

# Fike SR-H™ Rupture Disc Scored, Reverse-acting, Hygienic/Sanitary Service



**MEETS 3-A STANDARD**

**NO SPECIAL HOLDER**

**LIQUID OR VAPOR SERVICE**

**90% OPERATING RATIO**

# OVERVIEW OF SR-H™ FEATURES

## APPLICATIONS

- Food processing
- Beverage processing
- Pharmaceutical manufacturing
- Bio-Tech
- All Clean-In-Place/Steam In Place

### Three dimensional tag

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

### Non-fragmenting

The perimeter score configuration, along with the integral ring, controls its opening and enables the disc to rupture without fragmentation.

### Stainless steel construction

For hygienic/sanitary applications, the disc and tag are constructed of 316 stainless steel.

### FDA approved gasket material

Gasket material is available in silicone, Viton, EPDM, or Teflon®.

### Contour Modified™ design

Provides high performance at low burst pressures.



# IN-DEPTH VIEW OF SR-H FEATURES

## Meets 3-A Standard

The SR-H meets the requirements of the applicable 3-A standard and has been granted the use of the 3-A symbol.

## FDA approved gasket material

FDA approved gasket material is available in silicone, EPDM, Viton® or Teflon®.

## Clean-In-Place/Steam In Place

The SR-H's hygienic/sanitary design (i.e. no crevices) makes it easy to clean without removing the disc. Should removal be necessary, the Tri-Clamp® assembly makes removal of the disc a simple task. Replacement gaskets are available, see ordering instructions.

## No special holder

The SR-H is designed to fit between standard Tri-Clover® ferrules and a #13 MHHM clamp. Additionally the SR-H may be used with flush mounted NA Connect® Fittings (size: 1 1/2 & 2-in). No special rupture disc holder is necessary.

## Liquid or Gas service

Unlike many other hygienic/sanitary rupture discs, the SR-H can be used in either gas or liquid applications, providing the widest range of applications.

## Suitable for heavy cycling and pulsating duty

The SR-H's reverse-acting, Contour Modified™ design makes this disc a good choice for these challenging applications.

## 90% operating ratio

SR-H discs sustain cyclic and pulsating pressures as high as 90% of the stamped disc rating without premature failure due to metal fatigue.

## Low burst pressure

Because most hygienic/sanitary applications operate at low pressures, the SR-H has been specifically designed to provide accurate, reliable pressure relief in these applications.

## Full vacuum rating

The SR-H withstands full vacuum without the aid of a vacuum support.

## Non-fragmenting

As a non-fragmenting disc, the SR-H's design keeps metal fragments from contaminating your media.

## SRV compatible

The SR-H is an excellent choice for isolating Safety Relief Valves.

## Low Damage Ratio

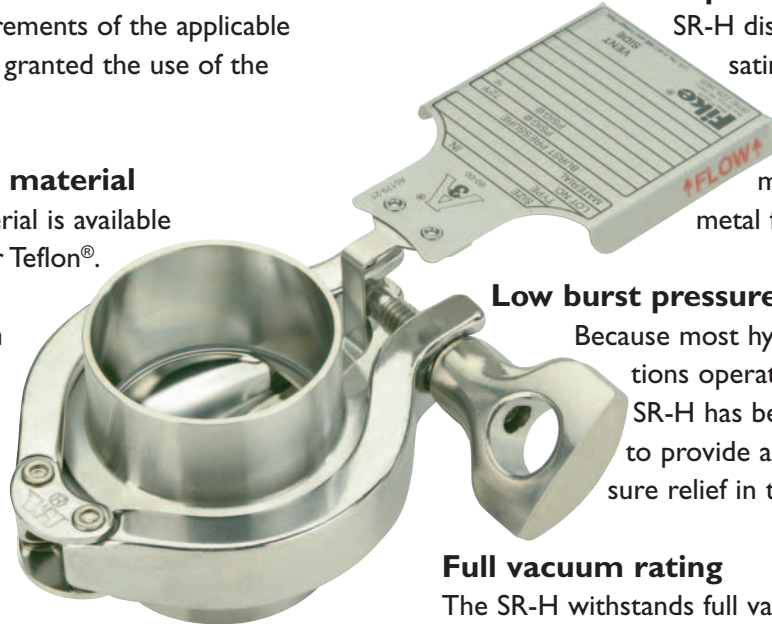
If damaged during normal installation, the rupture disc will open at less than 1.5 times the stamped burst pressure.

## 3-D tag

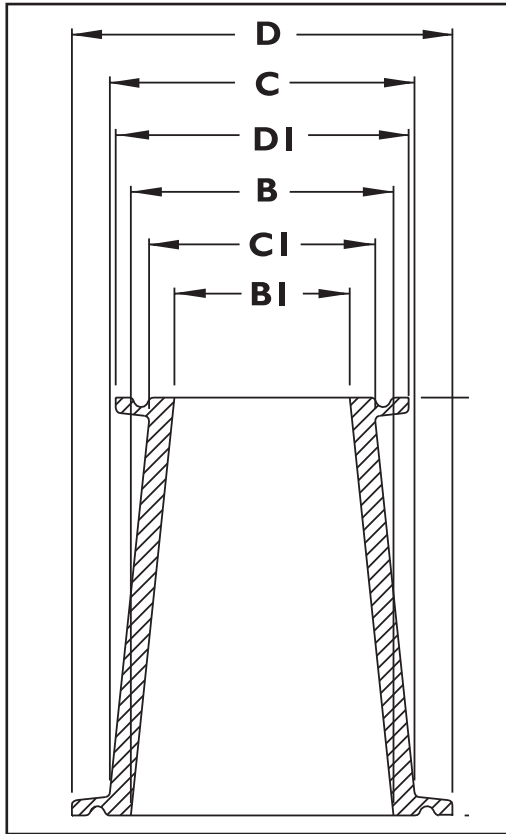
The three dimensional tag with prominent flow arrows visually confirms proper installation and orientation.

## Burst Indication

Fike's BCH burst indication is specifically designed for use with the SR-H rupture disc.



## CONCENTRIC REDUCER



Material: 316 L SST

Size	A	B (BI)	C (CI)	D (DI)	Wt. Lbs/Kg
1.5" x 1"	3	1.37 (0.87)	1.5 (1)	1.98 (1.98)	0.29
2" x 1.5"	3	1.87 (1.37)	2 (1.5)	2.52 (1.98)	0.4
3" x 2"	5	2.87 (1.87)	3 (2)	3.58 (2.52)	1.09
4" x 3"	5.13	3.83 (2.87)	4 (3)	4.68 (3.58)	3.08

NOTE: On Concentric Reducers, the SR-H is always installed on the larger end.

## GASKETS

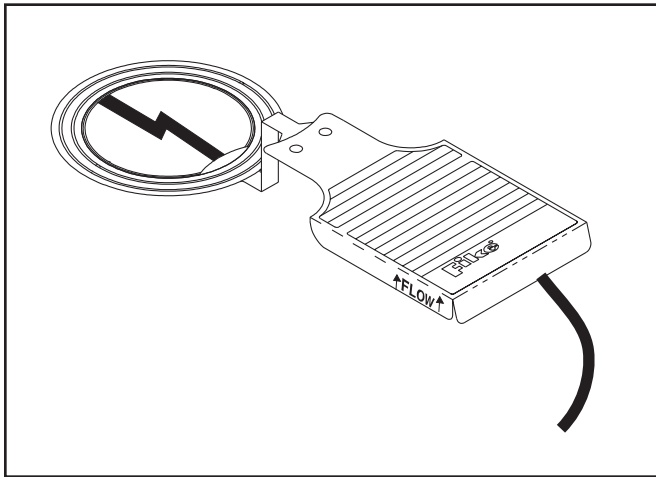


### FDA approved gasket material

The SR-H is supplied with an envelope-style gasket in your choice of silicone, Viton®, EPDM or PTFE Teflon®. Maximum temperature is 350° F. (177° C.) EPDM has a temperature range of -40°F to 300°F (-40°C to 149°C). Replacement gaskets are available.

Note: Teflon® gasket not available with NA Connect® fittings.





BCH Burst indicator

## Description

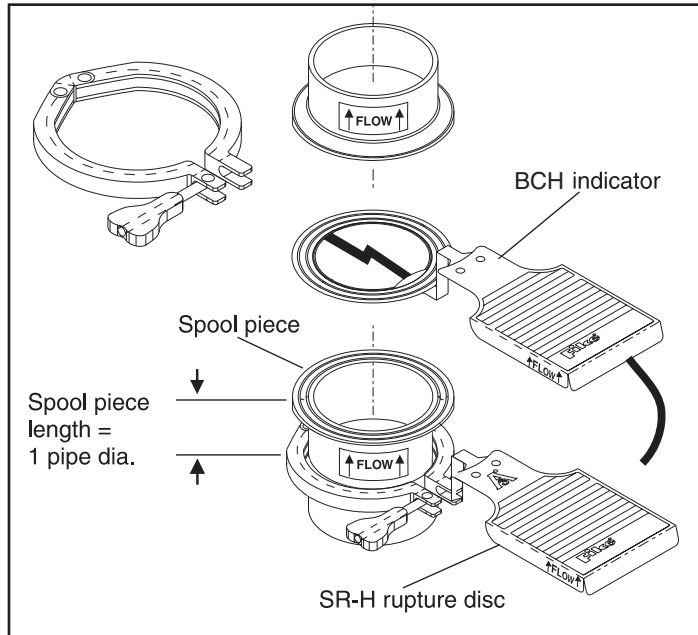
The BCH Burst Indicator is specifically designed for use with the SR-H Hygienic/Sanitary service rupture disc. It provides instantaneous notification of rupture disc activation. Upon disc rupture, the BCH's thin Teflon® seal is bulged into a flexible circuit, causing the circuit to be physically broken. This open circuit condition can be used to activate alarms, bells, remote annunciators or interfaced with process control systems. This provides process operators with immediate annunciation of an overpressure event so that appropriate measures can be taken. In addition, a model providing leak indication may be available for your application, please consult the factory.

The circuit conductive loop is protected with Kapton®, providing excellent corrosion resistance.

The flexible circuit is physically attached at two locations and is broken in a predetermined pattern. This eliminates the possibility of the conductive loop remaining intact after disc rupture.

The BCH is installed downstream of the SR-H rupture disc.

Note: While similar in appearance, the BCH is not a rupture disc and cannot be used as such. The BCH will not withstand positive or negative pressure on the downstream side.



Schematic of BCH with SR-H rupture disc

## Specifications

### Disc compatibility

SR-H

### Listing

CSA

### Intrinsic Safety

The BCH is intrinsically safe for Class I, Groups A, B, C, and D when connected through a CSA certified shunt diode safety barrier at current levels of 50 mA @ 24 VAC/DC. Maximum resistance across the circuit prior to rupture is 1.0 OHMS. An intrinsic Safety Barrier is available from Fike, P/N 02-8353.

### Operating Temperature Range

Viton Gasket: -15°F to 400°F (-26°C to 213.5°C)

Silicone Gasket: -15°F to 450°F (-26°C to 241°C)

EPDM Gasket: -40°F to 300°F (-40°C to 149°C)

### Cable Connection

The BCH comes with 18" of 20 AWG cable equipped with a 3 pin quick disconnect weatherproof receptacle. A lead cable can be purchased in lengths of 10' and 25' with a quick disconnect plug to connect to customer monitoring systems.

### Materials of construction

Indicator circuit: Copper foil laminated between Kapton®

Diaphragm: PTFE Teflon®

Support frame: 316 SST

Gasket: FDA approved silicone, Viton®, or EPDM

# SR-H PERFORMANCE DATA

**TABLE I: Performance data**

TYPE OF DISC		SR-H
AVAILABLE SIZE RANGE (SEE NOTE 4)		1½" - 4"
DISC MATERIAL		316 SST
MAX OPERATING TEMP DEG F		350
MAX OPERATING TEMP DEG C		177
RATIO OF OPERATING PRESSURE TO STAMPED BURST PRESSURE FOR ABOVE 40 PSI (80% AND 90% SEE NOTE 1)	60%	R
	70%	R
	80%	R
	90%	R
CYCLIC DUTY (POS TO NEG) (SEE NOTE 2)		R
LIGHT PULSATING DUTY		R
HEAVY PULSATING DUTY		R
FULL OR PARTIAL VACUUM RATING (SEE NOTE 2)		R
HYDRAULIC SERVICE		R
NON-FRAGMENTING DISC		R
SEAT CONFIGURATION: STANDARD TRI-CLAMP		
PROT. TEFLON® COAT. LINER AVAIL. (SEE NOTE 3)		

**NOTES FOR TABLE I**

1. Rupture discs stamped at 40 PSIG/2.7 BARG and below shall use the following equation: Maximum Operating Pressure = (Stamped Burst Pressure - 2 PSI) X Operating Ratio.
2. For burst pressures less than 15 PSIG/1.013 BARG, consult factory
3. Teflon® coating and Teflon® liner also available (process side only). Max temperature: 350°F (177°C)
4. Consult factory for DIN 32676 and ISO 2852 sizes.

R .....RECOMMENDED  
 NR .....NOT RECOMMENDED

## HOW TO SPECIFY

Size \_\_\_\_\_  
 Burst pressure \_\_\_\_\_  
 Vacuum/backpressure \_\_\_\_\_  
 Mfg. range  Std.  Other \_\_\_\_\_  
 Coincident Temp. \_\_\_\_\_  
 MAWP \_\_\_\_\_  
 Liner \_\_\_\_\_  
 ASME Cert.  yes  no  
 Gasket Mat'l  Silicone  Viton®  EPDM  Telfon®  
 Concentric Reducer

Note: Teflon® gasket not available with NA Connect® fittings.

# SR-H BURST PRESSURE DATA

**TABLE 2: Burst pressures @ 72°F/22°C**

SIZE		INCH	1 1/2	2	3	4
BURST PRESSURE PSIG (BARG)	316 SST	MIN	24 (1.65)	20 (1.35)	15 (1.03)	12 (.83)
		MAX	140 (9.65)	100 (6.89)	80 (5.52)	55 (3.79)

**NOTES FOR TABLE 2**

Manufacturing ranges	
Above 40 PSIG	+0% to -10%
	+0% to -5%
	Zero Mfg. Range
20 PSIG to 40 PSIG	+0% to -10%
	Zero Mfg. Range
Below 20 PSIG	<b>+0 PSIG to -2 PSIG</b>
	Zero Mfg. Range

**IMPORTANT:** 1" applications require 1½" disc with available concentric reducer.  
 • Standard Rupture Tolerance is ±5% except 40 PSIG/2.76 BARG and below which is ±2 PSIG/1 BARG.  
 All specifications are subject to change without prior notice.



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