

# LoKr™ FOR API

TECHNICALLY ADVANCED LOW  $K_R$  RUPTURE DISC

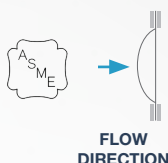
*The reverse buckling LoKr rupture disc for API plants and sanitary environments maximizes pressure relieving performance while providing superior reliability and extraordinary service life.*

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%.

|                                                      |                   |
|------------------------------------------------------|-------------------|
| <b>Size</b>                                          | 25mm - 300mm      |
| <b>Burst Pressure</b>                                | 0.69 - 172.3 barg |
| <b>Temperature</b>                                   | -84°C to 538°C    |
| <b><math>K_R</math> Value (<math>K_{RGL}</math>)</b> | 0.22              |
| <b>Operating Ratio</b>                               | 95%               |
| <b>Performance Tolerance</b>                         | +/-5%             |
| <b>Manufacturing Range</b>                           | 0%                |

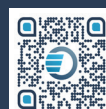
**Let us help you with all  
your pressure relief questions.**

**UK office | North Shields**  
+44 (0)191 293 1234 | [uksales@osecoelfab.com](mailto:uksales@osecoelfab.com)

**US office | Broken Arrow**  
+1 (918) 258 5626 | [info@osecoelfab.com](mailto:info@osecoelfab.com)

[osecoelfab.com](http://osecoelfab.com)

**REQUEST A QUOTE FOR  
THE LoKr for API**



# TECHNICAL SPECIFICATIONS



|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| Size range                | 25-300mm (1"-12")                                                      |
| Burst pressure range      | 0.69-172.3 barg (10-2,500 psig)                                        |
| Temperature range         | -84°C to 538°C (-120°F to 1000°F)                                      |
| 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                           |

## Certifications

ASME UD

## Related Products

### Sensors

AMS  
SVT

### Holders

LKR  
LKR-P

# Burst Pressure Ranges

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



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

## Free Flow Area / Minimum Net Flow Area (MNFA)



| NOMINAL BORE |        | MNFA            |          |
|--------------|--------|-----------------|----------|
| DN (mm)      | inches | mm <sup>2</sup> | Sq. Inch |
| 25           | 1      | 554             | 0.86     |
| 40           | 1.5    | 1,316           | 2.04     |
| 50           | 2      | 2,167           | 3.36     |
| 80           | 3      | 4,767           | 7.39     |
| 100          | 4      | 8,212           | 12.73    |
| 150          | 6      | 18,638          | 28.89    |
| 200          | 8      | 32,227          | 50.02    |
| 250          | 10     | 50,870          | 78.85    |
| 300          | 12     | 72,193          | 111.9    |

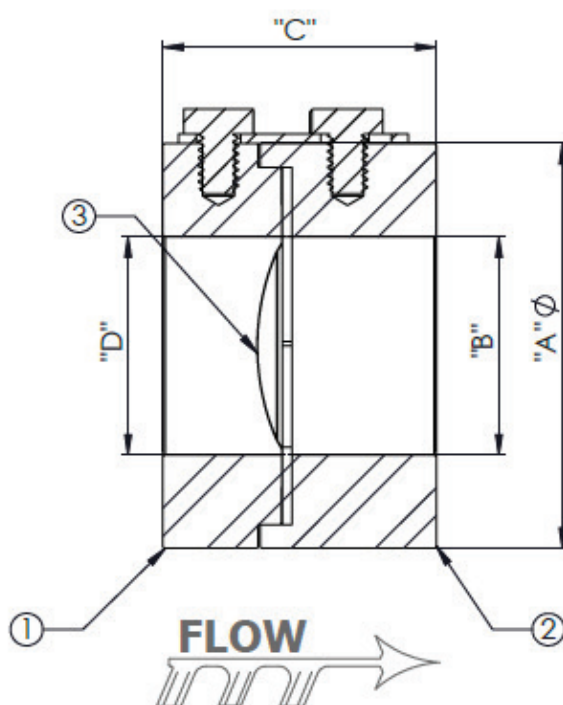
## Burst Tolerance

+/-5% > 2.8 barg  
+/-5% > 40 psig

+/-0.14 barg ≤ 2.8 barg  
+/-2 psig ≤ 40 psig

## K<sub>R</sub> Value (Frictional Loss Factor)

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



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

| FLANGE SPECIFICATIONS      |                                 |
|----------------------------|---------------------------------|
| EN 1092-1<br>PN DESIGNATED | BS EN 1759-1<br>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.