

## 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-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.



Axius Rupture Disc

### G2 - A FIKE TECHNOLOGY

Fike Corporation has developed a revolutionary process for the design and manufacture of rupture discs called G2. G2 is the next generation of rupture disc manufacturing methodology and represents a clear break from past design methods. Utilizing G2 technology the Axius disc is equipped with the best combination of cycle life, operating ratio and  $K_R$  values in the industry allowing the Axius to out perform all other rupture discs in its class.

### FEATURES AND BENEFITS

- Axius can operate up to 95% of its marked burst pressure for burst pressures over 40 PSIG (2.76 BARG), and up to 95% of the minimum of the burst tolerance at 40 PSIG (2.76 BARG) and below.
- 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 is available in Hastelloy® C276 and 316/316L SST.
- Operates in both gas and liquid applications.
- Standard with a zero manufacturing range.
- Has a damage ratio  $\leq 1$ .
- 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.

Form No. R.1.37.01-13

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

		316/316L SST		Hastelloy® C276	
		Max Temp: 900°F (482°C)		Max Temp: 900°F (482°C)	
In	DN	Min. BP	Max. BP	Min. BP	Max. BP
1 <sup>2</sup>	25	10 (0.69)	525 (36.20)	12 (0.83)	600 (41.37)
1.5	40	8 (0.55)	385 (26.54)	8 (0.55)	385 <sup>1</sup> (26.54)
2	50	8 (0.55)	385 (26.54)	8 (0.55)	470 (32.41)
3	80	7 (0.48)	325 (22.41)	7 (0.48)	430 (29.65)
4	100	7 (0.48)	285 (19.66)	7 (0.48)	300 (20.69)
6	150	8 (0.55)	200 (13.79)	8 (0.55)	200 (13.79)
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)

**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 burst pressure rating with a Hastelloy® C276 ring.
- 1" (DN25) size not suitable for liquid systems at burst pressures less than 65 PSIG (4.48 BARG) with an inlet piping length greater than 10" (25 cm)

LINER BURST PRESSURE MINIMUMS AND TEMPERATURE RANGE









Liner Material	Minimum BP 1"-4"	Minimum BP 6"-12"	Temperature Range
FEP	30 PSIG (2.07 BARG)	15 PSIG (1.03 BARG)	-40 to 400°F (-40 to 204°C)
PFA	45 PSIG (3.1 BARG)	15 PSIG (1.03 BARG)	-40 to 200°F (-40 to 93.33°C)
PFA	30 PSIG (2.07 BARG)	15 PSIG (1.03 BARG)	200.01 to 500°F (93.34 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
Ring Material:	316/316L SST Hastelloy® C276
Teflon Liner:	Yes / No
Certifications:	ASME CE

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

## CERTIFICATIONS



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