

# GR

## GRAPHITE REPLACEMENT

The GR series (GR, GRO and GRR) provides an **economical, high-performance and non-fragmenting alternative to graphite rupture discs**



The GR series offers superior pressure relief protection for corrosive applications in the chemical and pharmaceutical industries. The non-fragmenting design makes these discs an excellent alternative to graphite in applications where fragmentation is a problem.

The fluoropolymer-encapsulated stainless steel disc is highly resistant to corrosion and breakage. The non-torque-sensitive rupture disc does not require a holder and can be installed directly between industry-standard flanges.

We precision-cut every disc to exacting standards using our advanced, five-axis laser. The result is a high-performance yet economical solution for accurate bursting even at low pressures.

<b>Size</b>	25mm - 250mm
<b>Burst Pressure</b>	0.2 - 10.3 barg
<b><math>K_R</math> Value (<math>K_{RGL}</math>)</b>	1.22
<b>Operating Ratio</b>	60% of marked burst pressure
<b>Performance Tolerance</b>	+/- 5%
<b>Manufacturing Range</b>	0%

Let us help you with all  
your pressure relief questions.

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

REQUEST A QUOTE  
FOR THE GR DISC



# TECHNICAL SPECIFICATIONS



Size range	25-250mm / 1"-10"
Burst pressure range	0.2 barg to 10.3 barg / 2.5 psig to 150 psig
Temperature range	Up to max. 260°C /500°F (GR and GRR) Up to max. 215°C /420°F (GRO)
Standard materials	316 Series Stainless Steel
K <sub>R</sub> Value	1.22
Max. Operating Ratio	60% of marked burst pressure
Burst Tolerance	+/-5% above 2.8 barg +/-0.14 barg ≤ 1.03 - 2.8 barg +/-0.07 barg below 1.03 barg
Manufacturing Range	0%
Fragmentation	Non-fragmenting design
Vacuum Service	Fully opening vacuum supports available
Fluid compatibility	Gas service, liquid service
Torque requirements	Non-torque sensitive
Cycling or static service	Static
Protective linings	The metal disc is fluoropolymer-encapsulated
Design Standards	Designed to meet ASME Section XIII and PED 2014/68/EU standards

## Certifications

ASME UD  
CRN  
CE

## Related Products

**Sensors**  
AMS  
SVT

# Burst Pressure Ranges

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



PIPE SIZE		MIN barg (psig)	MAX barg (psig)
DN (mm)	inches		
25	1	1.4 (20)	10.3 (150)
40	1.5	0.9 (13)	10.3 (150)
50	2	0.7 (10)	10.3 (150)
80	3	0.5 (7)	10.3 (150)
100	4	0.3 (5)	10.3 (150)
150	6	0.2 (3)	10.3 (150)
200	8	0.17 (2.5)	6.9 (100)
250	10	0.17 (2.5)	6.9 (100)



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

NOMINAL BORE		MNFA	
DN (mm)	inches	mm <sup>2</sup>	Sq. Inch
25	1	460	0.714
40	1.5	1,036	1.606
50	2	1,842	2.856
80	3	4,145	6.426
100	4	7,367	11.42
150	6	16,580	25.7
200	8	29,483	45.7
250	10	46,064	71.4

## Burst Tolerance

+/-5% above 2.8 barg +/-0.14 barg ≤ 1.03 - 2.8 barg +/-0.07 barg below 1.03 barg	+/-5% above 40 psig +/-2 psig 15 - 40 psig +/-1 psig below 15 psig
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## K<sub>R</sub> Value (Frictional Loss Factor)

K <sub>R</sub>	GR	GRO
K <sub>RGL</sub>	1.22	1.22