

AXIUS® RUPTURE DISC

DESCRIPTION

The patented Axius is a reverse-acting, 95% operating ratio rupture disc, which boasts many new innovations in rupture disc technology. Utilizing Fike's new G2 design and manufacturing technology, this rupture disc is the first of its kind to be manufactured without hard score-tooling. Through the application of G2 technology, the Axius rupture disc has a unique "line of weakness" on the dome of the disc instead of a score line. Without stress zones that can fatigue, Axius provides unsurpassed cycling capability. There are no tool marks, dimples, or indentations on the process side of the disc making Axius the only 95% operating ratio disc with a completely smooth surface, preventing accumulation of process media.

G2 - A FIKE TECHNOLOGY

All disc families in the G2 product line represent a clean break from traditional disc manufacturing processes. The engineering methods used to develop and validate these products have provided industry leading performance characteristics across all pressure, material and size configurations. The advanced automated processes defining the G2 technology significantly increase lot to lot consistency helping to provide fast, economical industry solutions.

FEATURES AND BENEFITS

- High Operating Ratio
 - 95% of marked burst pressures over 40 PSIG (2.76 BARG)
 - 95% of minimum burst tolerance for burst pressures less than or equal to 40 PSIG (2.76 BARG)
 - 100% of minimum burst pressure for burst pressures over 40 PSIG (2.76 BARG) (ISO 4126-2)
- Axius is capable of cycling from full vacuum to 95% operating ratio in excess of 100,000 times, even at the lowest burst pressures available
- Disc seal and ring material are available in Hastelloy® C276, 316/316L SST, and Inconel 625
- Operates in both gas and liquid applications
- Standard with a zero manufacturing range
- Has a damage ratio ≤ 1
- Can be ordered with an optional FEP or PFA fluoropolymer liner on the process side
- Ideal for PRV/SRV isolation. Allows for PRV/SRV's to be tested in place when installed at the valve inlet and will withstand 1.25 times the marked pressure

ACCESSORIES AND HOLDERS

Holder

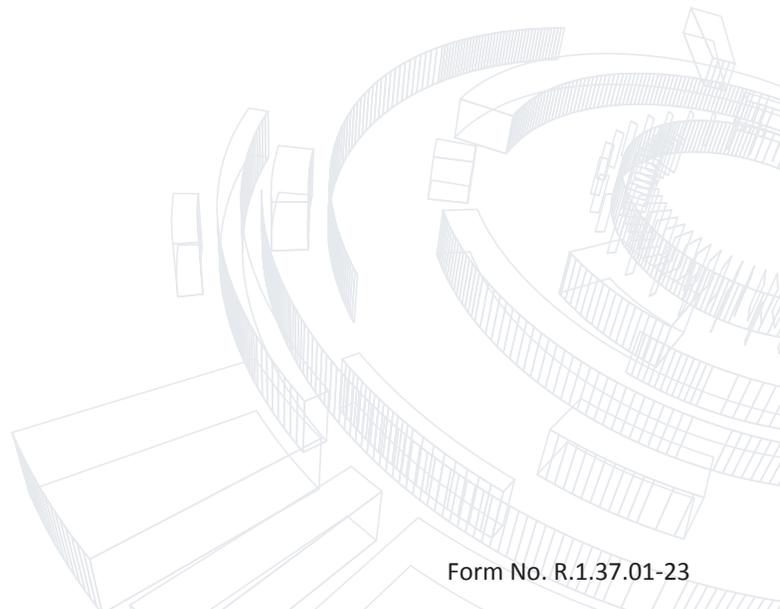
The Axius uses the XL and XLO (low profile) series of rupture disc holders. These holders are available in a variety of materials and configurations. See Insert Type Holder data sheet R.1.05.01, or for TQ Series Pretorqueable holders, see data sheet R.1.45.01 for complete specifications.



Axius Rupture Disc

APPROVALS:

- ASME
- CE Marked
- KOSHA
- SELO
- CRN



MINIMUM/MAXIMUM BURST PRESSURES IN PSIG (BARG) @ 72°F (22°C)

		316/316L SST (1.4401/1.4404)		Hastelloy® C276 (2.4856)		Inconel 625 (2.4819)	
		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
.75 ³	20	15 (1.03)	300 (20.68)	15 (1.03)	300 (20.68)	15 (1.03)	300 (20.68)
1 ²	25	10 (0.69)	525 (36.20)	12 (0.83)	600 (41.37)	10 (0.69)	450 (31.03)
1.5	40	8 (0.55)	385 (26.54)	8 (0.55)	385 ¹ (26.54)	8 (0.55)	215 (14.82)
2	50	8 (0.55)	385 (26.54)	8 (0.55)	470 (32.41)	8 (0.55)	150 (10.34)
3	80	7 (0.48)	325 (22.41)	7 (0.48)	430 (29.65)	7 (0.48)	80 (5.52)
4	100	7 (0.48)	285 (19.66)	7 (0.48)	300 (20.69)	7 (0.48)	60 (4.14)
6	150	8 (0.55)	200 (13.79)	8 (0.55)	200 (13.79)	Consult Factory	Consult Factory
8	200	8 (0.55)	150 (10.34)	8 (0.55)	140 (9.65)		
10	250	8 (0.55)	100 (6.89)	8 (0.55)	90 (6.21)		
12	300	8 (0.55)	70 (4.83)	8 (0.55)	60 (4.14)		

*For applications requiring higher burst pressures, please refer to the Atlas rupture disc, R.1.47.01. For larger sizes refer to the Large Atlas rupture disc, R.1.52.01.

Notes:

- 385 PSIG (26.54 BARG) is the maximum burst pressure rating with a 316/316L SST ring. 200 PSIG (13.79 BARG) is the maximum pressure rating with a Hastelloy® C276 ring.
- 1 IN (DN25) size not suitable for liquid systems at burst pressures less than 20 PSIG (1.38 BARG) with an inlet piping length greater than 10 IN (25 cm)
- 3/4 IN (DN20) size not suitable for liquid systems at burst pressures less than 30 PSIG (2.07 BARG) with an inlet piping length greater than 8 IN (20 cm)

LINER BURST PRESSURE MINIMUMS AND TEMPERATURE RANGE

Size	Liner Material:	Temperature Range:	Minimum BP:
.75-4" (DN20-DN100)	FEP	-40 to 400 F (-40 to 204 C)	30 psig (2.07 barg)
	PFA	-40 to 200 F (-40 to 93.3 C)	45 psig (3.10 barg)
	PFA	>200 to 500 F (>93.3 to 260 C)	30 psig (2.07 barg)
6-12" (DN150-DN300)	FEP	-40 to 400 F (-40 to 204 C)	15 psig (1.03 barg)
	PFA	-40 to 500 F (-40 to 260 C)	

BURST/PERFORMANCE TOLERANCE

Marked Burst Pressure		Tolerance	
PSIG	BARG	PSIG	BARG
7-14.99	.48-1.02	±1	±.07
15-40	1.03-2.76	±2	±.14
> 40	> 2.76	±5%	±5%

HOW TO SPECIFY

Previous Lot Number:	
OR	
Size:	
Flange Rating:	
Burst Pressure:	@ (Temperature)
Seal Material:	316/316L SST Hastelloy® C276 Inconel 625
Ring Material:	316/316L SST Hastelloy® C276 Inconel 625
Teflon Liner:	Yes / No
Certifications:	ASME CE KOSHA SELO CRN

Performance Attributes				Process Media		Rupture Disc Holders	
Operating Ratio	Non-Fragmenting	Vacuum Resistant	Pulsating/Cyclic	Liquid	Vapor/Gas	Bolted/Type	Pre-Torque
							
100% CE 95% ASME	yes	yes	yes	yes*	yes	yes	yes

* Consult factory for liquid full, hydraulic applications.

* Consult factory for applications where viscous liquid is against the disc at the time of disc opening.