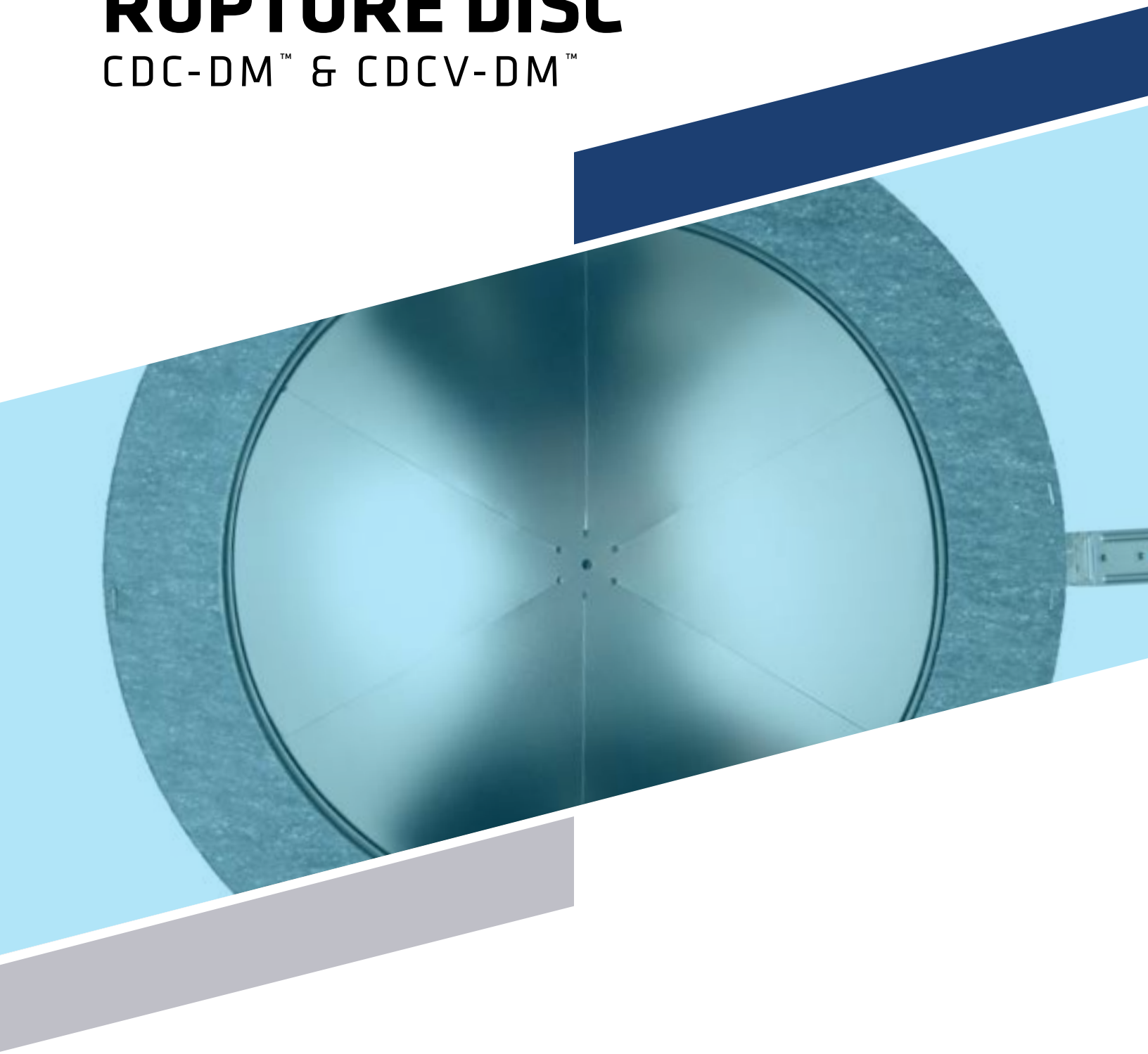
Continental Disc® Corporation

DIRECT MOUNT COMPOSITE RUPTURE DISC

CDC-DM™ & CDCV-DM™



CDC-DM™ & CDCV-DM™

Designed to provide instantaneous, full-opening pressure relief, the Continental Disc CDC-DM and CDCV-DM "direct-mount" holder-less composite rupture discs are differential pressure relief devices used to protect pressurized systems, equipment, and vessels from potentially damaging overpressure conditions. The CDC-DM composite rupture disc is designed to operate in conditions that are not subjected to vacuum conditions, while the CDCV-DM composite rupture disc is designed to operate in vacuum conditions.

Technical Details

- Size Range: 14" – 36" (350 mm – 900 mm)
- Flange Classes: Available in ASME #150 Series A, DIN PN6, and JIS 10K weld neck flange with standard schedule pipe bore
- Materials of Construction:
  - Outlet Gasket: Non-asbestos, Polytetrafluoroethylene (PTFE)*, or GYLON® 3500
  - Outlet Ring: 316 SS, 316L SS, Alloy C276, Alloy 600, Alloy 400 or Nickel
  - Top Section: 316 SS, 316L SS, Alloy C276, Alloy 600, Alloy 400 or Nickel
  - Seal: Aluminum, 316 SS, 316L SS, Alloy C276, Alloy 600, Alloy 400, Nickel or Fluoropolymer
  - Vacuum/Handling Support: 316 SS, 316L SS, Alloy C276, Alloy 600, Alloy 400 or Nickel
  - Inlet Gasket: Non-asbestos or Fluoropolymer
  - Operating Pressure: Up to 80% of the rated (stamped) burst pressure in liquid or gas applications
- Maximum Temperature: 400°F (204°C)
- Burst Range: 2 psig – 59 psig (0,13 barg – 4,06 barg)
- CDCV-DM can withstand full vacuum conditions
- K_R Factors: 0.93 gas/vapor relief, 1.06 liquid relief
- Global certifications and approvals including ASME (UD) and PED (CE)

Features

- The metallic top section can be manufactured from various materials, depending on your application and corrosion-resistance requirements. Seals, protective rings, gaskets and outline liners can also be manufactured from a variety of materials to meet your needs.
- Our preformed composite rupture discs also feature a seven-hole pattern, positioned at the apex of the rupture disc's top section. This unique configuration, in combination with the pre-cut sections along the dome, provide non-fragmenting characteristics when used with a fluoropolymer seal.
- By using this seven-hole design, thicker, more durable materials can be used to manufacture the rupture disc, while still achieving the high 80% operating-to-burst-pressure ratio.
- Various seal material options, such as fluoropolymers and exotic metals, help ensure excellent corrosion resistance. Our non-metallic seals are essential to eliminate fragmentation.
- An outlet ring is provided on the CDCV-DM and the CDC-DM Composite Rupture Discs for rigidity and to help align the rupture disc within the customer's flange.
- Ideal for liquid or gas/vapor applications.
- Handling support provided when vacuum support is not specified.

Options

- Available with Continental's exclusive integral B.D.I.® Burst Disc Indication
- Fluoropolymer coating available

*PTFE outlet gasket not available with integral B.D.I.

SPECIFICATIONS

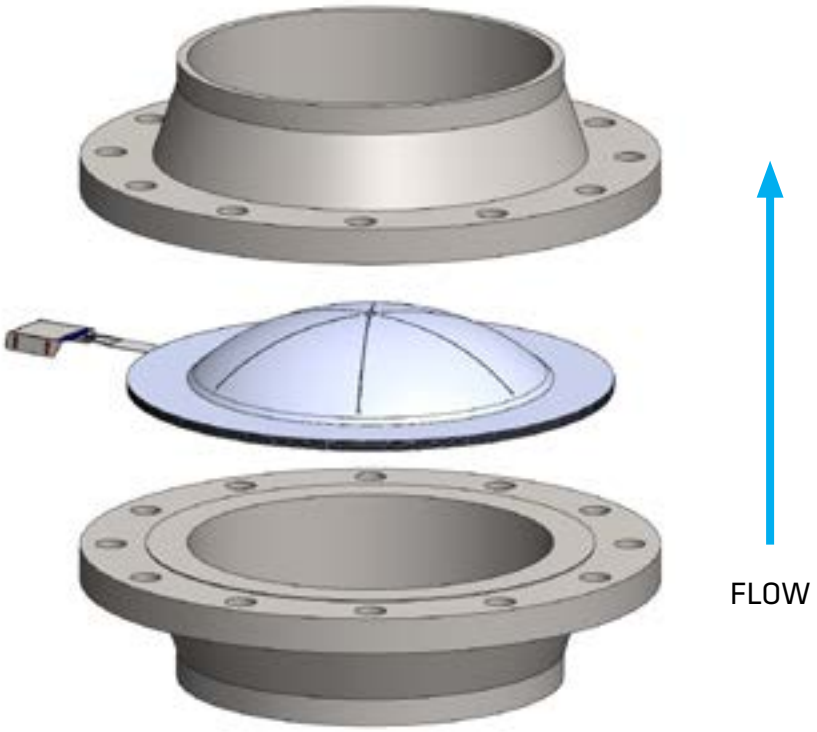
Product	Specified Burst Pressure psig (barg)	Corresponding Manufacturing Range -/+ %	Rated (Marked) Burst Tolerance
CDC-DM, CDCV-DM	≥2 – ≤8 (>0,138 – ≤0,552)	±40	± 20%
	>8 – ≤12 (>0,552 – ≤0,815)	±30	± 15%
	>12 – ≤14 (>0,815 – ≤0,965)	-10 / +20	± 10%
	>14 – ≤19 (>0,965 – ≤1,31)	-10 / +20	± 2 psig (± 0,138 barg)
	>19 – ≤40 (>1,31 – ≤2,76)	-4 / +14	± 2 psig (± 0,138 barg)
	>40 – ≤50 (>2,76 – ≤3,45)	-4 / +14	±5%
	>50 – ≤100 (>3,45 – ≤6,90)	-4 / +10	

Rating and Range is based on psig values, barg values are provided for reference

SPECIFICATIONS

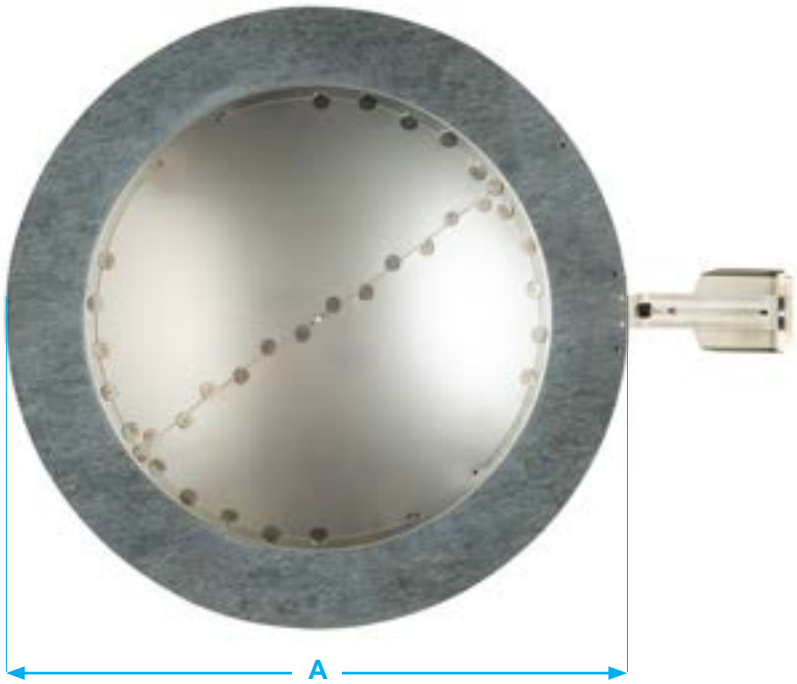
Seal Material Burst Pressure Limits							
Size Inches (mm)	Teflon		Aluminum psig (barg)	Nickel psig (barg)	Alloy 400 psig (barg)	Alloy 600 psig (barg)	316SS/316LSS psig (barg)
	CDC-DM psig (barg)	CDCV-DM psig (barg)					
14" (350 mm)	2 - 59 (0,138 - 4,07)	4 - 59 (0,138 - 4,07)	4 - 59 (0,276 - 4,07)	14 - 59 (0,965 - 4,07)	17 - 59 (1,17 - 4,07)	27 - 59 (1,86 - 4,07)	36 - 59 (2,48 - 4,07)
16" (400 mm)	2 - 59 (0,138 - 4,07)	4 - 59 (0,138 - 4,07)	4 - 59 (0,276 - 4,07)	13 - 59 (0,896 - 4,07)	16 - 59 (1,10 - 4,07)	25 - 59 (1,72 - 4,07)	34 - 59 (2,34 - 4,07)
18" (450 mm)	2 - 59 (0,138 - 4,07)	2 - 59 (0,138 - 4,07)	4 - 59 (0,276 - 4,07)	12 - 59 (0,827 - 4,07)	14 - 59 (0,965 - 4,07)	22 - 59 (1,52 - 4,07)	31 - 59 (2,14 - 4,07)
20" (500 mm)	2 - 50 (0,138 - 3,45)	4 - 50 (0,138 - 3,45)	4 - 50 (0,276 - 3,45)	10 - 50 (0,689 - 3,45)	12 - 50 (0,827 - 3,45)	21 - 50 (1,45 - 3,45)	29 - 50 (1,99 - 3,45)
24" (600 mm)	2 - 43 (0,138 - 2,96)	4 - 43 (0,276 - 2,96)	4 - 43 (0,276 - 2,96)	–	–	–	–
28" (700 mm)	2 - 36 (0,138 - 2,48)	4 - 36 (0,276 - 2,48)	4 - 36 (0,276 - 2,48)	–	–	–	–
30" (750 mm)	2 - 36 (0,138 - 2,48)	4 - 36 (0,276 - 2,48)	4 - 36 (0,276 - 2,48)	–	–	–	–
32" (800 mm)	2 - 30 (0,138 - 2,07)	4 - 30 (0,276 - 2,07)	4 - 30 (0,276 - 2,07)	–	–	–	–
36" (900 mm)	2 - 30 (0,138 - 2,07)	4 - 30 (0,276 - 2,07)	4 - 30 (0,276 - 2,07)	–	–	–	–

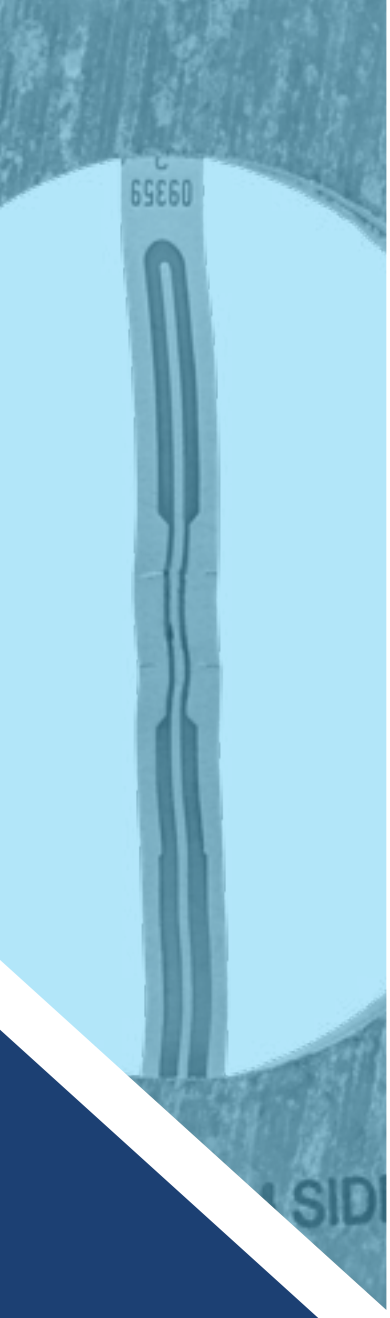
Dashes indicate material is not available at corresponding size.



SPECIFICATIONS

Outer Diameter Based on Installation			
Size Inches (mm)	150# ASME Series A Weld Neck Flange with Standard Schedule Pipe Bore Inches (mm)	DIN PN 6 Weld Neck Flange Inches (mm)	JIS 10K Weld Neck Flange with Standard Schedule Pipe Bore Inches (mm)
14" (350 mm)	17.63 (447.8)	16.65 (422.9)	16.54 (420.1)
16" (400 mm)	20.13 (511.3)	18.62 (473.0)	19.02 (483.1)
18" (450 mm)	21.50 (546.1)	20.78 (527.8)	21.18 (538.0)
20" (500 mm)	23.75 (603.3)	22.75 (577.9)	23.35 (593.1)
24" (600 mm)	28.13 (714.5)	26.73 (678.9)	27.44 (697.0)
28" (700 mm)	32.63 (828.8)	30.87 (784.1)	31.77 (807.0)
30" (750 mm)	34.63 (879.6)	31.26 (794.0)	34.49 (876.0)
32" (800 mm)	36.88 (936.8)	35.04 (890.0)	36.10 (916.9)
36" (900 mm)	41.13 (1044.7)	38.97 (989.8)	40.04 (1017.0)





B.D.I.® ALARM SYSTEM

The Continental Disc B.D.I. (Burst Disc Indicator) Alarm System reduces downtime, increase efficiency and ensure the safety of your facility. When an overpressure or vacuum condition causes a disc to rupture, the B.D.I. immediately sends a signal to the control room to alert the system operator.

The heart of the Burst Disc Indicator Alarm System is the BDI Alarm Strip. When a disc ruptures, it severs the electrically charged strip, opening the circuit and signaling the control room.

The B.D.I.® Alarm Monitor has been developed as an optional alarm monitor system to notify operators or activate appropriate equipment of an overpressure or vacuum event for a specific B.D.I.® Alarm Strip. Control panels, annunciators, light panels or other signaling devices can be used to warn of a ruptured disc. The B.D.I.® Alarm System is versatile to adapt to a variety of warning devices. Pumps, valves and other systems may also be activated to respond to an overpressure of vacuum situation by the break of a specific B.D.I.® Alarm Strip.

Linking the B.D.I. Alarm Strip to the monitoring system is the B.D.I. Lead Wire Assembly. A two-pin bullet plug protects the terminals at the connecting point against moisture. It is abrasion resistant, flexible, and highly weather-resistant.

Together this system will provide immediate notification of a burst disc to reduce downtime, increase efficiency and ensure the safety of your facility.

Technical Details

- Maximum current: 50 milliamp
- Maximum voltage: 24 VDC RMS
- Operational Temperature Range: -40 – +400 °F (-40 – +204 °C)
- B.D.I.® Alarm strip is composed of copper conductors adhered to a thin strip of KAPTON® film
- B.D.I.® Alarm Strip has been certified for use in “potentially explosive atmospheres” according to the requirements of the European Union
- Standard gaskets are asbestos free fiber-bound material

Features

- Resistant to chemical attack and corrosion
- Usable over a wide range of temperatures
- Compatible with standard CDC-DM and CDCV-DM rupture discs

Options

- Tantalum conductors available
- B.D.I.® Alarm Monitor
- Connector: Standard Plug or Bare Leads

NOTES

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