

# OSECO SAFETY CARTRIDGE

FEATURING PCR TECHNOLOGY

**Reduce fugitive emissions with the Oseco Safety Cartridge, a one-piece, welded rupture disc solution that is leak-tight and installs in minutes.**



The Oseco Safety Cartridge™ combines the traditional three components of a rupture disc system into one hermetically sealed component. It provides worry-free installation for your critical applications, while eliminating maintenance complexities, expenses and time requirements.

The Oseco Safety Cartridge™ system guarantees leak protection by completely removing the need to seal your rupture disc within a holder. These high performance, one-piece units come leak-tight from the factory and install in minutes.

No other rupture disc solution is as effective or as easy to install. The patented design makes the Oseco Safety Cartridge™ system the only widely available solution to eliminate exterior seam leakage.

<b>Size</b>	1" - 10"
<b>Burst Pressure</b>	40 - 1,250 psig
<b>K<sub>R</sub> Value (K<sub>RG</sub>)</b>	2.17
<b>Operating Ratio</b>	90%
<b>Performance Tolerance</b>	+/-5%
<b>Manufacturing Range</b>	0%

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

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# TECHNICAL SPECIFICATIONS



Size range	1"-10" (25-250mm)
Burst pressure range	40 - 1,250 psig (2.8 - 86.2 barg)
Temperature range	Up to 950°F (510°C)
Standard materials*	Hastelloy® C, 316 Series Stainless Steel, Carbon Steel, Inconel® 600, Monel®
K <sub>R</sub> Value	K <sub>RG</sub> : 2.17
Max. Operating Ratio	90%
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
Torque requirements	Non-torque sensitive; Fully isolated pressure relief device allows for torquing to any gasket specifications.
Cycling or static service	Suitable for high-cycling applications: tested to one million cycles.
Relief valve isolation	Suitable for safety relief valve isolation
Leak tightness	Hermetically designed assembly eliminates leak paths. Leak checked to 1x10 <sup>-8</sup> cc-atm/sec using helium.
Design standards	Designed to meet ASME Section XIII standards

\* Weld technology for dissimilar materials

## Certifications

ASME UD  
CRN  
CE

## Related Products

**Rupture discs**  
FAS  
OPR+/OPK+  
PCR

**One Piece Unit**  
HPSR

# Burst Pressure Ranges

Oseco Safety Cartridge 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 Inconel Monel	200 (13.8) 140 (9.7) 150 (10.3)	1250 (86.2)
1.5	40	316 Stainless Steel Inconel Monel	185 (12.8) 95 (6.5) 90 (6.2)	1000 (68.9)
2	50	316 Stainless Steel Inconel Monel	170 (11.7) 80 (5.5) 75 (5.2)	1000 (68.9)
3	80	316 Stainless Steel Inconel Monel	155 (10.7) 70 (4.8) 65 (4.5)	1000 (68.9)
4	100	316 Stainless Steel Inconel Monel	135 (9.3) 60 (4.1) 55 (3.8)	800 (55.2)
6	150	316 Stainless Steel Inconel Monel	95 (6.5) 50 (3.4) 45 (3.1)	800 (55.2)
8	200	316 Stainless Steel Inconel Monel	n/a 45 (3.1) 40 (2.8)	n/a 700 (48.3) 700 (48.3)
10	250	316 Stainless Steel Inconel Monel	Consult factory	

## Burst Tolerance

+/-2 psig at or below  
40 psig (2.8 barg)

+/-5% above  
40 psig (2.8 barg)

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



NOMINAL BORE		MNFA	
inches	DN (mm)	Sq. Inch	mm <sup>2</sup>
1	25	0.6	387
1.5	40	1.3	838
2	50	2.5	1,612
3	80	4.8	3,096
4	100	8	5,161
6	150	18	11, 612
8	200	32	20,645
10	250	51.25	33,064

## Standard height\* conforms to:

CARTRIDGE SIZE		HOLDER SIZE	
inches	DN (mm)	inches	mm
1	25	1 1/2	38
1.5	40	1 5/8	41
2	50	1 3/4	44
3	80	2 1/8	53
4	100	2 7/8	73
6	150	2 13/16	71
8	200	3 7/16	87

\*Special height available to fit any flange type or configuration, consult factory for more information

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

K <sub>R</sub>	Oseco Safety Cartridge
K <sub>RG</sub>	2.17