2.76 barg) (ASME)
 - 95% of minimum burst tolerance for burst pressures less than or equal to 40 psig (2.76 barg) (ASME and EN ISO 4126-2)
 - 100% of minimum burst pressure over 40 psig (2.76 barg) (EN ISO 4126-2)
- Cycling: Capable of 100,000 cycles with pressures ranging between full vacuum up to 95% of marked burst pressure (ASME) or 100% of the minimum burst pressure range (EN ISO 4126-2) (up to 95% of min burst pressure for pressures below 40 psig)
- Damage ratio: ≤ 1
- Backpressure: 105% of specified burst pressure
- Process Media: Operates in both gas and liquid applications
- Vacuum Resistance: Capable of withstanding full vacuum
- Zero manufacturing range: Included (ASME)

APPROVALS



ASME



CE Marked



KOSHA



CRN



DATA SHEET

MINIMUM / MAXIMUM BURST PRESSURE (BP) in psig (barg) @ 72°F (22°C)

Size \ Material		316/316L SST (1.4401/1.4404)		Hastelloy® C276 (2.4819)		Inconel® 625 (2.4856)	
		Max Temp: 900°F (482°C)		Max Temp: 900°F (482°C)		Max Temp: 1100°F (593°C)	
IN	DN	Min. BP	Max. BP	Min. BP	Max. BP	Min. BP	Max. BP
1	25	200 (13.79)	1100 (75.84)	380 (26.20)	1375 (94.80)	310 (21.37)	1500 (103.42)
1.5	40	120 (8.27)	1000 (68.95)	300 (20.68)	1200 (82.74)	180 (12.41)	1200 (82.74)
2	50	75 (5.17)	915 (63.09)	115 (7.93)	1060 (73.08)	100 (6.89)	970 (66.88)
3	80	60 (4.14)	780 (53.78)	60 (4.14)	865 (59.64)	75 (5.17)	625 (43.09)
4	100	60 (4.14)	615 (42.40)	60 (4.14)	750 (51.71)	60 (4.14)	700 (48.26)
6	150	50 (3.45)	540 (37.23)	Consult Factory		50 (3.45)	630 (43.44)
8	200	50 (3.45)	400 (27.58)	Consult Factory		50 (3.45)	520 (35.85))
10	250	Consult Factory					
12	300	Consult Factory					
14*	350	6.0 (0.41)	300 (20.7)	7.0 (0.48)	300 (20.7)	7.0 (0.48)	300 (20.7)
16*	400	5.0 (0.34)	250 (17.2)	7.0 (0.48)	250 (17.2)	7.0 (0.48)	250 (17.2)
18*	450	5.0 (0.34)	200 (13.8)	6.0 (0.41)	200 (13.8)	6.0 (0.41)	200 (13.8)
20*	500	4.5 (0.31)	180 (12.4)	5.0 (0.34)	180 (12.4)	5.0 (0.34)	180 (12.4)
24*	600	3.5 (0.24)	150 (10.3)	4.0 (0.28)	150 (10.3)	4.0 (0.28)	150 (10.3)
26*	650	3.5 (0.24)	150 (10.3)	4.0 (0.28)	150 (10.3)	4.0 (0.28)	150 (10.3)
28*	700	3.5 (0.24)	150 (10.3)	4.0 (0.28)	150 (10.3)	4.0 (0.28)	150 (10.3)
30*	750	3.5 (0.24)	140 (9.65)	4.0 (0.28)	140 (9.65)	4.0 (0.28)	140 (9.65)
32*	800	3.25 (0.22)	125 (8.62)	4.0 (0.28)	125 (8.62)	4.0 (0.28)	125 (8.62)
36*	900	3.25 (0.22)	100 (6.89)	4.0 (0.28)	100 (6.89)	4.0 (0.28)	100 (6.89)
42*	1050	3.25 (0.22)	75 (5.17)	4.0 (0.28)	75 (5.17)	4.0 (0.28)	75 (5.17)

*Sizes 14 in (DN350) and up are suitable for use in liquid systems only with listed volume of compressible vapor against the disc at the time of opening. See table below for the minimum vapor volume requirement.

For applications requiring lower burst pressures for sizes 12 in (DN300) and smaller, please refer to the RD520 AXIUS® rupture disc data sheet R.1.37.01

For applications that do not require high operating ratio or cycle life, please refer to the RD300 rupture disc data sheet R.1.53.01



DATA SHEET

MINIMUM FREE VAPOR VOLUME for LIQUID APPLICATIONS

Size		Minimum Free Vapor Volume		Relief Area	
IN	DN	ft ³	m ³	in ²	cm ²
14	350	7	0.21	117	752
16	400	11	0.32	153	989
18	450	16	0.45	195	1258
20	500	22	0.62	239	1540
24	600	38	1.07	346	2234
26	650	48	1.36	408	2630
28	700	60	1.69	474	3058
30	750	74	2.08	541	3491
32	800	89	2.53	617	3978
36	900	127	3.60	784	5057
42	1050	202	5.72	1066	6878

RUPTURE PERFORMANCE TOLERANCE

Burst Pressure @ 72°F (22°C)		Tolerance	
psig	barg	psi	bar
≤20	≤1.38	±1	±0.07
>20	>1.38	±5%	±5%

HOLDERS

The RD500 ATLAS® Rupture Disc is used with ATLAS/ATLAS-LO (low profile) holders. These are available as either insert-type with pre-assembly side-clips (GI) or pre-torque type with cap screws (TQ/TQ+). These holders are offered in a variety of materials and configurations. For complete specifications, see Atlas Insert Type Holder data sheet R.1.50.01 or R.2.50.01. Consult factory for TQ Series Pre-torque type.

OPTIONS AND ACCESSORIES

- Spacer ring for direct-coupling with relief valve required when using Atlas-Lo Holder
- Optional FEP or PFA fluoropolymer liner on the process side available

Size	Liner Material	Temperature Range
1 – 4 in (DN25 – DN100)	FEP	-40 to 400°F (-40 to 204°C)
	PFA	-40 to 500°F (-40 to 260°C)
6 – 42 in (DN150 – DN1050)	FEP	Consult Factory
	PFA	Consult Factory