

SR-SERIES

# Fike SRX Rupture Discs Scored, Reverse Acting, X-Pattern



- Extended service life
- 90% operating ratio
- Heavy cyclic duty
- Ideal for SRV isolation

# The Fike SRX Rupture Disc: Reverse acting,

Fike Corporation is recognized worldwide as **the** leader in the design and manufacture of rupture discs and explosion vents. Chemical, petrochemical and other process industries, aerospace and defense contractors, nuclear plant operators, and medical equipment manufacturers—all rely on Fike's Tradition of Quality to provide them with the ultimate in overpressure relief and explosion venting.

Fike SRX rupture discs are reverse-acting, compression loaded, and scored with an "X" pattern to facilitate opening without knifeblades. These discs have many high performance characteristics that make them ideal for demanding applications such as the isolation of safety relief valves.

## Extended service life

SRX rupture discs have **superior** service life in heavily pulsating and cyclic duty when compared to forward acting (tension loaded) rupture discs. This is primarily due to the reverse buckling (compression loaded) design.

## Non-fragmenting

The SRX is designed to be non-fragmenting. The "X" pattern score configuration controls the disc opening and enables the disc to rupture without fragmentation.

## High flow coefficient

When SRX discs are used to isolate Safety Relief valves, a combination capacity factor of 0.9 may be used. Higher combination capacity factors may be established by testing and certification in accordance with the ASME Code, Section VIII, Div I.

## High operating ratio

SRX discs will sustain process operating pressures as high as 90% of the stamped disc rating, without premature failure due to metal fatigue.

## Full vacuum rating

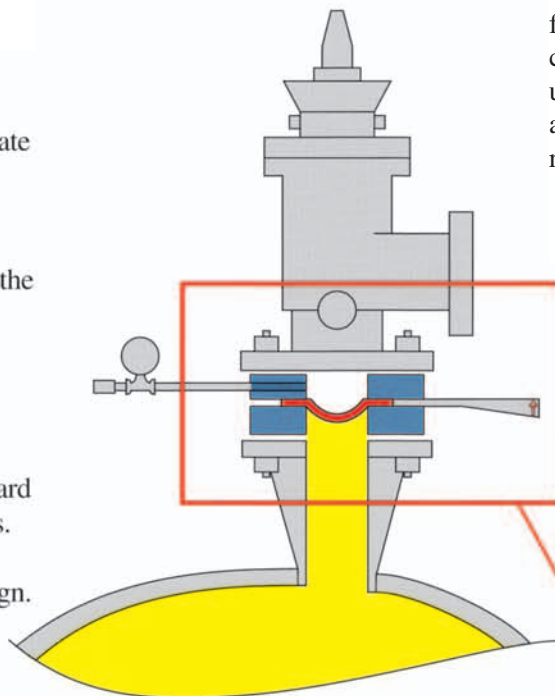
The SRX will withstand full vacuum, or backpressure service in magnitudes equivalent to the stamped burst pressure.

## Simplified application engineering

All manufacturing ranges are below the specified burst pressure. Standard manufacturing range is +0% to -10%. Reduced manufacturing ranges of +0% to -5% and Zero Manufacturing Range available.

## Materials of construction

Stainless steel, Inconel\*, Monel\*, nickel, and Hastelloy\* C are available as standard. Consult factory for other materials. Protective coatings such as Teflon\*, urethane, and urethane acrylic are available to enhance corrosion resistance.



## Reduced torque sensitivity

SRX discs perform reliably even under less than ideal installation conditions due to their special seating configuration.

## Three dimensional tag

A 3-D stainless steel tag, with prominent flow arrows, visually confirms proper installation and orientation.



Safety Relief Valve isolation is one of many applications for the SRX Rupture Disc

# compression loaded for high performance



SRX rupture discs before and after rupture

## Accessories

The Fike SRX may be ordered with either 1/4" or 1/2" gauge tap for insertion of pressure gauge, excess flow valve or other device as specified by ASME Code, Section VIII, Div. 1 when used in combination with a safety relief valve. Standard O-rings are available in Viton with a maximum operating temperature of 450° F (230° C).

## SRX rupture disc holders

SRX holders achieve a bubbletight metal-to-metal seal, while maintaining tight rupture tolerances. An optional O-ring in the base may be specified to reduce fugitive emissions. Tests have proven SRX leaktightness to  $1 \times 10^{-8}$  CC He/Sec. The holddown design further enhances the non-fragmenting characteristics of the SRX. The DiscLoc™ locator tab prevents incorrect, inverted installation in the holder. Prominent flow arrows indicate the process flow direction during venting. The SRX holder may also be ordered in pretorqueable style, which allows the correct torque to be achieved prior to field installation.



"TQ" pretorqueable (left) and "GI" insert style rupture disc holders

**TABLE 1**  
SRX PERFORMANCE DATA

TYPE OF DISC		SRX				
AVAILABLE SIZE RANGE		1" TO 24" (DN 25 - DN 600)				
DISC MATERIAL		NI	MO	INC	SST	HAST
MAX OPERATING TEMP DEG F		800	900	1100	900	900
MAX OPERATING TEMP DEG C		427	482	593	482	482
RATIO OF OPERATING PRESSURE TO STAMPED BURST PRESSURE	60%	R	R	R	R	R
	70%	R	R	R	R	R
	80%	R	R	R	R	R
	90%	S	S	S	S	S
CYCLIC DUTY (POS TO NEG)		S	S	S	S	S
LIGHT PULSATING DUTY		S	S	S	S	S
HEAVY PULSATING DUTY		S	S	S	S	S
FULL OR PARTIAL VACUUM RATING		R	R	R	R	R
POLYMERIZATION PROCESS (NOTE 2)		NR	NR	NR	NR	NR
HYDRAULIC SERVICE (SEE TABLE 2 FOR MIN VAP VOL)		R	R	R	R	R
NON-FRAGMENTING DISC		R	R	R	R	R
SEAT CONFIGURATION		SRX FLAT				
BOLTED TYPE ASSY.		YES				
UNION TYPE ASSY		NO				
SCREW TYPE ASSY.		NO				
PROT. COAT. AVAIL. SEE NOTE 1		YES				

**HOW TO SPECIFY**

Size \_\_\_\_\_

Burst pressure \_\_\_\_\_

Mfg. range  Std.  Other \_\_\_\_\_

Coincident Temp. \_\_\_\_\_

MAWP \_\_\_\_\_

Flange Rating \_\_\_\_\_

Coatings \_\_\_\_\_

Materials \_\_\_\_\_

ASME Cert.  yes  no

Optional O-ring qty. \_\_\_\_\_

**NOTES FOR TABLE 1**

1. Teflon 450°F (232°C), urethane 250°F (121°C), and urethane acrylic 150°F (66°C)
2. Consult Factory

S..... SUPERIOR  
R..... RECOMMENDED  
NR..... NOT RECOMMENDED

**TABLE 2**  
SRX RUPTURE DISC BURST PRESSURES @ 72°F/22°C

SIZE		INCH	1	1 1/2	2	3	4	6	8	10	12
		DN	25	40	50	80	100	150	200	250	300
MIN BURST PRESS	NICKEL 200	PSIG	85	85	75	60	50	40	35	30	27
		BARG	7.3	6.2	5.7	4.1	3.4	2.8	2.4	2.1	1.9
	MONEL 400	PSIG	110	110	90	70	60	45	40	35	30
		BARG	7.6	7.6	6.2	4.8	4.1	3.1	2.8	2.4	2.1
	INCONEL 600	PSIG	110	110	90	70	60	45	40	35	30
		BARG	7.6	7.6	6.2	4.8	4.1	3.1	2.8	2.4	2.1
	SST 316	PSIG	275	275	230	165	130	90	90	80	70
		BARG	19	19	15.9	11.4	9	6.2	6.2	5.5	4.8
	HAST C276	PSIG	320	320	265	200	160	115	115	___6	___6
		BARG	22.1	22.1	18.3	13.8	11	7.9	7.9	___6	___6
MAX BURST PRESS	ALL MAT'LS	PSIG	720	720	720	720	720	630	500	350	250
		BARG	49.7	49.7	49.7	49.7	49.7	41.4	34.5	24.2	17.3
MINIMUM FREE VAPOR VOLUME	CUBIC INCHES		13	13	28	91	205	701	1597	3141	5428
	CUBIC CENT		215	215	455	1487	3359	11485	26171	51,472	88,948

1. Standard Manufacturing Range is +0% to -10%
2. Optional Manufacturing Ranges +0% to -5%, and Zero Manufacturing Range.
3. Discs provided with Zero Manufacturing Range will be marked at the requested rating.
4. Standard Rupture Tolerance is ±5% except 40 PSIG/2.7 BARG and below which is ±2 PSIG/.14 BARG.
5. Consult factory for larger sizes and other materials.
6. Consult factory.



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