

Reverse Acting Rupture Discs and Holders

3-2226-3



**Continental Disc
Corporation**

Performance Under Pressure®

REVERSE ACTING RUPTURE DISCS

Rupture Discs for Overpressure Protection

Established in 1965, Continental Disc Corporation manufactures rupture discs to our customers' specifications to help protect vessels, equipment, and systems from damaging overpressure conditions. Continental is a leading manufacturer of rupture disc devices for a variety of process industries, including chemical, pharmaceutical, and petrochemical markets worldwide.

Continental Disc is committed to supplying the services you expect, including:

- Technical assistance, training, and support
- Fast, detailed, easily understood quotations
- Providing the product to your specifications
- Shipping schedules that are unmatched in the industry

Continental Disc offers an emergency service program to meet your needs. Twenty-four hour emergency service is available 365 days a year.

With a worldwide representative network backed by an in-house Tech Team, C.D.C. can assist in determining the best and most economical rupture disc for your specific needs.

Scored, Reverse Acting Rupture Discs

Continental Disc's solid metal, scored, reverse acting rupture discs are differential pressure relief devices that provide an instantaneous fully-open, non-reclosing design for protecting vessels, equipment, and systems from an overpressure condition. The ULTRX®, MINTRX®, STAR X®, and LOTRX® rupture discs offer a wide range of pressures and reliable features, including:

- A ZERO MANUFACTURING RANGE as a standard
- Recommended maximum operating pressure of 90% of the rated (marked) burst pressure. See page 6
- Solid metal design in a variety of available materials for corrosion resistance
- Encapsulating rings, which minimize torque sensitivity and provide a leak-tight metal-to-metal seal (handling ring for STAR X Rupture Disc)
- Permanently attached 3-dimensional flow direction tag, alignment pins, and J-Hook for proper rupture disc and holder orientation

The ULTRX, MINTRX, STAR X, and LOTRX rupture discs are all available with the full support and expertise of our Tech Team and Special Projects Group for special applications and new designs.

Seal Load Sensitivity

Continental Disc's encapsulating rings, proven to eliminate seal load (bolt torque) sensitivity, are components of the ULTRX, MINTRX, and LOTRX rupture discs (handling ring for STAR X). Encapsulating rings:

- Hold the rupture disc in the proper location
- Prevent rupture disc slippage when insufficient bolt load is applied to the companion flanges
- Provide a base to accept reasonable over-torquing of the companion flange bolts while protecting the rupture disc from being damaged
- Provide a superior metal-to-metal seal surface



Optimum Flow

Continental Disc's scored, reverse acting rupture discs have patented *precision controlled indentations* on the surface of the rupture disc dome to initiate reversal when the specified burst pressure is achieved. These rupture discs have a *semicircular score* to provide a clean, consistent opening pattern. At burst, the score pattern allows the disc to fully open, folding back against the holder, resulting in an optimum flow condition.

Corrosive Protection

Reverse acting rupture discs are superior for use in a corrosive media environment. A wide range of materials and the use of thicker rupture disc materials contribute to the superior corrosive resistance. A Teflon®* liner may be used on the process side of these rupture discs for additional corrosion protection. Consult the factory for available materials.

Safety Ratio

Should your reverse acting rupture disc be damaged during installation or handling, it has been designed to provide pressure relief at or less than the rated (marked) burst pressure for LOTRX and at or less than 1.5 times the rated (marked) burst pressure for ULTRX, MINTRX, and STAR X rupture discs.



*Teflon is a registered trademark of E.I. du Pont de Nemours and Company used under license.

REVERSE ACTING RUPTURE DISCS

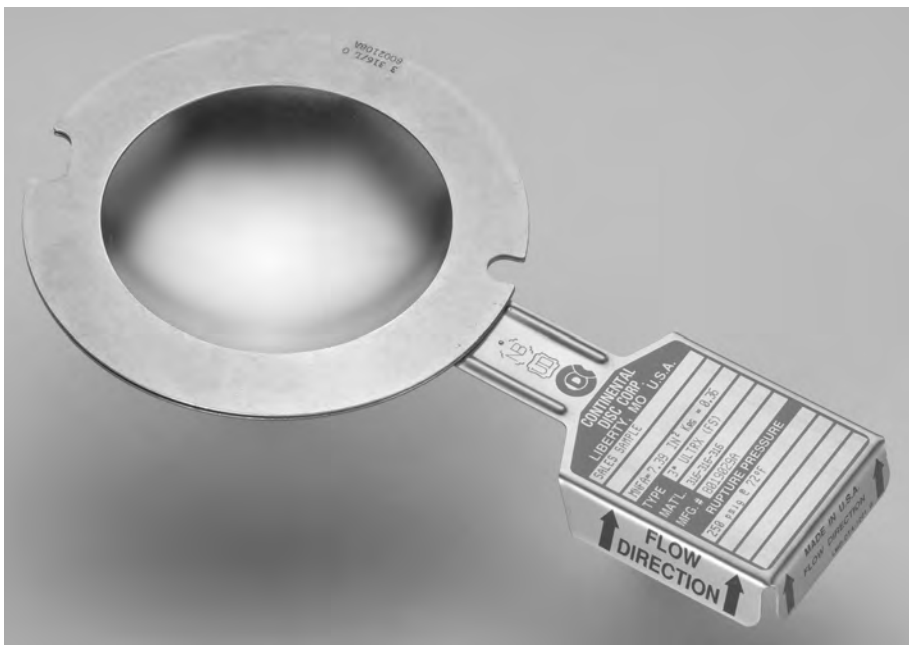
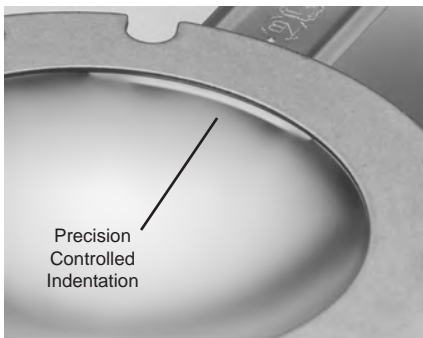
ULTRX Rupture Disc

The ULTRX Rupture Disc is a scored, reverse acting rupture disc. It is a differential pressure relief device that provides an instantaneous full-open, non-reclosing design for protecting equipment, vessels and systems from an overpressure condition.

The ULTRX Rupture Disc has Continental Disc's patented precision controlled indentation to initiate reversal when the specified burst pressure is achieved, and a semicircular score to provide a clean, consistent opening pattern.

Excels in Both Gaseous and Liquid Service!

The ULTRX Rupture Disc is a unique reverse acting rupture disc. It excels in gaseous, partial gas/liquid, or all liquid systems. Full opening occurs in liquid or gaseous systems, including those systems which have an extremely low rate of pressure rise or an exceptionally small volume.



ULTRX Rupture Disc

The ULTRX Rupture Disc eliminates:

- The concern of applying the wrong type of rupture disc in a plant. An ULTRX Rupture Disc can be used in any system, whether gaseous or liquid
- The need for a gas pocket between the rupture disc and liquid media

Wide Range of Applications

The ULTRX Rupture Disc is an ideal choice for primary and/or secondary system relief protection and provides an effective means of fugitive emission control when used to isolate a safety relief valve. Additional system protection

applications include installation in transfer piping, chemical reactors, pressure vessels, storage vessels, and heat exchangers.

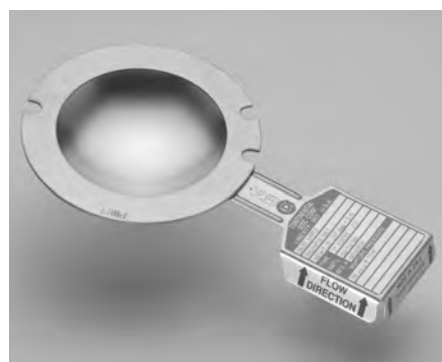
The ULTRX Rupture Disc is available in standard nominal sizes ranging from 1" through 12" (25 - 300 mm). Larger sizes are available. Consult the factory or your Continental Disc Corporation representative for more information.

MINTRX Rupture Disc

The MINTRX Rupture Disc has many of the same benefits as the ULTRX Rupture Disc, but is specifically designed to operate at lower burst pressures. When the patented precision controlled indentation on the rupture disc surface initiates the reversal action, full opening will occur.

The MINTRX Rupture Disc excels in low pressure gaseous or partial gas/liquid systems. Consult the factory before using the MINTRX Rupture Disc in full-liquid applications.

The MINTRX Rupture Disc is available in nominal sizes ranging from 1" through 8" (25 - 200 mm). Larger sizes are available. Consult the factory or your Continental Disc Corporation representative for more information.



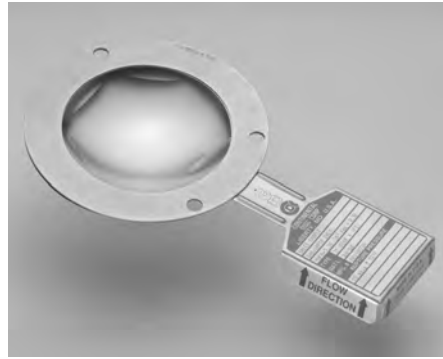
MINTRX Rupture Disc

STAR X Rupture Disc

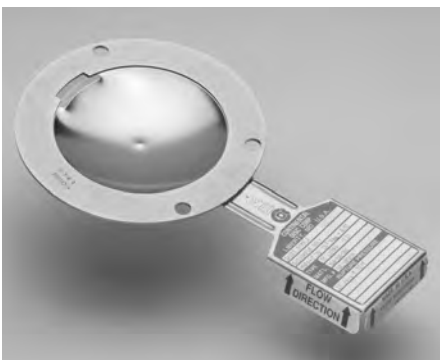
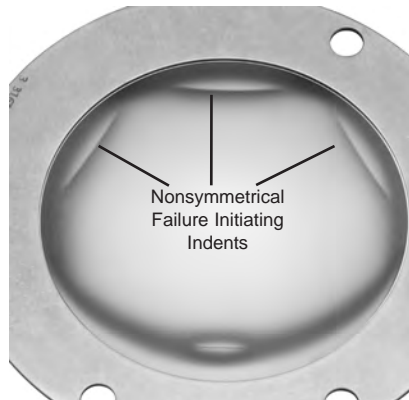
The STAR X Rupture Disc is designed to provide protection at even lower burst pressures than the ULTRX or MINTRX rupture discs. It has Continental Disc's patented nonsymmetrical failure initiating indents, to precisely control disc buckling at a predetermined pressure. The STAR X Rupture Disc incorporates a handling ring to reduce torque sensitivity. It is specifically designed for low pressure applications that require operating ratio of up to 90% of the disc's rated (marked) burst pressure.

The STAR X Rupture Disc excels in low pressure gaseous or partial gas/liquid systems. Consult the factory before using the STAR X Rupture Disc in full-liquid applications.

The STAR X Rupture Disc is available in nominal sizes ranging from 1" through 6" (25 - 150 mm). Larger sizes are available. Consult the factory or your Continental Disc Corporation representative for more information.



STAR X Rupture Disc



LOTRX Rupture Disc

LOTRX Rupture Disc

The LOTRX Rupture Disc represents a breakthrough in rupture disc design. The LOTRX Rupture Disc provides all the benefits of Continental's scored, reverse acting discs, with additional features that make it ideal for extremely low pressure applications. These enhancements include:

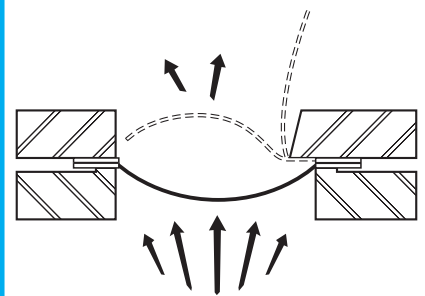
- C.D.C.'s Failure Initiating Indent, located at or near the apex of the rupture disc dome, lowers the pressure at which reversal occurs (compared to other solid metal, reverse acting rupture discs of similar size, material, or thickness)

- C.D.C.'s Notched Outlet Ring facilitates opening of the rupture disc along the precision semicircular score at extremely low reversal pressures
- Safety ratio of 1-to-1. Should your LOTRX Rupture Disc be damaged during installation or handling, it has been designed to provide pressure relief at or below the burst pressure rating
- C.D.C.'s Backpressure Support Ring permits operation under full vacuum conditions for burst pressure ratings 5 psig (0,345 barg) and above. For lower burst pressure settings, full vacuum protection may be available based on size and material; consult the factory

The LOTRX Rupture Disc is available in nominal sizes ranging from 1" through 8" (25 - 200 mm) and is intended for low pressure gaseous or partial gas/liquid systems. Larger sizes are available. Consult the factory or your Continental Disc Corporation representative for more information.

Proven features of Continental Disc's Scored, Reverse Acting Rupture Discs:

- ~ Operation to 90% of burst rating (see page 6)
- ~ Zero manufacturing range as standard
- ~ Safety ratio of at or less than 1.5 times the rated burst pressure (1.0 for LOTRX)
- ~ Designed to withstand full vacuum for burst pressure ratings above 5 psig (0,345 barg)
- ~ Non-fragmenting design
- ~ Encapsulating rings (handling ring for STAR X), which minimize torque sensitivity and provide a leak-tight metal-to-metal seal
- ~ Excellent for safety relief valve isolation
- ~ Conformance to national or international codes including ASME Section III or VIII, ISO, DIN, EN, BSI, JIS, CE, ATEX, or other codes
- ~ Permanently attached 3-dimensional flow direction tag to provide immediate visual verification of proper installation



SPECIFYING A REVERSE ACTING RUPTURE DISC

Manufacturing Range

All reverse acting rupture discs are offered with a zero manufacturing range as a standard. This means that the rupture disc will be manufactured and marked with precisely the burst pressure that was requested by the customer, and that the rupture disc can be pressurized up to 90% of the rated (marked) burst pressure under normal operating conditions, for ratings of 40 psig (2,76 barg) and above. In this case, a standard burst tolerance of +/-5% applies to the rated (marked) burst pressure. For pressures below 40 psig (2,76 barg), the rupture disc can be pressurized to 90% of the rated (marked) burst pressure reduced by the burst tolerance. This is in accordance with the ASME Code.

European standards (ISO 4126.2) allow for different rupture disc rating methods, including:

- Specifying a burst pressure with a performance tolerance range, which includes the manufacturing range and the burst tolerance together
- Specifying an acceptable min-max burst pressure range

For the table at right, a manufacturing range is defined as the allowable pressure range within which the rupture disc will be rated (marked), based on the customer's specified burst pressure. After the rupture disc has been manufactured, tested, and marked, the burst tolerance applies to the rated (marked) burst pressure. The maximum operating pressure is the highest differential pressure the disc should be exposed to under normal operating conditions. Pressurizing a rupture disc above the maximum operating pressure may reduce the expected operating life of the rupture disc.

Recommended Maximum Temperatures

In general, the burst pressure of a rupture disc will decrease as operating temperatures increase. Table II states the maximum temperatures for commonly used rupture disc materials and linings.

Table I – Rupture Disc Rating Methods (Manufacturing Range, Performance Tolerance, Min-Max)

North American (ASME) Standard					
Specified Burst Pressure	Manufacturing Ranges Available			Burst Tolerance	Maximum Operating Pressure
	Standard	Increased	Max		
50 psig and above 3,44 barg and above	zero	-5%	-10%	± 5 %	90% of rated
40 up to 50 psig 2,76 up to 3,44 barg	zero	-2.5 psig -0,173 barg	-5 psig -0,345 barg	± 5 %	90% of rated
9 up to 40 psig 0,806 up to 2,76 barg	zero	-2.5 psig -0,173 barg (See below for LOTRX)	-5 psig -0,345 barg	± 2 psig ± 0,138 barg	90% of (rated - 2 psig or 0,138 barg)
LOTRX ONLY					
20 psig and above 1,38 barg and above	zero	-5%	-10%	± 2 psig ± 0,138 barg	90% of (rated - 2 psig)
6 psig up to 20 psig 0,414 up to 1,38 barg	zero	-5%	-10%	± 10%	90% of (rated - 10%)
5 psig up to 6 psig 0,345 up to 0,414 barg	zero	-0.3 psig -0,021 barg	-0.6 psig -0,042 barg	± 10%	90% of (rated - 10%)
less than 5 psig less than 0,345 barg	zero	-0.3 psig -0,021 barg	-0.6 psig -0,042 barg	± 15%	90% of (rated - 15%)
European "Performance Tolerance" Method					
Specified Burst Pressure	Performance Tolerances Available			Burst Tolerance	Maximum Operating Pressure
	Standard	Increased	Max		
50 psig and above 3,44 barg and above	± 5 %	-10% / +5%	-15% / +5%	Included in	90% of low end
40 up to 50 psig 2,76 up to 3,44 barg	± 5 %	(-2.5 psig-5%) / +5% (-0,173 barg-5%) / +5%	(-5 psig-5%) / +5% (-0,345 barg-5%) / +5%	Performance	of Performance
9 up to 40 psig 0,806 up to 2,76 barg	± 2 psig ± 0,138 barg	-4.5 / +2 psig -0,311 / +0,138 barg (See below for LOTRX)	-7 / +2 psig -0,483 / +0,138 barg	Tolerance	Tolerance
LOTRX ONLY					
20 psig and above 1,38 barg and above	± 2 psig ± 0,138 barg	(-2 psig-5%) / +2 psig (-0,138 barg-5%)/+0,138 barg	(-2 psig-10%) / +2 psig (-0,138 barg-10%)/+0,138 barg	Included in	90% of low end
6 psig up to 20 psig 0,414 up to 1,38 barg	± 10%	-15% / +10%	-20% / +10%	Performance	of Performance
5 psig up to 6 psig 0,345 up to 0,414 barg	± 10%	(-0.3 psig-10%) / +10% (-0,021 barg-10%) / +10%	(-0.6 psig-10%) / +10% (-0,042 barg-10%) / +10%	Tolerance	Tolerance
less than 5 psig less than 0,345 barg	± 15%	(-0.3 psig-15%) / +15% (-0,021 barg-15%) / +15%	(-0.6 psig-15%) / +15% (-0,042 barg-15%) / +15%		
Min-Max Method					
Specified Minimum Burst Pressure	Available Max Burst Pressure			Burst Tolerance	Maximum Operating Pressure
	Standard	Increased	Max		
50 psig and above 3,44 barg and above	Min + 10%	Min + 15%	Min + 20%	Included in	90% of
40 up to 50 psig 2,76 up to 3,44 barg	Min + 10%	Min + 2.5 psig + 10% Min + 0,173 barg + 10%	Min + 5 psig + 10% Min + 0,345 barg + 10%		
9 up to 40 psig 0,806 up to 2,76 barg	Min + 4 psig Min + 0,276 barg	Min + 6.5 psig Min + 0,449 barg (See below for LOTRX)	Min + 9 psig Min + 0,621 barg		
LOTRX ONLY					
20 psig and above 1,38 barg and above	Min + 4 psig Min + 0,276 barg	Min + 4 psig + 5% Min + 0,276 barg + 5%	Min + 4 psig + 10% Min + 0,276 barg + 10%	Included in	90% of
6 up to 20 psig 0,414 up to 1,38 barg	Min + 20%	Min + 25%	Min + 30%		
5 up to 6 psig 0,345 up to 0,414 barg	Min + 20%	Min + 0.3 psig + 20% Min + 0,021 barg + 20%	Min + 0.6 psig + 20% Min + 0,042 barg + 20%		
less than 5 psig less than 0,345 barg	Min + 30%	Min + 0.3 psig + 30% Min + 0,021 barg + 30%	Min + 0.6 psig + 30% Min + 0,042 barg + 30%	Min-Max	Minimum

Table II - Maximum Recommended Temperature Limits

Disc Material	Fahrenheit	Celsius
Nickel / Monel**	800°	427°
316 Stainless Steel / Hastelloy*** C-276	900°	482°
Inconel**	1000°	538°
Tantalum	500°	260°
Aluminum	260°	127°
Teflon liner	500°	260°

* Inconel and Monel are registered trademarks of the Inco family of companies.

** Hastelloy is a registered trademark of Haynes International.

REVERSE ACTING RUPTURE DISC HOLDERS

Table III – Minimum / Maximum Available Burst Pressures at 72°F (22°C)

White bars indicate psig. Gray bars indicate barg.

Model	Size	Nickel/Monel		316SS/Inconel		Hastelloy C (see note)	
		Min	Max	Min	Max	Min	Max
ULTRX	1"	100	1000	125	1000	140	1000
	25 mm	6,90	68,9	8,62	68,9	9,66	68,9
	1.5"	85	900	100	1000	110	1000
	40 mm	5,87	62,0	6,90	68,9	7,59	68,9
	2"	65	850	85	900	95	1000
	50 mm	4,49	58,6	5,87	62,0	6,56	68,9
	3"	50	750	70	900	80	1000
	80 mm	3,45	51,7	4,83	62,0	5,52	68,9
	4"	50	650	60	800	70	900
	100 mm	3,45	44,8	4,14	55,1	4,83	62,0
	6"	40	400	50	450	60	500
	150 mm	2,76	27,5	3,45	31,0	4,14	34,4
	8"	40	250	50	300	60	350
	200 mm	2,76	17,2	3,45	20,6	4,14	24,1
	MINTRX	1"	50	99	65	124	75
25 mm		3,45	6,82	4,49	8,54	5,18	9,58
1.5"		45	84	50	99	60	109
40 mm		3,11	5,79	3,45	6,82	4,14	7,51
2"		35	64	45	84	50	94
50 mm		2,42	4,41	3,11	5,79	3,45	6,48
3"		25	49	35	69	45	79
80 mm		1,73	3,37	2,42	4,75	3,11	5,44
4"		25	49	30	59	40	69
100 mm		1,73	3,37	2,07	4,06	2,76	4,75
6"		20	39	25	49	35	59
150 mm		1,38	2,68	1,73	3,37	2,42	4,06
8"		20	39	25	49	35	59
200 mm		1,38	2,68	1,73	3,37	2,42	4,06
STAR X		1"	20	125	20	125	40
	25 mm	1,38	8,61	1,38	8,61	2,76	9,65
	1.5"	16	100	16	100	30	110
	40 mm	1,11	6,89	1,11	6,89	2,07	7,58
	2"	15	89	15	89	25	94
	50 mm	1,04	6,13	1,04	6,13	1,73	6,48
	3"	15	69	15	69	22	79
	80 mm	1,04	4,75	1,04	4,75	1,52	5,44
	4"	15	59	15	59	22	69
	100 mm	1,04	4,06	1,04	4,06	1,52	4,75
	6"	13	50	13	50	20	60
LOTRX	1"	2	19.9	2	19.9	4	39.9
	25 mm	0,138	1,37	0,138	1,37	0,276	2,75
	1.5"	2	15.9	2	15.9	4	29.9
	40 mm	0,138	1,09	0,138	1,09	0,276	2,06
	2"	2	14.9	2	14.9	4	24.9
	50 mm	0,138	1,02	0,138	1,02	0,276	1,71
	3"	3	14.9	3	14.9	5	21.9
	80 mm	0,207	1,02	0,207	1,02	0,345	1,51
	4"	1.5	14.9	1.5	14.9	3	21.9
	100 mm	0,104	1,02	0,104	1,02	0,207	1,51
	6"	2.5	12.9	2.5	12.9	7	19.9
150 mm	0,173	0,889	0,173	0,889	0,483	1,37	
8"	3.5	24.9	3.5	24.9	10.5	34.9	
200 mm	0,242	1,71	0,242	1,71	0,724	2,40	

- Notes:
- Higher or lower pressures and sizes may be available. Consult your Continental Disc representative or the factory.
 - Stainless steel encapsulating rings are standard (handling ring for STAR X). For optional ring materials, consult your Continental Disc representative or the factory.
 - Teflon lining or coating is available on some models. Consult your Continental Disc representative or the factory.
 - For additional corrosion protection or pressure capability, other materials like tantalum or aluminum are available. Consult your Continental Disc representative or the factory.

REVERSE ACTING RUPTURE DISC HOLDERS

Rupture Disc Holders

In order to provide a leak-tight seal in all conditions and to support and orient the rupture disc properly during operation, Continental Disc Corporation offers a holder assembly specifically designed for each of our scored, reverse acting rupture disc designs.

These solid metal holders are insert type, meaning they were designed to fit directly between standard ANSI, DIN, or JIS companion flanges, as well as other flat or raised-face bolted flange arrangements. A holder assembly consists of two main parts: a **holder inlet** with attached J-Hook, and a **holder outlet**. Both parts are held together during installation by two or more preassembly clips.

The holder assembly allows optimum operation of the companion rupture disc, and has been designed for simplicity, superior seating capability, and safety:

- Alignment of the rupture disc in the holder is assured through the use of non-symmetrical locating pins outside the rupture disc sealing area.
- Stainless steel tags spot-welded to the outside of the holder inlet and outlet indicate the proper flow direction, to match that shown on the 3-D flow tag attached to the rupture disc. Plus, a J-Hook is welded to the holder inlet as a standard, to mate with a customer-drilled hole in the side of the companion flange. This combination virtually assures that the rupture disc assembly cannot be inserted in the system upside down.
- A tapered, raised seat on the inlet holder provides uniform load on the rupture disc, insuring a metal-to-metal leak-tight seal between the rupture disc and holder.
- An arcuate projection, located inside the holder outlet, helps eliminate fragmentation and provides an unrestricted flow after reversal occurs.

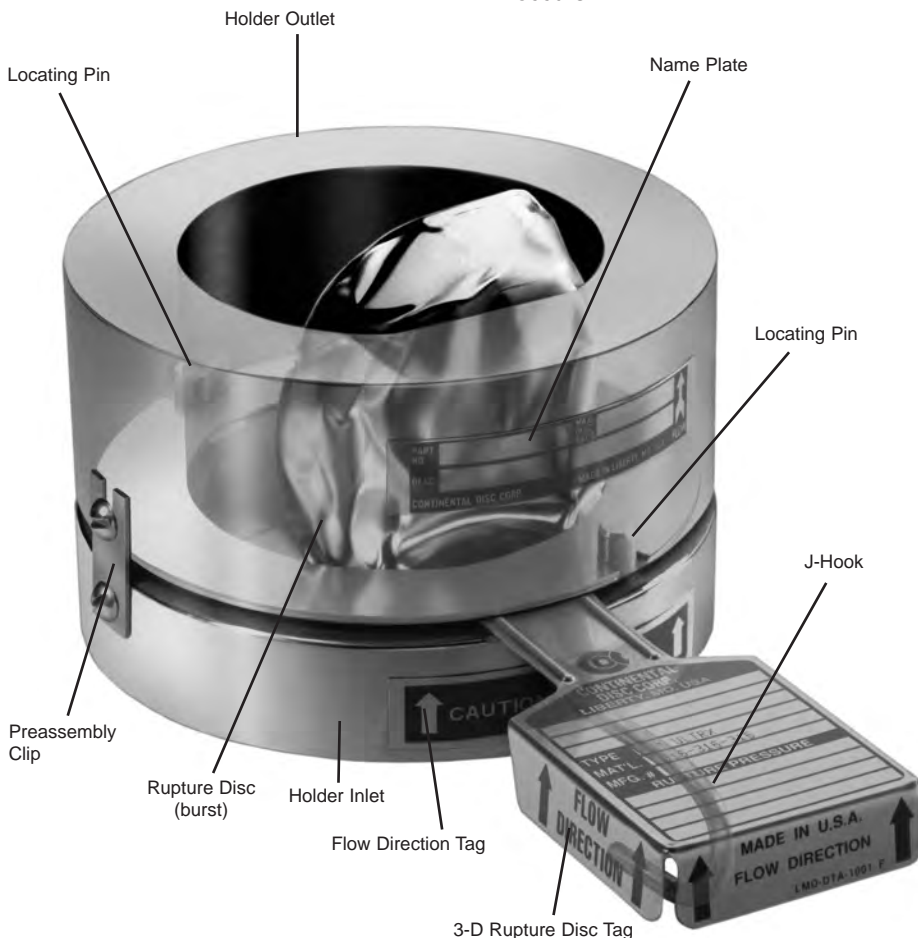
Each scored, reverse acting rupture disc design — ULTRX, MINTRX, STAR X, or LOTRX — has specific holder design requirements. The customer must install the rupture disc properly in the appropriate holder assembly for optimum operation. The permanently attached stainless steel tags and unique locating pins make proper installation safe and easy.

Holder Specifications

Weights and dimensions for these holders in ANSI, DIN, and JIS configurations are shown in Table IV. Consult the factory for holders to fit other national or international standards.

Materials: Holder assemblies are machined from standard materials including carbon steel, 316SS, Monel, and Hastelloy C. Other materials are available on request.

Options: Holder assemblies are available with options including 1/4", 3/8", or 1/2" gauge tap, nipple and tee, excess flow valve, pressure gauge, special facings, or Teflon coating. A stainless steel customer identification tag can be permanently attached to the holder at no extra charge. Holder assemblies can also be manufactured in a pretorque design, at customer request. This design allows the rupture disc and holder to be "bolted up" prior to insertion in the system piping. For additional corrosion protection, tantalum lining is available on the inlet portion of the holder. Contact the factory for more information.



REVERSE ACTING RUPTURE DISC HOLDERS

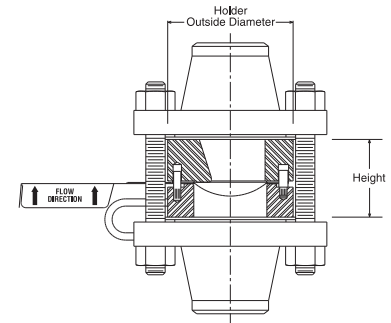


Table IV — Weights and Dimensions for Scored, Reverse Acting Holder Assemblies


Holder Sizes Available				Nominal Size	ANSI		DIN		JIS		ULTRX Height	MINTRX Height	STAR X Height	LOTRX Height	Weight
ULTRX	MINTRX	STAR X	LOTRX		Class	Outside Diameter (inch/mm)	Class	Outside Diameter (mm)	Class	Outside Diameter (mm)					
◆	◆	◆	◆	1 in. 25 mm	150	2.50 / 63,5					1.82 / 46	1.75 / 44	1.80 / 46	1.84 / 47	2.0 / 0,9
					300 / 600	2.75 / 69,9	10 / 40	69,9	10 / 20	69,9	1.82 / 46	1.75 / 44	1.80 / 46	1.84 / 47	2.5 / 1,1
							64 / 160	82,0	30 / 40	76,0	1.82 / 46	1.75 / 44	1.80 / 46	1.84 / 47	3.0 / 1,4
											2.42 / 61	2.35 / 60			3.6 / 1,6
◆	◆	◆	◆	1 1/2 in. 40 mm	150	3.25 / 82,6					2.03 / 52	1.96 / 50	2.04 / 52	2.08 / 30	4.5 / 2,0
					300 / 600	3.63 / 92,2	10 / 40	92,2			2.03 / 52	1.96 / 50	2.04 / 52	2.08 / 30	4.7 / 2,1
									10 / 20	86,0	2.03 / 52	1.96 / 50	2.04 / 52	2.08 / 30	4.9 / 2,2
					900 / 1500	3.75 / 95,3			30 / 40	97,0	2.03 / 52	1.96 / 50	2.04 / 52	2.08 / 30	5.0 / 2,3
							64 / 160			2.57 / 65	2.50 / 64			6.4 / 2,9	
										2.57 / 65	2.50 / 64			7.5 / 3,4	
◆	◆	◆	◆	2 in. 50 mm	150	4.00 / 101,6			10	101,6	2.40 / 61	2.33 / 59	2.36 / 60	2.40 / 61	5.9 / 2,8
									16 / 20	101,6	2.40 / 61		2.36 / 60	2.40 / 61	5.9 / 2,8
					300 / 600	4.25 / 108,0	10 / 40	108,0			2.40 / 61	2.33 / 59	2.36 / 60	2.40 / 61	6.5 / 2,9
							64	111,0	30 / 40	111,0	2.40 / 61	2.33 / 59		2.40 / 61	6.7 / 3,0
										2.40 / 61	2.33 / 59		2.40 / 61	7.2 / 3,3	
										2.40 / 61	2.33 / 59		2.40 / 61	7.6 / 3,4	
										3.06 / 78				17 / 7,7	
◆	◆	◆	◆	3 in. 80 mm	150	5.25 / 133,4			10	132,0	3.24 / 82	3.17 / 81	3.17 / 81	3.21 / 81	15 / 6,9
									16 / 20	137,0	3.24 / 82	3.17 / 81	3.17 / 81	3.21 / 81	16 / 7,3
							10	142,0			3.24 / 82		3.17 / 81	3.21 / 81	19 / 8,8
					300 / 600	5.75 / 146,1	16 / 40	142,0			3.24 / 82	3.17 / 81	3.17 / 81	3.21 / 81	19 / 8,8
						64	146,1	30 / 40	146,1	3.24 / 82	3.17 / 81	3.17 / 81	3.21 / 81	21 / 9,5	
◆	◆	◆	◆	4 in. 100 mm			10 / 16	162,0	10	156,0	4.07 / 103	4.00 / 102	3.93 / 100	3.97 / 101	17 / 7,7
								25 / 40	168,0	16 / 20	162,0	4.07 / 103	4.00 / 102	3.93 / 100	20 / 9,1
					150	6.75 / 171,5			30	168,0	4.07 / 103	4.00 / 102	3.93 / 100	3.97 / 101	23 / 10,0
							64	173,0			4.07 / 103	4.00 / 102	3.93 / 100	3.97 / 101	24 / 11,0
										4.19 / 106	4.12 / 105			25 / 11,0	
										4.07 / 103	4.00 / 102	3.93 / 100	3.97 / 101	27 / 12,0	
									40	180,0	4.07 / 103	4.00 / 102	3.93 / 100	3.97 / 101	27 / 12,0
◆	◆	◆	◆	6 in. 150 mm	150	8.63 / 219,2	10 / 16	217,0	10	217,0	5.81 / 148	5.74 / 146	5.60 / 142	5.64 / 143	55 / 25,0
								25 / 40	223,0		5.81 / 148	5.74 / 146	5.60 / 142	5.64 / 143	62 / 28,0
										16 / 20	235,0	5.81 / 148	5.74 / 146	5.60 / 142	69 / 31,0
					300	9.75 / 247,7			30	247,7	5.81 / 148	5.74 / 146	5.60 / 142	5.64 / 143	85 / 39,0
									40	262,0	5.81 / 148	5.74 / 146	5.60 / 142	89 / 40,0	
														96 / 44,0	
														112 / 51,0	
														113 / 51,0	
														120 / 54,0	
														123 / 56,0	
														150 / 68,0	
◆				10 in. 250 mm	150	13.25 / 336,6					6.12 / 155				89 / 40,0
											6.12 / 155				96 / 44,0
								25	340,0	16 / 20	353,0	6.12 / 155			112 / 51,0
								40	352,0		357,0	6.12 / 155			113 / 51,0
											6.12 / 155			120 / 54,0	
											6.12 / 155			123 / 56,0	
											6.12 / 155			150 / 68,0	
◆				12 in. 300 mm			25	400,0	16 / 20	403,0	7.12 / 181				150 / 68,0
					150	16.00 / 406,4					403,0	7.12 / 181			154 / 70,0
								40	417,0	30	417,0	7.12 / 181			160.3 / 73,0
					300	16.50 / 419,1					431,0	7.12 / 181			183 / 83,0
											7.12 / 181			187 / 85,0	
											7.12 / 181			211 / 96,0	

Note: The ULTRX Rupture Disc Holder may require a spool piece between the holder outlet and the inlet of a pressure relief valve for 10" and 12" (250 and 300 mm) size. Recommended spool piece height is 5" for a 10" holder, and 6" for a 12" holder (125 mm for 250 mm holder, 150 mm for 300 mm holder). Consult the factory for more information.

CODE COMPLIANCE

Code Compliance

When specified, ULTRX, MINTRX, STAR X, and LOTRX Rupture Discs will be manufactured in accordance with ASME Code Sections III or VIII, ISO, DIN, EN, BSI, JIS, or other codes as required. For these applications, C.D.C. will manufacture, temperature test, and mark the rupture discs to comply with specific code requirements.

Continental Disc Corporation has been accredited and is authorized by the ASME Code to utilize the  Code Symbol Stamp for product built in accordance with the requirements of the ASME Boiler and Pressure Vessel Code, Section VIII, Division 1.

The ULTRX, MINTRX, STAR X, and LOTRX flow performance was certified by The National Board of Boiler and Pressure Vessel Inspectors. The certified flow resistance factors (K_R) and minimum net flow area values are available from Continental Disc



Corporation or The National Board of Boiler and Pressure Vessel Inspectors.

€ marked reverse acting rupture discs in accordance with Pressure Equipment Directive 97/23 EC are available when specified.

Continental Disc maintains an in-house ASME accepted flow testing laboratory to conduct flow testing for rupture discs, relief valves, and rupture disc/valve combinations (Refer to C.D.C. Bulletin no. 1-1106 for details).

B.D.I.®* (Burst Disc Indicator) Alarm System

In situations where immediate notification of pressure relief is critical, Continental's patented B.D.I. (Burst Disc Indicator) Alarm System should be used to automatically notify system operators that a rupture disc has burst.

The heart of the B.D.I. Alarm System is the B.D.I. Alarm Strip, a closed-path electrical strip adhered to a Teflon membrane, which installs in conjunction with the rupture disc. When the rupture disc bursts, the alarm strip is severed, disrupting the electrical current supplied from a connected monitoring device. This "open-circuit" creates a signal to initiate alarms or equipment controlled by the monitoring device.

The B.D.I. Alarm Strip is computer compatible, resistant to corrosives, and operational over a wide range of temperatures.

Continental Disc also offers a full line of B.D.I. Alarm Monitors providing several beneficial features including visual and/or auditory alarm signals, as well as multi-channel modular designs.



Intrinsically safe designs are also available (Refer to C.D.C. Bulletin no. 5-7701-5 for details).

The B.D.I. Alarm System should not be used with devices with minimum pressure ratings below those shown in Table V. Consult the factory for these applications.

Table V – Minimum Pressure for B.D.I.

Rupture Disc Size		Pressure	
In.	mm.	psig	barg
1	25	15	1,03
1-1/2	40	10	0,69
2	50	4	0,28
3	80	2,5	0,17
4	100	2,5	0,17
6	150	1	0,07

ULTRX, MINTRX, and STAR X rupture discs incorporate United States patent no. 4,597,505; 4,512,171; 4,072,160; 4,669,626 and 4,759,460; Australia patent no. 579833; Canada patent no. 1244315; Chile patent no. 35096; Germany patent no. P 3473633.6; France, Netherlands and United Kingdom patent no. EP 0137 903; India patent no. 160204; Ireland patent no. 55493; Mexico patent no. 161587; Spain patent no. 289581; and Venezuela patent no. 46.640.

LOTRX Rupture Disc incorporates U.S. patent no. 6,006,938 and 6,241,113. Other patents pending.

To assure selection of the correct rupture disc and holder for your application, the following information should be supplied when placing an order. To discuss more specific information regarding the applicable rupture disc for your installation, a B.D.I. Alarm System, or accessory, call, write, or fax the nearest Continental Disc direct sales office listed on the back.

Specifications:	Quality Assurance/Documentation:	Operating Specifications:
<ol style="list-style-type: none"> 1. Quantity 2. Size 3. Type 4. Materials 5. Options . . . linings 6. Actual vacuum pressure or back pressure 7. Specified pressure/specified temperature 8. Manufacturing range, see page 6 	<ol style="list-style-type: none"> 1. Codes: ASME, DIN, EN, JIS, BSI, or others 2. Special cleaning 3. Special packaging 4. Special tagging 5. Temperature testing 6. Material test reports 7. Other 	<ol style="list-style-type: none"> 1. Maximum allowable working pressure (vessel MAWP) 2. Operating pressure 3. Operating temperature 4. Vacuum/backpressure 5. Cycle conditions 6. Flow rate required 7. Media 8. Molecular weight/specific gravity 9. For use under a relief valve 10. Previous manufacturing number (if known)

Please supply the following when ordering::

RUPTURE DISC: Quantity: _____ **Size:** _____

Description: ULTRX, MINTRX, STAR X, or LOTRX Rupture Disc

Material: _____

Inlet and Outlet Rings: 316 SS ⁽¹⁾ Manufacturing Range: Zero⁽²⁾

Rated Burst Pressure: _____ psig or _____ barg at _____ °F or _____ °C
 _____ min to _____ max ^(select) psig / barg at _____ °F or _____ °C

Burst Tolerance: _____ or Performance Tolerance: _____

Manufacturing Number: _____ for previously supplied rupture discs.

- Options –**
- ASME testing required: _____
 - Teflon Liner: Inlet _____
 - Protective Cover: Outlet _____
 - B.D.I. Alarm System _____
 - Other requirements: _____

HOLDER: Quantity: _____ **Size:** _____

Description: ULTRX, MINTRX, STAR X, or LOTRX Holder with J-Hook, to mate with ⁽³⁾ _____ class flanges

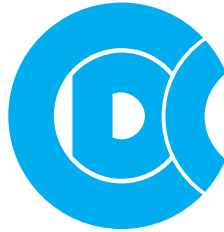
Material: Inlet _____ Outlet _____

Manufacturing Number: _____ for previously supplied holders.

- Options –**
- Accessories:⁽⁴⁾ _____
 - Other requirements: _____


Notes:
 1. 316 SS is standard. Specify other material when required.
 2. Zero (0) manufacturing range is standard. See page 6.


3. Specify class of flange that holder is to mate with, i.e., ANSI 150 or DIN 10/40, etc.
 4. Gauge tap, nipple and tee, excess flow valve, pressure gauge, special facing, tantalum lining, Teflon coating.



Continental Disc[®] Corporation




ASME Code Symbol Stamp
Available When Specified


China Manufacture License
Available When Specified


Pressure Equipment Directive
Available When Specified

Continental Disc Corporation has representatives located throughout the world.
Contact the Continental Disc Corporation office nearest you for the authorized representative in your area.

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