



**Continental Disc[®]
Corporation**

HPX™ SANITARY RUPTURE DISC OFFERED with 90% or 95% OPERATING RATIO

The HPX™ SANITARY rupture disc is a scored reverse acting rupture disc designed specifically for the pharmaceutical, food and beverage, and biotech industries. This differential pressure relief device features an instantaneous full-open relief area for protecting equipment, vessels, systems and people from an overpressure condition. This high precision reverse acting rupture disc offers proven performance **in excess of 250,000 cycles at a 95% operating ratio.**



Features:

- **Extreme cycling durability** - proven performance in excess of a quarter million cycles!¹
- **High precision** - choice of 90% or 95% maximum recommended operating ratio
- **High versatility** - wide range of burst pressures, materials and sizes
- Precision scoring on the vent side of the dome assures optimum cleanability and improves rupture disc performance in severe service applications
- All rupture discs include sanitary, environmentally friendly, non-toxic packaging.

Benefits:

- This rupture disc **meets all ASME BPE and USP class VI criteria** including:
 - Surface finish of 20 Ra microinch or better
 - Solid metal construction provides cleanability for CIP/SIP applications
 - Fully traceable materials including USP Class VI certified gaskets
 - All components are free of polishing compounds, release agents and animal derivatives.
- Lower maintenance costs
- Increased productivity
- ASME Code Section VIII, Division 1 compliant.

National Board Certified K_R flow resistance values²:

$$K_{RG} \text{ (gas)} = 1.13$$
$$K_{RL} \text{ (liquid)} = 1.60$$

Installation:

Available to fit between industry standard sanitary ferrules, NA-connect^{®*} flanges and SANITRX[®] fittings

Additional Features:

- Permanently attached three-dimensional flow direction tag allows for accurate installation ensuring proper performance within the piping system.
- Available in 316 SS and Hastelloy^{®**} C. Other materials available upon request.
- Manufactured to provide a safety ratio of 1 to 1 or less. If the rupture disc becomes damaged, it will relieve at or below the rated burst pressure.
- Vacuum conditions: rupture disc can be operated to full vacuum even in the lowest available burst pressure.
- Ideal for gas/vapor, liquid and partial gas/liquid service applications.³
- Available with the B.D.I.[®] (Burst Disc Indicator) alarm system to remotely signal when the rupture disc has burst. Refer to *Rupture Discs with B.D.I. Alarm System* literature for details.
- HPX SANITARY Rupture Discs are available with the full support and expertise of our Tech Team and Special Projects Group for special applications and new designs.

¹ Tests performed on 316 SS and Hastelloy[®] C

² See CERTIFLOW[®] Literature for full details and MNFA values.

³ To optimize service life and rupture disc performance, Continental Disc Corporation manufactures and tests each HPX rupture disc order for compressible or incompressible relief conditions as required by your application. HPX™ rupture discs manufactured and tested only for compressible (gas/vapor) relief conditions may not function properly in an incompressible (liquid) application. Please state in your specifications and orders if a scenario exists for relief of incompressible media or if relief conditions exist only for compressible media.

* NA-connect[®] is a registered trademark of NovAseptic America Inc.

** Hastelloy is a registered trademark of Haynes International.

HPX™ SANITARY RUPTURE DISC

Rupture Disc Specifications
(Manufacturing Range, Burst Tolerance,
Maximum Operating Pressure):

| Product | Requested Burst Pressure | Available Manufacturing Range | Burst Tolerance Around Rated (Marked) Burst Pressure | Maximum Operating Pressure |
|--|---|--|--|---|
| HPX SANITARY Rupture Disc with 95% Maximum Recommended Operating Ratio (HPX SANITARY-95) | above 40 psig 2,76 barg to Max | Zero | +/- 5% | 95% of Rated (Marked) Burst Pressure |
| | Min up to and including 40 psig 2,76 barg | | +/- 2 psig +/- 0,345 barg | 95% of [Rated (Marked) Burst Pressure -2 psig or -0,345 barg] |
| HPX SANITARY Rupture Disc with 90% Maximum Recommended Operating Ratio (HPX SANITARY-90) | above 50 psig 3,44 barg to Max | Zero -5% -10% | +/- 5% | 90% of Rated (Marked) Burst Pressure |
| | above 40 psig 2,76 barg up to and including 50 psig 3,44 barg | Zero -2.5 psig -0,172 barg -5 psig -0,345 barg | +/- 5% | |
| | Min up to and including 40 psig 2,76 barg | Zero -2.5 psig -0,172 barg -5 psig -0,345 barg | +/- 2 psig +/- 0,345 barg | 90% of [Rated (Marked) Burst Pressure -2 psig or -0,345 barg] |

Available Material/Rupture Disc: 316 SS, Hastelloy® C, other materials available upon request

Available Gasket Materials:

| FDA and USP Class VI Compliant Gasket Materials | Service Temperatures | | | |
|---|----------------------|-------|---------|-------|
| | Minimum | | Maximum | |
| | deg F | deg C | deg F | deg C |
| Peroxide Cured Silicone | -80 | -62 | 450 | 232 |
| Platinum Cured Silicone | -80 | -62 | 350 | 177 |
| White Viton®** | -20 | -29 | 400 | 204 |
| Black Viton® | -20 | -29 | 400 | 204 |
| White EPDM | -55 | -48 | 275 | 135 |
| Black EPDM | -55 | -48 | 300 | 149 |
| PTFE Teflon®*** | -40 | -40 | 450 | 232 |

Other materials available upon request

Burst Pressure Available At 72°F (22°C):

| Nominal Size | 316 SS | | Hast C | |
|--------------|--------|------|--------|------|
| | Min | Max | Min | Max |
| 1 in | 25 | 250 | 30 | 250 |
| 25 mm | 1,72 | 17,2 | 2,07 | 17,2 |
| 1½ in | 10 | 200 | 20 | 200 |
| 40 mm | 0,69 | 13,8 | 1,38 | 13,8 |
| 2 in | 10 | 150 | 15 | 150 |
| 50 mm | 0,69 | 10,3 | 1,03 | 10,3 |
| 3 in | 10 | 100 | 15 | 100 |
| 80 mm | 0,69 | 6,89 | 1,03 | 6,89 |

(white bars indicates psig/ grey bars indicate barg)

Minimum pressures are based upon the minimum of the manufacturing range at 72°F (22°C)

- * Hastelloy is a registered trademark of Haynes International
- ** Viton® is a registered trademark of DuPont.
- *** Teflon® is a registered trademark of DuPont used under license by Continental Disc Corporation.

HPX Rupture Discs incorporate U.S. patent No. 6,006,938; 6,241,113 B1; 6,431,383; 4,597,505; 4,512,171; 4,759,460; 4,669,626; and 4,072,160; Chile patent no. 35096; Spain patent no. 289581; India patent no. 160204; Canada patent no. 1244315; and 2,328,834; France, Netherlands, and United Kingdom patent no. EP 0 137 903; Germany patent no. P 3473633.6; Australia patent no. 579833; Venezuela patent no. 46.640; Ireland patent no. 55493; and Mexico patent no. 161587. Belgium, Germany, Ireland, the Netherlands, and United Kingdom patent no. EP 1 078 183 B1; China patent no. HK 1035766 B. Burst Disc Indicator (B.D.I.®) Alarm System incorporates U.S. patent no. Re. 34,308 and 4,408,194; Australia patent no. 539415; Germany patent no. 3174227.0; Belgium, France and United Kingdom patent no. EP 0 033 867; Canada patent no. 1199990; Japan patent no. 2032464. U.S. and foreign patents pending.



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ASME Code Symbol Stamp
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