



Rupture Disc Solutions

FOR NEARLY ANY PRESSURE RELIEF CHALLENGE

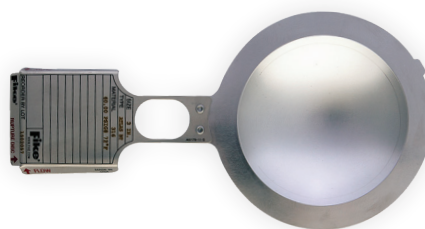
When working with elevated pressures and temperatures in the process industry, one unexpected pressure-related event can result in the catastrophic destruction of equipment, and most importantly, in the loss of life. For more than 75 years, Fike rupture discs have been used in these applications to “burst” precisely when called upon to relieve hazardous overpressure environments.

- RUPTURE DISCS
- HYGIENIC PRESSURE RELIEF
- CUSTOM-ENGINEERED SOLUTIONS
- PRESSURE RELIEF VALVE PROTECTION
- PRESSURE ACTIVATION

How Fike Can Solve Your Pressure Relief Problems

Reliable Rupture Discs

Fike rupture discs offer tighter burst tolerances, greater cycle life and higher operating ratios than the rest. That means you can run your operation at full capacity and for longer periods of time without worrying about the premature failure of a rupture disc.



Hygienic Pressure Relief

Hygienic rupture discs are engineered to remain free of unwanted media or bacteria, are compatible with CIP/SIP processes and may be treated to remove microscopic traces of rust-causing carbon - all of which are essential in the food and beverage and pharmaceutical industries.

Custom-Engineered Solutions

Some pressure relief challenges fall outside of what is considered "standard". Equipped with a dedicated team of pressure relief experts, an on-site ASME-certified flow characteristics lab, and 75 years of rupture disc experience, learn why Fike is known as the problem solvers in pressure relief.

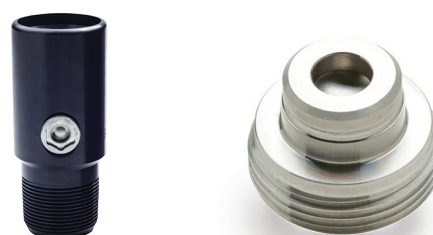


Pressure Relief Valve Protection

Pressure relief valves (PRVs) are often expensive to maintain, susceptible to leaking toxic media and at risk of clogging. Fike's ValveGuard concept uses rupture discs in tandem with PRVs to protect these expensive devices, allow for in-situ testing, and detect leakage or activation of the PRV.

Pressure Activation

A common problem in oil and gas drilling, completion and production are downhole tools' failure to properly activate. Fike's pressure activation device (PAD) technology uses applied pressure to burst a rupture disc to reliably accomplish various functions downhole and Hydraulic Tubing Drains (HTDs) help equalize fluid levels in tubing strings.



The Best from the Best – G2 Manufacturing Technology

Rupture discs are a symbol of trust. It's our job to ensure that when you insert a Fike rupture disc in your operation, it performs exactly as intended. This level of precision may be the difference between protecting your business, and most importantly, protecting your people from pressure-related disasters.

Fike's premium G2 rupture discs are the result of 75 years of rupture disc manufacturing—featuring our highest operating ratios, tightest burst tolerances and greatest life cycles.



FIKE IS THE ONLY RUPTURE DISC MANUFACTURER UTILIZING G2 TECHNOLOGY, WHICH INCLUDES:

Pre-Bulging Process

While bulging the metal, an engineered reversal point is implemented, which allows for precise control in the disc's pressure. This patented technique allow us to "control the reversal" to a degree previously unimaginable, creating an ultra-reliable disc that's proven to withstand in excess of 100,000 cycles.

Patented Opening Feature

Conventional scoring and coining methods used to create the disc's opening feature may cause microscopic mechanical damage, resulting in loss of burst tolerance control. G2's laser ablating and patented milling technologies remove material rather than compress it, greatly supporting the engineered reversal point.

Pre-Engineered Manufacturing

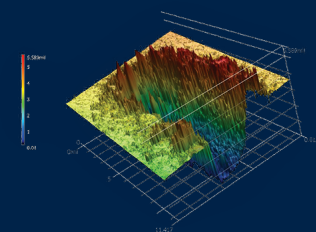
All configurations of rupture disc sizes, burst pressures and materials have been pre-engineered and pre-calculated. Therefore, a rupture disc with any combination of variables may be manufactured with maximum reliability and the shortest lead times in the industry.

OPENING FEATURES - UNDER THE MICROSCOPE

Two rupture discs may appear quite similar, but viewing them under a microscope may reveal a different story.

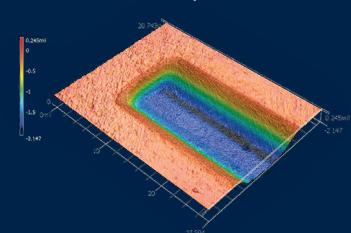
Scored/Coined Disc

Score blade produces inconsistent trench geometry and heat transfer, which may result in performance degradation and lower cycle life..



Laser-Ablated Disc

Femtosecond laser vaporizes the material, leaving the rest untouched. This results in a much more predictable, and reliable, rupture disc.



DISC TECHNOLOGY








Disc	AXIUS® RD520* Advanced Design/G2 Technology Superior Cycling Performance, Smooth, Rupture Disc	ATLAS® RD500* Advanced Design/G2 Technology Superior Cycling Performance, Smooth, Rupture Disc	RD540 Advanced Design/G2 Technology Superior Cycling Performance, Smooth, Ultra Low Pressure Rupture Disc	POLY-SD* Ideal for Polymerization Processes
Size Range	0.75-12 in. DN20-300	1-42 in. DN25-1050	1-4 in. DN25 - DN100	0.5-24 in. DN15-600
Burst Pressure	7-600 PSIG 0.48-41.37 BARG	3.25-1500 PSIG 0.22-103.24 BARG	1.75 - 10 PSIG 0.12 - 0.69 BARG	15-3000 PSIG 1.03-206.84 BARG
Operating Ratio	95% of marked burst pressure > 40 psig and 95% of min burst tolerance for burst pressure ≤ 40 psig	95% of marked burst pressure > 40 psig and 95% of min burst tolerance for burst pressure ≤ 40 psig	90% of min burst pressure tolerance	90% of marked burst pressure
EU Operating Ratio	95% of min burst tolerance for burst pressure ≤ 2.76 barg and 100% of min burst pressure > 2.76 barg	95% of min burst tolerance for burst pressure ≤ 2.76 barg and 100% of min burst pressure > 2.76 barg	95% of min burst pressure tolerance	95% of min burst pressure tolerance
Non-Fragmenting	Yes	Yes	Yes	Yes
Vacuum Resistant	Yes	Yes	Yes	Yes
Pulsating/Cyclic	Best	Best	Best	Good
Process Media	Liquid/Vapor/Gas	Liquid/Vapor/Gas	Liquid/Vapor/Gas	Liquid/Vapor/Gas
Type of Disc	Reverse Acting Rupture Disc	Reverse Acting Rupture Disc	Reverse Acting Rupture Disc	Forward Acting Rupture Disc
Application	Bolted Holder/ Flange Applications	Bolted Holder/ Flange Applications	Bolted Holder/ Flange Applications	Bolted Holder/ Flange Applications

DISC TECHNOLOGY



Disc	SRL* Good in Liquid Applications Perimeter Scored	SRX* Long Service Life Reliable	HO Series Wide Range of Sizes/ Burst Pressures, Wide Range of Applications	P Series Wide Range of Sizes/ Burst Pressures, Economical	SCRD* High Pressure Applications, Protection of PRV/ SRVs
Size Range	1-8 in. DN25-200	1-24 in. DN25-600	1-24 in. DN25-600	0.5-24 in. DN15-600	0.5-24 in. DN15-600
Burst Pressure	10-320 PSIG 0.69-22.07 BARG	20-820 PSIG 1.38-56.54 BARG	1.5-6000 PSIG 0.10-413.69 BARG	1.5-11000 PSIG 0.10-758.42 BARG	34-6000 PSIG 2.34-758.42 BARG
Operating Ratio	90% of marked burst pressure	90% of marked burst pressure	80% of marked burst pressure	70% of marked burst pressure	90% of marked burst pressure
EU Operating Ratio	95% of min burst pressure tolerance	95% of min burst pressure tolerance	85% of min burst pressure tolerance	75% of min burst pressure tolerance	95% of min burst pressure tolerance
Non-Fragmenting	Yes	Yes	No	No	Yes
Vacuum Resistant	Yes	Yes	Yes (HOV)	Yes (PV)	Yes
Pulsating/Cyclic	Good	Good	Good	Better	Good
Process Media	Liquid/Vapor/Gas	Gas/Vapor	Liquid/Vapor/Gas	Liquid/Vapor/Gas	Liquid/Vapor/Gas
Type of Disc	Reverse Acting Rupture Disc	Reverse Acting Rupture Disc	Forward Acting Rupture Disc	Forward Acting Rupture Disc	Forward Acting Rupture Disc
Application	Bolted Holder/ Flange Applications	Bolted Holder/ Flange Applications	Bolted Holder/ Flange Applications	Bolted Holder/ Flange Applications	Bolted Holder/ Flange Applications

DISC TECHNOLOGY

					
Disc	AXIUS® SC* Advanced Design/G2 Technology Superior Cycling Performance, Smooth, Hygenic Rupture Disc	RD 540 SC Advanced Design/G2 Technology Superior Cycling Performance, Smooth, Ultra Low Pressure Hygenic Rupture Disc	SR-H* Excellent Liquid Performance Scored, Reverse Acting	SHX* Higher Pressure Applications Cross Scored, Forward Acting	AD Series Protection of Atmospheric Vessels, AD-H for Sanitary Applications
Size Range	1-4 in. DN33.7, DN40, DN42.4, DN50, DN38, DN51, DN76	1-4 in. DN25-DN100	1.5-4 in. DN40, DN50, DN38, DN51, DN76	1.5-2 in. DN40-50	2-24 in. DN50-600
Burst Pressure	10-275 PSIG 0.69-18.96 BARG	2.5-25 PSIG 0.17-1.72 BARG	12-140 PSIG 0.83-9.65 BARG	250-1500 PSIG 17.24-103.42 BARG	1-15 PSIG 35-1034 MBARG
Operating Ratio	95% of marked burst pressure > 40 psig and 95% of min burst pressure for burst pressure ≤ 40 psig	90% of min burst pressure tolerance	90% of marked burst pressure	90% of marked burst pressure	50% of marked burst pressure
EU Operating Ratio	100% of min burst tolerance for burst pressure > 2.76 barg and 95% of min burst pressure for burst pressure ≤ 2.76 barg	90% of min burst pressure tolerance	95% of min burst pressure tolerance	95% of min burst pressure tolerance	55% of min burst pressure tolerance
Non-Fragmenting	Yes	Yes	Yes	Yes	No
Vacuum Resistant	Yes	Yes	Yes	Yes	Yes (AD-V)
Pulsating/Cyclic	Best	Best	Good	Good	NR*
Process Media	Liquid/Vapor/Gas	Gas/Vapor only	Liquid/Vapor/Gas	Liquid/Vapor/Gas	Liquid/Vapor/Gas
Type of Disc	Reverse Acting Rupture Disc	Reverse Acting Rupture Disc	Reverse Acting Rupture Disc	Forward Acting Rupture Disc	Forward Acting Rupture Disc
Application	Ferrule Applications	Ferrule Applications	Ferrule Applications	Ferrule Applications	Ferrule Applications

DISC TECHNOLOGY



Disc

Extruder RD
Protection for extrusion processes in a variety of sizes and burst pressures

LO-V
Superior Opening
Bi-Directional

Size Range

0.19-6 in.
DN4.5-150

3-8 in.
DN80-200

Burst Pressure

1500-12,000 PSIG
80-1000 BARG

1"WC-170 PSIG
0.21-11.72 BARG

Operating Ratio

90% of marked burst pressure

80% of marked
burst pressure

EU Operating Ratio

95% of min burst pressure tolerance

85% of min burst
pressure tolerance

Non-Fragmenting

No

Yes

Vacuum Resistant

Yes

No

Pulsating/Cyclic

Good

NR*

Process Media

Liquid/Vapor/Gas

Vapor/Gas

Type of Disc

Specialty

Bi-Directional Disc

Application

Extruder Applications

Bolted Holder/ Flange Applications
and Ferrule Applications

*Good for Pressure/Safety Relief Valve Protection Applications
NR* - Not Recommended

Why Fike?

UNMATCHED SUPPORT

Our team of experts are available to help you with your rupture disc questions, inquiries and orders. We also provide rigorous training to our distribution partners to ensure that they are able to assist you at the Fike standard.

CUSTOM SOLUTIONS

Fike's custom pressure relief solutions have been used in cryogenic applications, hygienic environments, extremely small and large applications, and even in space! Regardless of your challenge, our team of engineers have seen it all and are here to solve your unique pressure relief problems with custom engineered products.

FAST LEAD TIMES

Fike controls each part of the rupture disc manufacturing process, allowing us to deliver your rupture disc when required. In emergency cases our expedited services will allow you to resume operations as quickly as possible, reducing costly downtime.

REDUCED TOTAL COST OF OWNERSHIP

Fike rupture discs are designed to maximize operating ratios, withstand high temperatures and pressure cycles, and are available in a wide range of materials to ensure compatibility with your process. All of these factors ensure a long lifespan by reducing the time in between replacement and preventing costly unplanned downtime due to disc failure.



Copyright© Fike Corporation. All Rights Reserved. 2024.
This document is not to be used for installation purposes and is subject to Fike's full disclaimer at fike.com/disclaimer.
Fike reserves the right to change product designs or specifications without obligation and without further notice.