DATASHEET /
TECHNICAL SPECIFICATIONS

OE for Pharma

LoKr™ FOR API

TECHNICALLY ADVANCED LOW K_R RUPTURE DISC

The reverse buckling LoKr rupture disc for API plants and sanitary environments maximizes pressure relieving performance while providing superior reliability and extraordinary service life.

FDA

ASME BPE

ISO 1127

Meets bioprocessing requirements



Delivering a best-in-class Flow Resistance Factor (FRF) or K_R value, the LoKr is designed to improve process performance and efficiency. The highly engineered bursting disc design covers the majority of pressures in bioprocesses and enhances performance with the long-cycle life and tight tolerances of a reverse buckling rupture disc.

The disc's architecture has been refined and optimized to offer full-bore opening with exceptionally accurate burst ratings. This supports operational efficiency, especially at low flow rates, and makes it easier to keep pressure drops across the relief line below 3%.

Size	1"-12"
Burst Pressure	10 - 2,500 psig
Temperature	-120°F to 1000°F
K_R Value (K_{RGL})	0.22
Operating Ratio	95%
Performance Tolerance	+/-5%
Manufacturing Range	0%

Let us help you with all your pressure relief questions.

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TECHNICAL SPECIFICATIONS

Size range	1"-12" (25-300mm)
Burst pressure range	10-2,500 psig (0.69-172.3 barg)
Temperature range	-120°F to 1000°F (-84°C to 538°C)
Standard materials	Hastelloy® C, 316 Series Stainless Steel, Nickel, Inconel® 600, Monel®
K_R Value	K_{RGL}: 0.22
Max. Operating Ratio	95%
Performance Tolerance	+/-5%
Manufacturing Range	0%
Fragmentation	Non-fragmenting design
Vacuum Service	Withstands full vacuum (14.7 psi) without separate vacuum support
Fluid compatibility	Gas service and liquid service
Torque requirements	Non torque-sensitive
Cycling or static service	Suitable for high-cycling applications (tested to 1 million cycles)
Relief Valve Isolation	Suitable for safety relief valve isolation
Leak tightness	Helium Leak checked to 1x10^-8 cc-atm/sec
Design Standards	Designed to meet ASME Section XIII standards

Certifications

ASME UD
CE

Related Products

Sensors
AMS
SVT

Holders
LKR
LKR-P

Burst Pressure Ranges

LoKr Min/Max Burst Pressure @ 72° F (psig) / 22° C (barg)

SIZE (inches)	SIZE DN (mm)	MATERIAL	MIN psig (barg)	MAX psig (barg)
1	25	316 Stainless Steel Nickel Inconel Monel Hastelloy C	15 (1.03)	2000 (137.9) 1750 (120.66) 2000 (137.9) 2000 (137.9) 2500 (172.3)
1.5	40	316 Stainless Steel Nickel Inconel Monel Hastelloy C	10 (0.69)	1500 (103.42) 1000 (68.95) 1500 (103.42) 1300 (89.63) 2200 (151.68)
2	50	316 Stainless Steel Nickel Inconel Monel Hastelloy C	10 (0.69)	1200 (82.74) 1000 (68.95) 1500 (103.42) 1200 (82.74) 2200 (151.68)
3	80	316 Stainless Steel Nickel Inconel Monel Hastelloy C	10 (0.69)	1200 (82.74) 1000 (68.95) 1500 (103.42) 1200 (82.74) 2000 (137.9)
4	100	316 Stainless Steel Nickel Inconel Monel Hastelloy C	10 (0.69)	1200 (82.74) 1000 (68.95) 1500 (103.42) 1200 (82.74) 1500 (103.42)
6	150	316 Stainless Steel Nickel Inconel Monel Hastelloy C	10 (0.69)	750 (51.7) 600 (41.37) 750 (51.7) 750 (51.7) 750 (51.7)
8	200	316 Stainless Steel Nickel Inconel Monel Hastelloy C	10 (0.69)	600 (41.37) 500 (34.47) 600 (41.37) 600 (41.37) 750 (51.7)
10	250	316 Stainless Steel Nickel Inconel Monel Hastelloy C	10 (0.69)	400 (27.58) 250 (17.24) 400 (27.58) 400 (27.58) 500 (34.47)
12	300	316 Stainless Steel Nickel Inconel Monel Hastelloy C	10 (0.69)	300 (20.6)

Free Flow Area / Minimum Net Flow Area (MNFA)

NOMINAL BORE		MNFA	
inches	DN (mm)	Sq. Inch	mm^2
1	25	0.86	554
1.5	40	2.04	1,316
2	50	3.36	2,167
3	80	7.39	4,767
4	100	12.73	8,212
6	150	28.89	18,638
8	200	50.02	32,271
10	250	78.85	50,870
12	300	111.9	72,193

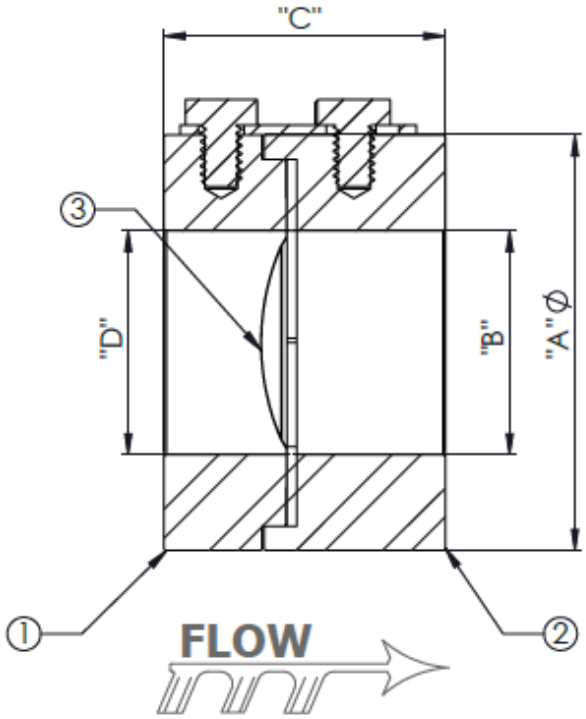
Burst Tolerance

+/-5% > 40 psig +/-5% > 2.8 barg	+/-2 psig ≤ 40 psig +/-0.14 barg ≤ 2.8 barg

K_R Value (Frictional Loss Factor)

K_R	LoKr
K_{RGL}	0.22

Schematic Drawing



NOMINAL BORE		STANDARD HEIGHT (C)	
inches	DN (mm)	inches	mm
1	25	1.91	48.5
1.5	40	2.00	50.8
2	50	2.25	57.1
3	80	2.50	63.5
4	100	3.25	82.55
6	150	4.00	101.6
8	200	4.25	107.9
10	250	5.25	133.3
12	300	6.50	165.1

Standard height dimensions account for the disc and holder assembly only. They do not account for gasket thickness.

FLANGE SPECIFICATIONS	
EN 1092-1 PN DESIGNATED	BS EN 1759-1 ANSI DESIGNATED
PN 6	ANSI 150
PN 10	ANSI 300
PN 16	ANSI 600
PN 20	ANSI 900
PN 25	ANSI 1500
PN 50	ANSI 2500
PN 63	
PN 100	

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