



# LoKr™

TECHNICALLY ADVANCED LOW  $K_R$  RUPTURE DISC

**The Next Generation of Design and Engineering in Pressure Relief Technology, *delivering superior performance, reliability and accuracy.***



A Halma company

# The LoKr disc improves process performance

Delivering a best-in-class Flow Resistance Factor (FRF) or  $K_R$ , the LoKr is a highly engineered rupture disc. The advanced design maximizes pressure relieving performance while providing superior reliability and extraordinary service life.

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## BEST-IN-CLASS $K_R$ VALUE

- Creates opportunities for increasing efficiency and throughput
- Minimizes line sizes for rupture discs installed in-series with PRVs, with no loss of performance or efficiency, at low flow rates
- Makes it easier to keep pressure drops across the relief line below 3%
- Helps prevent valve chatter



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## USE AS A SINGLE-DISC SOLUTION

- Sizes and pressure ranges cover the majority of applications in the plant
- High-cycling and high temperature capabilities for superior reliability and long service life, even in the toughest applications
- Reduce inventory of holders and discs required in the stock-room

# The LKr holder supports accurate, full-bore opening

When used together, the LoKr disc and LKr holder create a leak-tight unit that improves safety and efficiency by reducing opportunities for leak paths within the plant. Standard holder materials are Carbon Steel, Stainless Steel 316/316L, Inconel 600, Monel, and Hastelloy C-276

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## EASY TO INSTALL

- Tapered seal design makes installation easy
- Non-torque sensitive
- Insert and pre-torqued designs available
- Fits most standard heights and flange sizes



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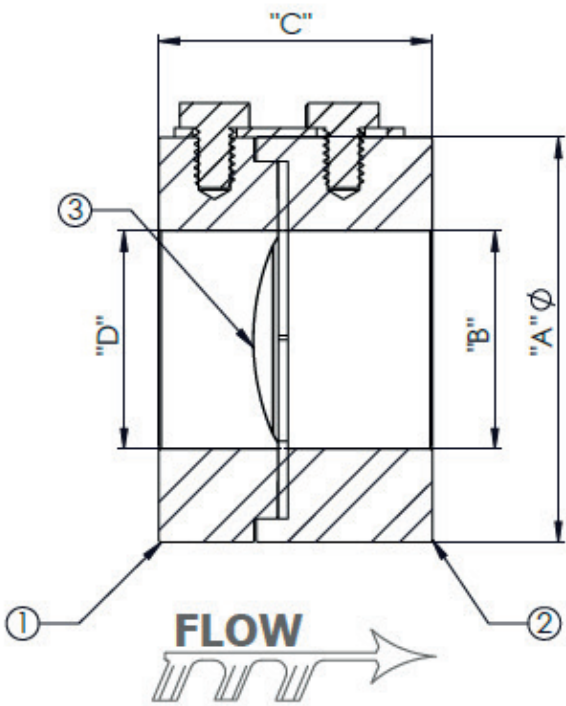
## SUPPORTS A LOW $K_R$ VALUE

- Knuckle in outlet enables full-bore opening on burst





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 <sub>R</sub> Value	K <sub>RGL</sub> : 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 <sup>-8</sup> cc-atm/sec
Design Standards	Designed to meet ASME Section XIII standards



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

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	

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

## Certifications

ASME UD

## Related Products

**Sensors**  
AMS  
SVT

**Holders**  
LKR  
LKR-P

# Burst Pressure Ranges

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



SIZE		MATERIAL	MIN psig (barg)	MAX psig (barg)
(inches)	DN (mm)			
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 <sup>2</sup>
1	25	0.864	557
1.5	40	2.036	1,313
2	50	3.355	2,164
3	80	7.393	4,769
4	100	12.73	8,212
6	150	28.89	18,638
8	200	50.0	32,258
10	250	78.9	50,903
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
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# K<sub>R</sub> Value (Frictional Loss Factor)

K <sub>R</sub>	LoKr
K <sub>RGL</sub>	0.22

Download full technical specifications



# Our products and services provide complete peace of mind

## PRODUCT LINE



### Oseco Safety Cartridge™

*Single piece unit eliminates multiple leak paths*



### Ultra-high pressure scored reverse acting disc assembly

**HPSR:** *Single piece unit designed for a burst pressure over 6,000 psig*



### High-performance reverse acting discs

**LoKr:** *Best-in-class  $K_R$  value*



**Opti-Gard:** *Versatile single disc solution*



**Opti-Gard SoLo:** *Innovative low pressure disc*



### High-performance forward acting scored disc

**Safe-Gard:** *Low  $K_R$  value*



### Burst detection sensors



### Explosion protection



### Pressure gauges

## SERVICES

**Engineering and maintenance training seminars**

**Safety surveys**

**Custom engineered solutions**

**Expedited shipments**

**Emergency response team**

**24/7/365 Customer service**

**Let us help you with all your pressure relief questions.**

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