

## SHX RUPTURE DISC

### DESCRIPTION

The SHX rupture disc is a forward acting, cross scored rupture disc, ideal for high pressure sanitary applications. The concave surface of the SHX rupture disc remains in contact with the process media and is designed to burst along the cross score pattern when subjected to a predetermined pressure. In addition, the hub ring prevents the disc petals from fragmenting at the maximum burst pressure and provides a rigid support to prevent the disc from slipping.



SHX Rupture Disc

### FEATURES AND BENEFITS

- Operating ratio of up to 90% without premature failure due to metal fatigue
- Superior design for CIP/SIP requirements. The gasket design creates proper alignment with the inside diameter, or bore, of the ferrule/fittings.
- Integral replaceable gaskets create ease of installation; offered in a variety of 3-A and USP Class VI approved materials: White silicone (pt cured), Viton, white and black EPDM, Teflon® and J-1500
- Teflon liner option available on the process side of the rupture disc
- Standard sanitary packaging includes sanitary discs poly-bagged, nitrogen purged and sealed.
- Damage ratio of  $\leq 1$
- When assembled in accordance with the SHX Installation and Maintenance Instructions, the SHX will withstand a helium leak rate of a minimum of  $1 \times 10^{-4}$  atm cc/sec (bubble tight)
- 316 SST tag visually confirms proper installation and orientation
- Constructed of 316/316L SST
- Average surface finish of wetted surfaces:
  - Standard: 12-25 Ra
  - Electro-polished: 8-16 Ra
- Temperature limit: 250°F (121°C) (consult factory for higher temperatures)

### OPTIONS

- Electropolishing
- BC-H Burst Indicator

Form No. R.1.04.01-7

## ACCESSORIES AND HOLDERS

SHX rupture discs are designed for use in ASME BPE ferrules and NovAseptic® Connectors flush mount fittings. Other sizes and/or ferrule standards can be satisfied by using SHX rupture discs in combination with appropriate transition ferrules.

The BCH Burst Indicator is designed for use with the SHX disc utilizing ASME BPE ferrules and clamps. 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. For more information, see Fike Data Sheet R.1.02.01.

### LOW PRESSURES - STANDARD 13 MHHM CLAMP

13 MHHM	Max. Pressure Rating	
	1.5"	2"
@ 72°F (22°C)	500	450
@ 250°F (121°C)	300	300

- One-piece design
- 316/316L SST construction



### HIGH PRESSURES - MODIFIED 13 MHP CLAMP (A8647-100-X)

A8647-100-X	Max. Pressure Rating	
	1.5"	2"
@ 72°F (22°C)	1500	1000
@ 250°F (121°C)	1200	800

*Note:* clamp assemblies sold separately

- The A8647-100-X is recommended for high pressures.
- This modified 13MHP clamp is notched to allow the rupture disc tag to extend beyond the assembly.
- Assembly includes bolts, washers and nuts
- 316/316L SST construction



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

		316/316L SST	
In	DN	Min BP	Max BP
1.5	40	330 (22.76)	1500 (103.42)
2	50	300 (20.68)	1000 (68.95)

AVAILABLE MANUFACTURING RANGES

Available Manufacturing Ranges
+0/-10%
+0/-5%
Zero

PERFORMANCE TOLERANCE

Tolerance	
± 5%	± 10%

GASKET INFORMATION

Gasket Material	Minimum Service Temperature	Maximum Service Temperature
White EPDM*	-40°F (-40°C)	250°F (121°C)
Black EPDM	-40°F (-40°C)	250°F (121°C)
PTFE (Teflon)	-20°F (-28°C)	250°F (121°C)
Silicone	-40°F (-40°C)	250°F (121°C)
Viton	-20°F (-28°C)	250°F (121°C)
J-1500 (Filled PTFE)	-20°F (-40°C)	250°F (121°C)








\* 3-A approval applies to all gaskets except white EPDM. All gaskets are USP Class VI approved.

**Notes:**

PTFE Teflon is subject to cold flow in gasketed connections and may result in leakage and/or the need for frequent re-tightening. J1500 is a filled PTFE composite that is highly resistant to cold flow and is a preferable alternative to PTFE in most applications.

HOW TO SPECIFY

Previous Lot Number:	
OR	
Size:	
Burst Pressure:	@ (Temperature)
Gasket Material:	
Electropolishing:	Yes / No
CE Certification:	Yes / No

Performance Attributes				Process Media		Rupture Disc Holder
Operating Ratio	Non-Fragmenting	Vacuum Resistant	Sanitary	Liquid	Vapor / Gas	Ferrules
						
90%	yes	yes	yes	yes	yes	yes

CERTIFICATIONS



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 Form No. R.1.04.01-7 May, 2011 Specifications are subject to change without notice.