

GROUND TRANSPORTATION PROTECTION

RUPTURE
DISCS



Continental Disc Corporation has protection of your transportation vessels covered.

We offer an array of rupture disc products specifically designed to protect railroad tank cars, intermodal tank containers, tank trucks, over-the-road tank trucks and other vessels that transport liquid or gas products.

The following are our standard transportation vessel product offerings. As a custom rupture disc manufacturer, we also stand ready to design & build any custom product needed for your application. Contact your Sales Representative for additional information.

RUPTURE DISCS
DESIGNED TO
PROTECT
TRANSPORTATION
VESSELS



ICON // ICON-TL



PC-SERT



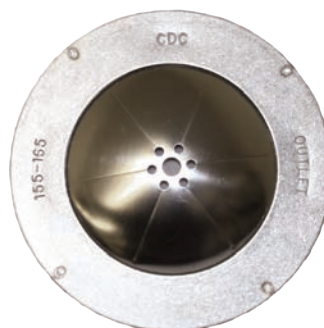
SC12500



SPECIAL 10" SCORED



TANKSERT



STANDARD & COMPOSITE



■ ICON & ICON-TL RUPTURE DISCS

ICON & ICON-TL Rupture Discs are cross-scored, tension acting type rupture discs specifically designed to protect transportation vessels such as intermodal tank containers, railroad portable containers, tank cars, over-the-road tank trucks and other vessels that transport liquid or gas products, from potentially damaging overpressure conditions. The ICON bursting disc is ideal for installation beneath pressure relief valves due to its non-fragmenting design. ICON and ICON-TL Rupture Discs have all the same performance features, however, the ICON-TL is a fully fluoropolymer lined rupture disc on all the wetted surfaces allowing the rupture disc to be installed on applications with highly corrosive process media.



SPECIFICATIONS

- Sizes:**
2 1/2" and 3" (65mm and 80mm)
- Burst Pressure:**
53.2 psig (3,67 barg)
59.5 psig (4,10 barg)
70.2 psig (4,84 barg)
- Manufacturing Range:**
ZERO
- Maximum Recommended Operating Ratio:**
85% of the minimum performance tolerance
- Available Maximum Temperature Limit:**
400° F (204° C)
- Service:**
Gas or Liquid
- Non-fragmenting Design:**
Yes
- Withstand Full Vacuum:**
Yes
- Operating Conditions:**
Static, Cyclic or Pulsating
- Material(s):**
Disc: Nickel
Outlet & Inlet Ring: 316 SS
Liner, Outlet & Inlet Gasket: Fluoropolymer
- Seat Configuration:**
Flat seat
- Holders:**
Designed to mount directly to tank flanges
- Compatible with the Following Alarm System:**
Not available
- Tagging:**
Stainless steel tag attached

ICON-TL

The ICON-TL Rupture Disc is manufactured with a fluoropolymer liner on the inlet side of the inlet ring allowing the rupture disc to be installed on applications with highly corrosive process media.

CUSTOMIZED RUPTURE DISCS

Consult your sales representative for additional materials and pressure ratings.

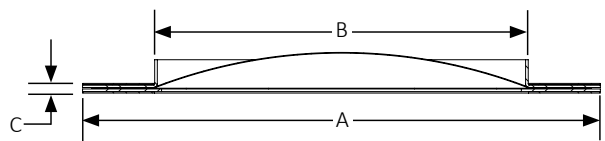
FEATURES

- Scored rupture disc out of "one piece" of solid metal
- The process side of the rupture disc is smooth to prevent any process media accumulation
- The fluoropolymer liner provides corrosion resistance on the process side of the rupture disc
- A self-aligning outlet ring assures proper positioning of the rupture disc with the valve or mating outlet flange
- Withstands full vacuum without a vacuum support
- Inlet and outlet fluoropolymer gaskets provide a leak-tight seal in the system
- Non-fragmenting design is ideal for isolating pressure relief valves
- Permanently attached 316 SS tag

PERFORMANCE TOLERANCE

BURST PRESSURE	PERFORMANCE TOLERANCE
53.2 psig (3,67 barg) @ 68°F (20°C)	±5%
59.5 psig (4,10 barg) @ 68°F (20°C)	
70.2 psig (4,84 barg) @ 68°F (20°C)	

NOMINAL DIMENSIONS



SIZE	A	B	C
2 1/2" 65 mm	3.54" 90 mm	2.56" 65 mm	.06" 1,5 mm
3" 80 mm	4.72" 120 mm	3.15" 80 mm	.06" 1,5 mm

PC-SERT RUPTURE DISC

The PC-SERT Rupture Disc

is a composite type rupture disc specifically designed to protect transportation vessels such as intermodal tank containers, railroad portable containers, tank cars, over-the-road tank trucks and other vessels that transport liquids or gas products, from potentially damaging overpressure conditions. The PC-SERT Rupture Disc is ideal for installation beneath pressure relief valves on transportation vessels due to its non-fragmenting design.



SPECIFICATIONS

- Sizes:**
2 1/2" and 3" (65mm and 80mm)
- Burst Pressure:**
20 - 200 psig (1,38 - 13,8 barg)
- Manufacturing Range:**
ZERO
- Maximum Recommended Operating Ratio:**
85% of the minimum performance tolerance
- Available Maximum Temperature Limit:**
400° F (204° C)
- Service:**
Gas or Liquid
- Non-fragmenting Design:**
Yes
- Withstand Full Vacuum:**
With Vacuum Support
- Operating Conditions:**
Static, Cyclic or Pulsating
- Material(s):**
Disc, Outlet Ring, Top Section & Vacuum Support: 316 SS, 316L SS, Alloy 400, Alloy 600, Alloy C276, Nickel Seal, Outlet & Inlet Gasket: Fluoropolymer
- Seat Configuration:**
Flat seat
- Holders:**
Designed to mount directly to tank flanges
- Compatible with the Following Alarm System:**
Not available
- Tagging:**
Stainless steel tag attached

PERFORMANCE TOLERANCE

BURST PRESSURE	PERFORMANCE TOLERANCE
40 psig (2,76 barg) and below	± 2 psig (0,138 barg)
Above 40 psig (2,76 barg)	± 5%

CUSTOMIZED RUPTURE DISCS

Consult your sales representative for 32mm or 50mm sizes and additional materials.

FEATURES

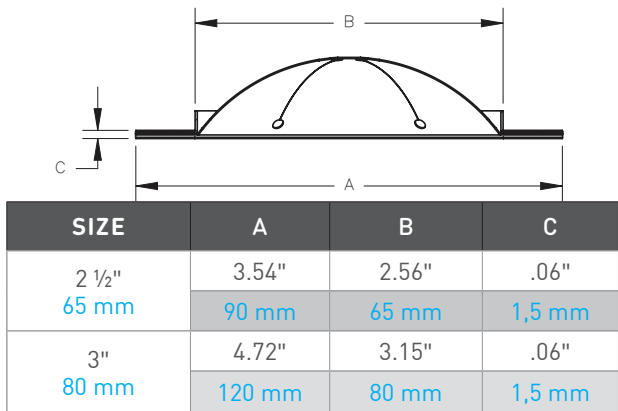
- Available in a wide range of materials
- Excellent performance in low pressure applications
- Self-aligning outlet ring assures proper positioning of the rupture disc with the valve or mating outlet flange
- Withstands full vacuum
- Inlet and outlet fluoropolymer gaskets provide a leak-tight seal in the system
- Non-fragmenting design is ideal for isolating pressure relief valves
- Permanently attached 316 SS tag

BURST PRESSURE RATINGS

The following table shows burst pressures available at 72°F [22°C]

SIZE	MIN	MAX
2 1/2" 65 mm	20	200
	1,38	13,8
3" 80 mm	20	175
	1,38	12,1

NOMINAL DIMENSIONS



SC12500 RUPTURE DISC

The SC12500 Rupture Disc is a welded scored reverse acting type rupture disc specifically designed to protect transportation vessels such as intermodal tank containers that transport liquefied gas products, from potentially damaging overpressure conditions. The SC12500 Rupture Disc is ideal for installation beneath pressure relief valves on transportation vessels due to its non-fragmenting design.



SPECIFICATIONS

- Sizes:**
3 1/2" (89 mm)
- Burst Pressure:**
65 - 500 psig (4,48 - 34,5 barg)
- Manufacturing Range:**
Zero
- Maximum Recommended Operating Ratio:**
95% of the minimum performance tolerance
- Available Maximum Temperature Limit:**
500° F (260° C)
- Service:**
Gas Only
- Non-fragmenting Design:**
Yes
- Withstand Full Vacuum:**
Yes
- Operating Conditions:**
Static, Cyclic or Pulsating
- Material(s):**
Disc, Outlet & Inlet Ring: 316 SS, 316L SS, Alloy 400, Alloy 600, Alloy C276, Nickel
Outlet Gasket: Fluoropolymer
- Seat Configuration:**
Flat seat
- Holders:**
Designed to mount directly to tank valves
- Compatible with the Following Alarm System:**
Not available
- Tagging:**
Unattached stainless steel tag provided

FEATURES

- Scored rupture disc out of "one piece" of solid metal
- Available in a wide range of materials
- Excellent performance in high pressure applications
- Rupture disc assembly helium leak tested to 1 X 10⁻⁷ mBAR L/S
- Withstands full vacuum
- Outlet fluoropolymer gaskets provide a leak-tight seal in the system
- Non-fragmenting design is ideal for isolating pressure relief valves
- Permanent marking on rupture disc for traceability

BURST PRESSURE RATINGS

The following table shows burst pressures available at 72°F (22°C)

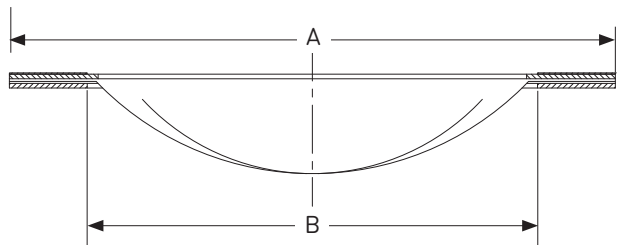
MATERIAL	MIN	MAX
316 SS / 316L SS / Alloy C276	170 psig	500 psig
	11,7 barg	34,5 barg
Alloy 400 / Alloy 600	70 psig	500 psig
	4,83 barg	34,5 barg
Nickel	65 psig	500 psig
	4,48 barg	34,5 barg

Other burst pressures are available upon request.

PERFORMANCE TOLERANCE

BURST PRESSURE	PERFORMANCE TOLERANCE
Above 40 psig (2,76 barg)	± 5%

NOMINAL DIMENSIONS



SIZE	A	B
3 1/2"	4.71"	3.50"
89 mm	120 mm	89 mm

SPECIAL 10" (250 mm) SCORED RUPTURE DISC

The SPECIAL 10" (250 mm) Scored Rupture Disc

is a fragmenting design, cross scored, tension acting type rupture disc specifically designed to protect transportation vessels such as hydrogen peroxide (H₂O₂) tank containers, from potentially damaging overpressure conditions. The Special 10" Scored Rupture Disc is ideal for installation in breather vents, or rupture disc assemblies on transportation vessels.



SPECIFICATIONS

- Sizes:**
10" (250 mm)
- Burst Pressure:**
65.3 or 87 psig (4,5 or 6 barg)
- Manufacturing Range:**
-10%
- Maximum Recommended Operating Ratio:**
75% of the minimum performance tolerance
- Available Maximum Temperature Limit:**
68° F or 140° F (20° C or 60° C)
- Service:**
Gas or Liquid
- Non-fragmenting Design:**
No
- Withstand Full Vacuum:**
With Vacuum Support
- Operating Conditions:**
Static, Cyclic or Pulsating
- Material(s):**
Disc, Vacuum Support or Handling Support: 316 SS
Outlet & Inlet Liner: Fluoropolymer
- Seat Configuration:**
Flat seat
- Holders:**
Designed to mount directly between flanges
- Compatible with the Following Alarm System:**
Not available
- Tagging:**
Unattached stainless steel tag provided

FEATURES

- Scored rupture disc out of "one piece" of solid metal
- Rupture disc with inlet and outlet fluoropolymer liner provides corrosive resistance for hydrogen peroxide service (**Model SC14465**)
- Rupture disc with inlet and outlet fluoropolymer liner plus handling support to help prevent damage during installation (**Model SC13863**)
- Rupture disc with inlet and outlet fluoropolymer liner plus vacuum support to withstand full vacuum (**Model SC15628**)
- Full-opening, non-reclosing design
- Permanent marking on rupture disc for traceability

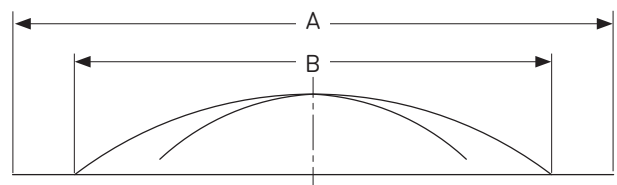
PERFORMANCE TOLERANCE

BURST PRESSURE	PERFORMANCE TOLERANCE
65.3 or 87 psig 4,5 or 6 barg	+ 5% / -14.5%

BURST PRESSURE RATINGS

BURST PRESSURE
65.3 psig (4,5 barg) @ 68°F (20°C)
65.3 psig (4,5 barg) @ 140°F (60°C)
87 psig (6 barg) @ 68°F (20°C)

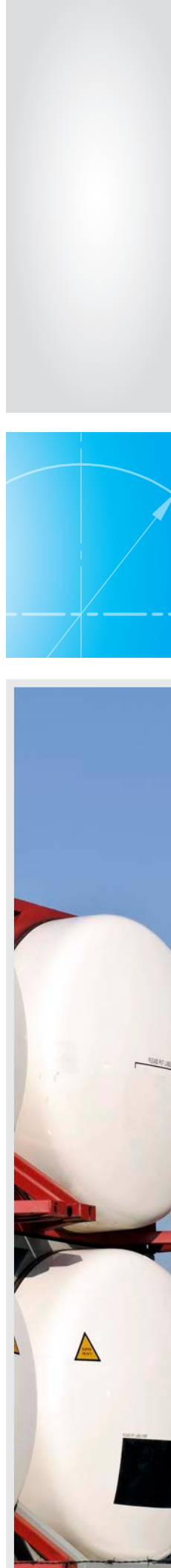
NOMINAL DIMENSIONS



SIZE	A	B
10" 250 mm	12.91" 328 mm	10.24" 260 mm

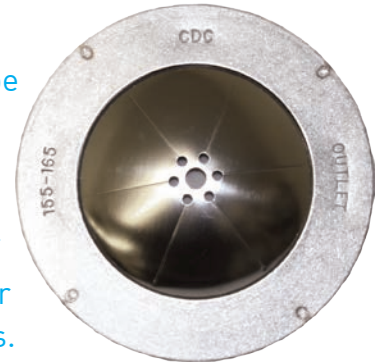
CUSTOMIZED RUPTURE DISCS

Consult your sales representative for additional materials and pressure ratings.



TANKSERT RUPTURE DISC

The TANKSERT Rupture Disc is a composite type rupture disc specifically designed to protect transportation vessels such as railroad tank cars, over-the-road tank trucks and other vessels which transport liquid or gas products from potentially damaging overpressure conditions. The TANKSERT Rupture Disc is ideal for installation in standard threaded or bolted type safety vent assemblies on transportation vessels.



SPECIFICATIONS

- Sizes:**
2" (50mm)
- Burst Pressure:**
25 - 165 psig (1,72 - 11,4 barg)
- Maximum Recommended Operating Ratio:**
80% of the Minimum Burst Pressure
- Service:**
Gas or Liquid
- Non-fragmenting Design:**
Yes
- Withstand Full Vacuum:**
Yes
- Operating Conditions:**
Static, Cyclic or Pulsating
- Material(s):**
Top Section, Outlet Ring, Vacuum Support: 316 SS
Seal, Inlet Gasket: Fluoropolymer
Optional Bee Screen: 300 Series SS
- Seat Configuration:**
Flat seat
- Holders:**
Designed to fit both threaded and bolted type customer supplied safety vent assemblies
- Compatible with the Following Alarm System:**
Not available
- Tagging:**
Marked on rupture disc

CUSTOMIZED RUPTURE DISCS

Consult your sales representative for additional materials and pressure ratings.

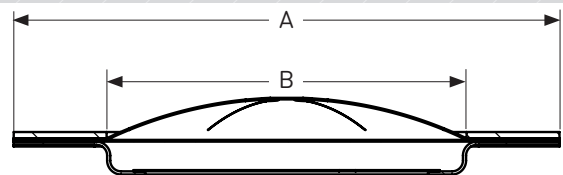
FEATURES

- Self-aligning vacuum support assures proper positioning of the rupture disc in the safety vent assembly
- Vacuum support prevents the seal from becoming damaged should a pressure surge occur during transit or unloading
- Withstands full vacuum
- Non-fragmenting design
- Inlet fluoropolymer gaskets provide a leak-tight seal in the system
- Optional #14 or #20 Bee Screen used in applications which require protection against insects or airborne particles from entering the tank car after a rupture disc opening has occurred

BURST PRESSURE RATINGS

25-30 psig @ 72° F
40-45 psig @ 72° F
55-60 psig @ 72° F
70-75 psig @ 72° F
95-100 psig @ 72° F
155-165 psig @ 72° F

NOMINAL DIMENSIONS



SIZE	A	B
2" 50 mm	3.13" 79,4 mm	2.06" 52,3 mm

STANDARD & COMPOSITE RUPTURE DISCS

STANDARD & COMPOSITE Rupture Discs are tension acting type rupture discs that are available to protect transportation vessels such as railroad portable containers, tank cars, over-the-road tank trucks and other vessels that transport liquids or gas products, from potentially damaging overpressure conditions.

Standard and Composite Rupture Discs provide instantaneous full-opening within milliseconds of an overpressure situation and are available in nominal sizes 1/4" through 30" (6 - 750 mm). Pressure ranges from 1 psig to 75,000 psig (0,138 - 5171 barg) are available in a variety of different materials. The Standard and Composite Rupture Discs are for use in Full Bolted, 7I Insert and Union Rupture Disc holders.

STANDARD RUPTURE DISCS



The Standard Rupture Disc has a full-opening and fragmenting design for optimum flow and reliable performance that make it an ideal choice

for primary and/or secondary system relief protection. The Standard Rupture Disc is a solid metal, pre-bulged (preformed) differential pressure relief device. It is used to protect equipment, vessels and systems from an overpressure condition.

7I INSERT HOLDERS



The 7I Insert Holder is a 30° seat holder which fits within the bolting pattern of ASME, DIN or JIS companion pipe flanges. Insert Holders are furnished with pre-assembly cap screws or clips for bench assembly. Installation of the holder is easy. These holders are designed to be used with either Standard or Composite 30° Seat (LL) or (HL) Rupture Discs.

COMPOSITE RUPTURE DISCS



The Composite Rupture Disc is ideal for low pressure applications, and installation beneath pressure relief valves on transportation vessels due to its non-fragmenting design.

The Composite Rupture Disc is constructed of two or more components of metallic and/or non-metallic materials. It is a differential pressure relief device used for protecting equipment, vessels and systems from an overpressure condition.

FULL BOLTED HOLDERS



The Full Bolted Holders compatible with ASME, DIN or JIS bolting classes. Full bolted holders are available in any combination of welded, threaded or flat faced inlet and outlet connections. These holders are designed to be used with either Standard or Composite 30° Seat (LL) or (HL) Rupture Discs.

UNION TYPE HOLDERS

The Union Type Holder is designed to provide flexibility of use in tight piping configurations.



These precisely built holders combine remarkable ease of installation with high pressure ratings in pipe sizes of 2" (50 mm) or less. These holders are designed to be used with either Standard or Composite (LL) Rupture Discs.



FOR MORE INFORMATION, SEE THE:
[STANDARD RUPTURE DISC DATASHEET](#)
[COMPOSITE RUPTURE DISC DATASHEET](#)
[UNION HOLDER DATASHEET](#)

CERTIFICATIONS
Available When Specified



Pressure Equipment
Directive



ASME Code Symbol Stamp

ASME ACCEPTED FLOW TEST LABORATORY

Continental Disc Corporation's ASME Accepted Flow Test Laboratory is adaptable to run a wide range of flow tests. With the addition of a Liquid Flow Loop, the Flow Test Laboratory runs a full range of flow tests with both air and liquid.

The Flow Test Laboratory includes a 16-channel, state-of-the-art high speed data acquisition system capable of reading up to 500,000 samples per second. This hardware, coupled with pressure/temperature instrumentation and custom written software, creates a measurement system that conforms to the stringent testing requirements of the ASME Performance Test Code, PTC-25.



Continental's Flow Test Laboratory is managed and operated by a team of experienced research and development personnel who are ASME accepted authorized observers. They are experienced in flow testing pressure/vacuum relief valves, rupture discs, rupture disc resistance values (K_R), relief valve/rupture disc combinations, vent valves and other pressure relief devices.

Test Lab Capacities

Test Media	Maximum Pressure	Maximum Capacity	Available Nozzle Sizes*
Air	200 psig	7200 scfm	1/2" - 4" 150/300 ANSI
Air	650 psig	6000 scfm	1/2" - 4" 150/300 ANSI
Water	650 psig	900 gpm	1/2" - 4" 150/300 ANSI

*Other test sizes are available

The state-of-the-art acquisition equipment and instrumentation found in Continental Disc Corporation's Flow Test Laboratory are available to manufacturers, researchers and educational institutions. The presence of a member of the ASME designated organization may be required for certain types of device testing requiring certification. For more information about test scheduling and rates, contact us directly.

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

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