DATASHEET /
TECHNICAL SPECIFICATIONS

OsecoElfab

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.**

ASME CE

FLOW DIRECTION

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.

Size	25mm - 250mm
Burst Pressure	2.8 - 86.2 barg
K_R Value (K_{RG})	2.17
Operating Ratio	90%
Performance Tolerance	+/-5%
Manufacturing Range	0%

Let us help you with all your pressure relief questions.

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TECHNICAL SPECIFICATIONS

Size range	25-250mm (1"-10")
Burst pressure range	2.8 - 86.2 barg (40 - 1,250 psig)
Temperature range	Up to 510°C (950°F)
Standard materials*	Hastelloy® C, 316 Series Stainless Steel, Carbon Steel, Inconel® 600, Monel®
K_R Value	K_{RG}: 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 $1x10^{-8}$ 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 @ 22° C (barg) / 72° F (psig)

SIZE		MATERIAL	MIN barg (psig)	MAX barg (psig)
DN (mm)	inches			
25	1	316 Stainless Steel Inconel Monel	13.8 (200) 9.7 (140) 10.3 (150)	86.2 (1250)
40	1.5	316 Stainless Steel Inconel Monel	12.8 (185) 6.5 (95) 6.2 (90)	68.9 (1000)
50	2	316 Stainless Steel Inconel Monel	11.7 (170) 5.5 (80) 5.2 (75)	68.9 (1000)
80	3	316 Stainless Steel Inconel Monel	10.7 (155) 4.8 (70) 4.5 (65)	68.9 (1000)
100	4	316 Stainless Steel Inconel Monel	9.3 (135) 4.1 (60) 3.8 (55)	55.2 (800)
150	6	316 Stainless Steel Inconel Monel	6.5 (95) 3.4 (50) 3.1 (45)	55.2 (800)
200	8	316 Stainless Steel Inconel Monel	n/a 3.1 (45) 2.8 (40)	n/a 48.3 (700) 48.3 (700)
250	10	316 Stainless Steel Inconel Monel	Consult factory	

Burst Tolerance

+/-0.14 barg at or below 2.8 barg (40 psig)	+/-5% above 2.8 barg (40 psig)

Free Flow Area / Minimum Net Flow Area (MNFA)

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

Standard height* conforms to:

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

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

K_R Value (Frictional Loss Factor)

K_R	Oseco Safety Cartridge
K_{RG}	2.17