



# SFAZ Series Scored Forward-Acting Rupture Disks

## Features

- Solid metal cross-scored disk designed for Non-fragmentation
- Operating ratios up to 90% of the low end of the burst tolerance
- Excellent for liquid, gas or 2-phase flow
- Scored after disk material is formed to a high crown height. Permits use of thicker material and allows lower burst ratings which withstand full vacuum
- Burst ratings 15 psig (248 barg) to 3600 psig (1 barg)
- Sizes 1/2" (13mm) through 24" (610mm) diameters
- Temperature ratings to 1000°F (538°C)
- Standard material of construction is Nickel. Optional materials 316SS, Inconel, Monel, Hastelloy C and Aluminum are available
- 3-dimensional stainless steel tag engraved with complete disk specifications
- ASME UD, CE and TÜV compliance available



## Polymerization Vessel Protection

- Withstands corrosive attack
- Positive-to-negative cycling
- Higher operating ratio
- Use alone or combine with relief valves



UHZ Disk Holder

## Fail-Safe Design

If the SFAZ Series Disk is damaged or incorrectly installed, it will always burst at or below the marked burst rating as indicated on the disk tag.

## Safety Relief Valve Protection

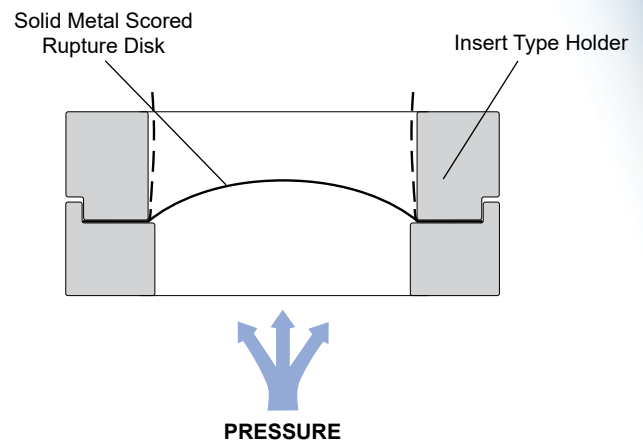
SFAZ Series Disks mounted under the valve isolates working parts from hostile environments.

## Options

### Liners

Liners are available to provide protection from corrosive media if required. Refer to Table 1 for maximum temperature ratings for disks and liners.

**Protective Rings** are recommended for use with SFAZ Series Disks to provide stability and protection when thin materials and/or liners are used.



SFAZ Series Disks mount with the concave surface facing the process media. As pressure increases above the recommended operating ratio, the score lines weaken until rupture occurs. When the SFAZ Disk ruptures, the disk opens along the score lines and folds back against the holder outlet.



# SFAZ Series Specifications

## SFAZ Series Minimum and Maximum Pressure Ratings

- psig (bar) @ 72°F (22°C)

Disk Size	Disk Materials									
	Nickel		Inconel		Monel		316SS		Hastelloy C	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1"	79	3600	110	3600	100	3600	110	3600	165	3600
25 mm	(5.45)	(248.28)	(7.59)	(248.28)	(6.90)	(248.28)	(7.59)	(248.28)	(11.38)	(248.28)
1-1/2"	73	3600	85	3600	73	3600	80	3600	125	3600
40 mm	(5.03)	(248.28)	(5.86)	(248.28)	(5.03)	(248.28)	(5.52)	(248.28)	(8.62)	(248.28)
2"	61	3600	70	3600	65	3600	61	3600	102	3600
50 mm	(4.21)	(248.28)	(4.83)	(248.28)	(4.48)	(248.28)	(4.21)	(248.28)	(7.03)	(248.28)
3"	45	2159	60	2159	60	2159	60	2159	84	2159
80 mm	(3.10)	(148.90)	(4.14)	(148.90)	(4.14)	(148.90)	(4.14)	(148.90)	(6.00)	(148.90)
4"	45	2159	60	2159	55	2159	60	2159	84	2159
100 mm	(3.10)	(148.90)	(4.14)	(148.90)	(3.79)	(148.90)	(4.14)	(148.90)	(5.79)	(148.90)
6"	45	1440	60	1440	55	1440	60	1440	96	1440
150 mm	(3.10)	(99.31)	(4.14)	(99.31)	(3.79)	(99.31)	(4.14)	(99.31)	(6.62)	(99.31)
8"	45	1440	60	1440	55	1440	60	1440	93	1440
200 mm	(3.10)	(99.31)	(4.14)	(99.31)	(3.79)	(99.31)	(4.14)	(99.31)	(6.41)	(99.31)
10"	45	1440	72	1440	60	1440	72	1440	111	1440
250 mm	(3.10)	(99.31)	(4.97)	(99.31)	(4.14)	(99.31)	(4.97)	(99.31)	(7.66)	(99.31)
12"	45	720	82	720	65	720	82	720	120	720
300 mm	(3.10)	(49.66)	(5.66)	(49.66)	(4.48)	(49.66)	(5.66)	(49.66)	(8.28)	(49.66)
Max. Temp.	750°F (399°C)		900°F (482°C)		800°F (427°C)		900°F (482°C)		1000°F (538°C)	

**Notes:**

- Minimum rating will support full vacuum without additional vacuum support. Alternate materials and lower burst ratings are available on request. Contact ZOOK for more information.

MONEL - TM Huntington Alloys  
 INCONEL - TM International Nickel  
 HASTELLOY C - TM Haynes International

- For larger sizes or sizes not shown, Contact ZOOK.

**TFE liner may be added to provide additional protection against corrosive media**

Requirements/Limitations when TFE liner is added:

1. A protective ring is required
2. Max. temperature of 500°F (260°C) – Limitation of liner material
3. Liner cannot be applied to process side of vacuum support
4. Liner may be applied to all ratings. Contact ZOOK if liner is required on both sides of rupture disk

### Manufacturing Range / Burst Tolerance

Specified Burst Pressure Rating	Manufacturing Ranges	Burst Tolerance
40 and below	0%, -5%, -10%	+/-2.00
(2.76 and below)		(+/-0.14)
Above 40		+/-5%
(Above 2.76)		(+/-5%)

**Notes:**

- +0% / -10% manufacturing range is standard
- Burst tolerances are the maximum expected variation from the disk's marked burst pressure

### Certified Flow Resistance Factors

Disk Type	K <sub>rl</sub> (Liquid)	K <sub>rg</sub> (Gas)
SFAZ	1.78	0.39



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Safety through knowledge and performance.