

# SPECIAL FACE SEAL BEAD SCORED RUPTURE DISC ASSEMBLIES

Special Face Seal Bead Scored Rupture Disc Assemblies are designed for critical leak rate applications with rupture discs available in 1/2", 3/4" and 1" sizes. These non-reclosing differential pressure relief devices respond within milliseconds to provide instantaneous full opening relief protection of equipment, vessels and systems from damaging overpressure conditions.

The two available rupture disc designs are:

- Special Welded Scored Reverse Acting Rupture Disc with 90%\* maximum recommended operating ratio...ideal for cycling applications
- Special Welded Cross-Scored Tension Acting Rupture Disc with 80% maximum recommended operating ratio...ideal for static and high pressure applications

These special Welded Rupture Disc Assemblies (rupture discs & holders) are suitable for applications which must meet leak rate specifications as low as  $4 \times 10^{-9}$  atm. cc/sec. helium.

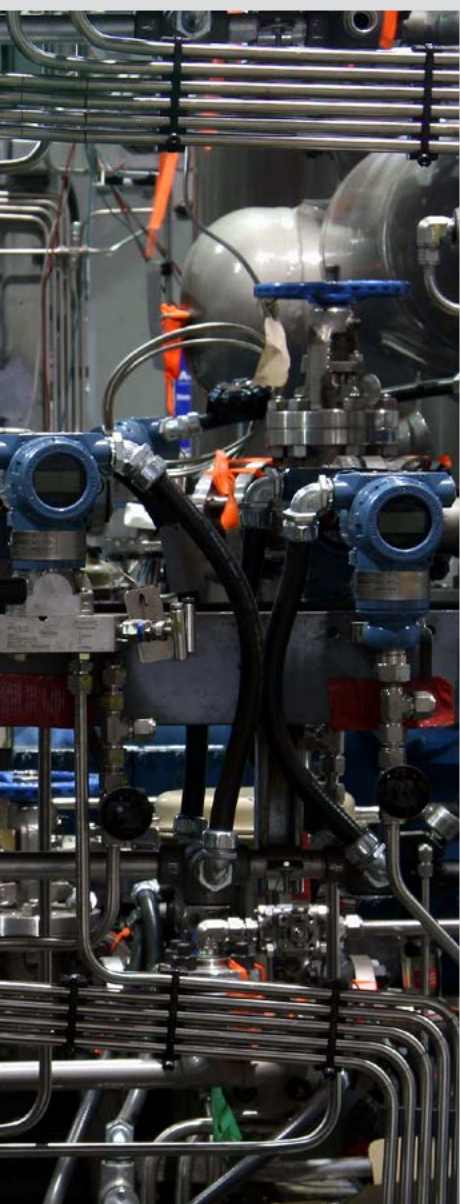
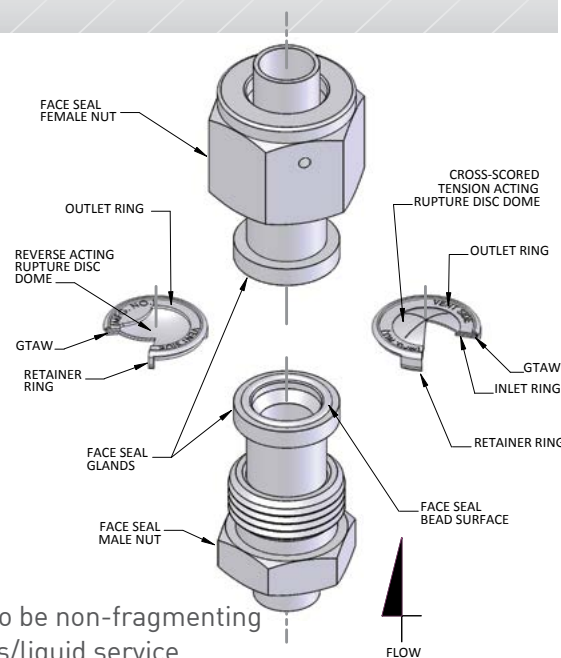
## APPLICATIONS

- Ultra Pure Gas (including corrosive, toxic & reactive gases)
- Gas Panels // Gauges //
- Instrumentation
- Micro Processing (Semi-Conductor)
- Pumps & Compressors
- Valve Connections
- Manifolds
- Purge & Vent Lines
- Sampling Lines

## FEATURES

- Scored rupture discs designed to be non-fragmenting
- Ideal for gas/vapor or partial gas/liquid service
- Manufacturing range: minus 10% for pressures above 50 psig and -5 psig for pressures less than and equal to 50 psig // Burst Tolerance: +/- 5% for pressures above 40 psig and +/- 2 psig for pressures less than or equal to 40 psig
- Zero clearance (for most configurations)
- Cleaning for oxygen and liquid oxygen service available
- Standard disc materials: 316 SS, 316L SS, Nickel, MONEL<sup>®</sup>, HASTELLOY<sup>®</sup> C or INCONEL<sup>®</sup>
- Other materials available, contact your sales representative
- CDC custom face seal bead holder ensures proper functioning and orientation of assembly during installation
- CDC custom face seal bead holders are available in a wide variety of inlet and outlet connections

\*For rated pressures 40 psig or below, 90% applies to the rated marked pressure minus burst tolerance





Pressure Equipment Directive  
Available When Specified

**TABLE 1 // Scored Reverse Acting Rupture Disc Available Burst Pressures at 72°F (22°C)**

Values in black are psig // Values in blue are barg

Nominal Size	Rupture Disc Minimum			Rupture Disc Maximum		
	Nickel, MONEL®	INCONEL®, 316 SS, 316L SS	HASTELLOY® C	Nickel, MONEL®	INCONEL®, 316 SS, 316L SS	HASTELLOY® C
1/2" 13 mm	40 2,76	115 10,0	125 8,62	1000 68,9	1000 68,9	1000 68,9
3/4" 19 mm	30 2,07	45 3,10	85 5,9	1000 68,9	1000 68,9	1000 68,9
1" 25 mm	22 1,52	45 3,10	55 3,8	1000 68,9	1000 68,9	1000 68,9

Note:  
The Scored Reverse Acting Rupture Disc is able to withstand full vacuum

Minimum and Maximum pressures are based upon the corresponding minimum and maximum of the manufacturing range

**TABLE 2 // Cross-Scored Tension Type Rupture Discs Available Burst Pressures at 72°F (22°C)**

Values in black are psig // Values in blue are barg

Nominal Size	Rupture Disc Minimum* Does Not Withstand Full Vacuum				Rupture Disc Minimum Does Withstand Full Vacuum					Rupture Disc Maximum**
	Nickel, MONEL®	INCONEL®	HASTELLOY® C	316 SS, 316L SS	Nickel	MONEL®	INCONEL®	HASTELLOY® C	316 SS, 316L SS	Nickel, MONEL®, INCONEL®, HASTELLOY® C, 316 SS, 316L SS
1/2" 13 mm	250 17,2	350 24,1	900 62,1	450 31,0	300 20,7	325 22,4	450 31,0	900 62,1	530 36,5	2800 193
3/4" 19 mm	200 13,8	300 20,7	600 41,4	400 27,6	250 17,2	275 19,0	375 25,9	650 44,8	465 32,1	2400 165
1" 25 mm	150 10,3	250 17,2	450 31,0	350 24,1	200 13,8	225 15,5	300 20,7	500 34,5	400 27,6	2400 165

Minimum and Maximum pressures are based upon the corresponding minimum and maximum of the manufacturing range

\*A vacuum support is not available for this product type.

\*\* Maximum pressure may vary based on maximum pressure rating of holders.

**TABLE 3 // Available Connections**

Custom Face Seal Bead Holders are available with the following connections:

Inlet Connections Available	Face Seal	Tube Butt Weld	NPT	Socket Weld	Automatic Tube Weld	S.A.E. Threaded	Tube Adapter	
Outlet Connections Available	Face Seal	Tube Butt Weld	NPT	Socket Weld	Automatic Tube Weld	Male Weld	Free	Muffled

For other connections, consult your sales representative

**TABLE 4 // Material Temperature Limits**

Maximum Recommended Temperature Limits

Material	Max Temp
Nickel	800°F (427°C)
MONEL®	800°F (427°C)
316 SS/316L SS	900°F (482°C)
HASTELLOY® C	900°F (482°C)
INCONEL®	1000°F (538°C)

Special scored rupture discs are designed to mate with CDC custom face seal bead holders only. If installed into face seal bead fittings not obtained through CDC, the rupture disc will not perform as specified.

NOTE: Product parameters are based on United States customary units. Values in metric are provided for reference only.

HASTELLOY® is a registered trademark of Haynes International // INCONEL® and MONEL® are registered trademarks of the Inco family of companies

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