

HPX[®]

RUPTURE DISC

LOT QUALIFICATION & IN-HOUSE TESTING PROCEDURES

CONTINENTAL DISC
CORPORATION



HPX[®] Rupture Discs are manufactured and tested under a Quality Assurance Program certified to ISO 9001 Quality Management System requirements. Before any lot of HPX[®] Rupture Discs is shipped from Continental Disc Corporation, specific criteria must be met. There are NO MARGINAL RUPTURE DISCS and in TOTAL QUALITY, no room for error.

The following is a listing of qualification procedures and tests required for each lot:

- 1) **DYE PENETRANT TEST**
A dye penetrant test is conducted on each rupture disc to verify the score integrity.
- 2) **FRAGMENTATION BURST TEST**
When required to verify non-fragmentation, an air volume burst test is conducted on one rupture disc from the manufactured lot. *(The requirement for testing is determined by rupture disc size, material and burst pressure.)*
- 3) **SAFETY RATIO BURST TEST**
One rupture disc from the lot is intentionally damaged. This rupture disc is then burst tested using air pressure to verify that the damaged rupture disc burst pressure does not exceed the burst pressure of the rupture disc.
- 4) **LIQUID BURST TEST**
When required to verify performance in liquid service, two rupture discs from the manufactured lot are burst tested using hydraulic pressure. *(The requirement for testing is determined by the customer specification that the rupture disc is to be good for gas/liquid service, instead of for a gas only application.)*
- 5) **QUALIFYING BURST TEST**
A sampling of rupture discs (which is dependent on lot size but no less than two rupture discs) are burst tested at ambient and/or elevated temperature to verify accuracy of the lot as required by Continental Disc Corporation's internal testing standard and when specified by ASME Code Section VIII Division 1, ISO 4126-2 or other customer specified code or standard.
- 6) **CYCLE TEST**
When required to verify cyclic performance, one rupture disc from the lot is cycled from full vacuum to its maximum recommended operating pressure for a minimum of 1000 cycles, followed by a dye penetrant test of the rupture disc score line. This is to simulate variation in operating pressure and to verify score line integrity. This rupture disc is not included in the customer's final shipment. *(The requirement for testing is determined by rupture disc material, service condition [gas/liquid] and pressure.)*
- 7) **PROOF PRESSURE TEST**
All remaining rupture discs in the lot, comprising the shipment quantity, are proof pressure tested to verify each rupture disc's ability to withstand the maximum operating pressure recommended by Continental Disc Corporation.

FINAL PRODUCTION STAGE INCLUDES:

- a) Cleaning the qualified rupture discs.
- b) Tagging per customer requirements on Continental Disc Corporation's attached three-dimensional tag. Tagging will also include any additional marking required to comply with applicable codes or standards per which the rupture disc was produced.
- c) Completion of a burst test certificate for enclosure with shipment.

Final inspection by Quality Assurance is independent of production and performed on every lot of rupture discs. This includes verification of all test results for conformance, visual inspection of each rupture disc and documentation review.

HPX[®] Rupture Disc Holders have been design tested and are inspected for dimensional characteristics and appearance by Quality Assurance inspectors. Continental Disc Corporation provides permanently affixed stainless steel customer identification tags when equipment tag numbers are furnished on the order.

All rupture discs and holders are marked *(on the part or on a tag)* with a manufacturing lot number, which allows for traceability back to your order specification and Continental Disc Corporation manufacturing data.



CONTINENTAL DISC CORPORATION //
3160 W. Heartland Drive
Liberty, MO 64068 USA
Ph (816) 792-1500 | Fax (816) 792-2277
sales@contdisc.com | www.contdisc.com

GROTH CORPORATION //
13650 N. Promenade Blvd.
Stafford, TX 77477 USA
Ph (281) 295-6800 | Fax (281) 295-6999
sales@grothcorp.com | www.grothcorp.com

THE NETHERLANDS

Energieweg 20
2382 NJ Zoeterwoude-Rijndijk
The Netherlands
Ph +(31) 71 5412221 | Fax +(31) 71 5414361
cdcnl@contdisc.com

CHINA

Room 1312, Tower B, COFCO Plaza
No. 8 JianGuoMenNei Avenue
Beijing (100005), P.R. China
Ph +(86) 10 6522 4885 | Fax +(86) 10 6522 2885
cdcchina@contdisc.com

INDIA

423/P/11, Mahagujarat Industrial Estate, Moraiya,
Sarkhej-Bavla Road, Ahmedabad (GJ)
382213 INDIA
Ph +(91) 2717 619 333 | Fax +(91) 2717 619 345
gcmpl@contdisc.com