



OSECO SAFETY CARTRIDGE™

An innovative rupture disc solution to eliminate leaks, eliminate installation errors and increase safety.

LOWEST K_R IN THE INDUSTRY / NON-INVASIVE SENSING / FAIL-SAFE DESIGN



A Halma company

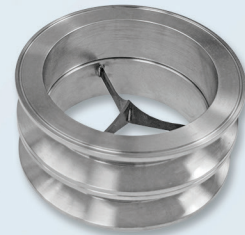
1930s Technology
Standard Rupture Disc



1940s Technology
Composite Rupture Disc



1960s Technology
Knife Blade Assembly



1980s Technology
Forward Acting Scored Rupture Disc



2000s Technology
Precision Reverse Buckling Rupture Disc



OPR+/OPK+ Reverse Buckling Rupture Disc with Integrated Sensor



Throughout the evolution of rupture disc technology for pressure relief systems, **OsecoElfab** has remained at the forefront of innovation. Our tradition of delivering reliable products on the leading edge of technology continues with the introduction of the most innovative rupture disc system to be created in the last twenty years, the **Oseco Safety Cartridge™**.

- **HERMETICALLY SEALED DESIGN**
eliminates leak paths
- **FULLY INTEGRATED HOLDER-DISC**
eliminates installation errors
- **ONE-PIECE ASSEMBLY**
eliminates torque issues
- **REDUCED** cost of ownership



THE FUTURE
Oseco Safety Cartridge™

OsecoElfab Eliminates Common Pain Points

After many years of research and industry experience, OsecoElfab continues to address today's issues with rupture disc systems. Customers have asked for solutions to these common pain points, **and the Oseco Safety Cartridge™ delivers.**

1

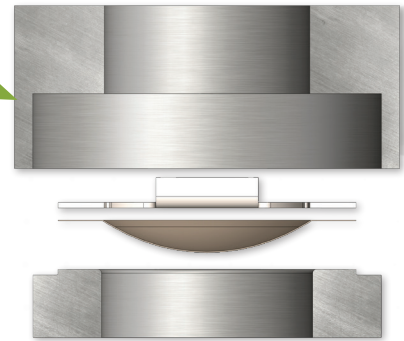
PAIN POINT: INSTALLATION

- Misalignment of piping
- Uneven torque
- Mishandling / damage
- Difficult applications

SOLUTION: FULLY INTEGRATED HOLDER-DISC

- Eliminates any need to handle the disc
- Immune-force is transferred through the outlet, not to the disc
- Dome is always protected
- Reduces installation time

DETAIL: Oseco Safety Cartridge™ Assembly. Three pieces welded into **ONE**.



2

PAIN POINT: LABOR CONCERNS

- Inexperienced maintenance technicians
- Lack of installation training
- Contract labor
- Employee turnover

SOLUTION: INTUITIVE DESIGN

- Shortens learning curve and supports correct installation

3

PAIN POINT: LEAKING

- Between holder and flange
- Between rupture disc and holder
- Multiple leak paths

SOLUTION: ONE-PIECE ASSEMBLY

- Follows torque specs of gaskets – force placed on the outlet rather than the disc
- Patented electron beam weld design

4

PAIN POINT: FUGITIVE EMISSIONS

- EPA limits on chemical types
- Emissions of VOCs, HRVOCs, and VHAPs
- Location and repair of leaking components

SOLUTION: HERMETICALLY SEALED DESIGN

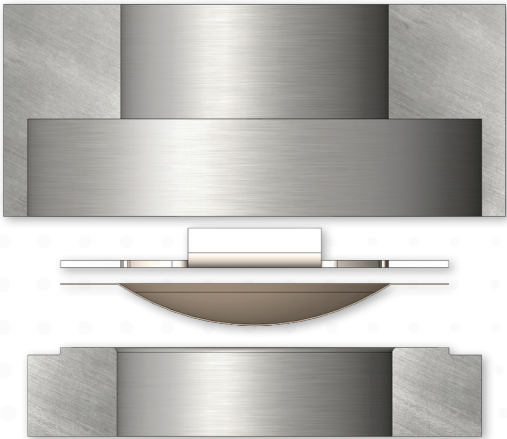
- Cannot leak outside of the piping
- Supports LDAR and EPA Guidelines (HRVOCs)



One Piece... Peace of Mind

Our patented design allows the traditional three components of a rupture disc system to be combined into **ONE HERMETICALLY SEALED COMPONENT.**

CROSS-SECTION



Three pieces welded into **ONE.**

- Sizes 1"–12"
- Operating ratio up to 95%
- Burst tolerance: +/-5% of specified burst pressure
- Materials available: 316 Series Stainless Steel, Inconel® 600, Monel® and Hastelloy® C
- Available for gas and liquid service
- Leak checked to 1x10⁻⁸ cc-atm/sec using helium
- Non-fragmenting design
- Fully isolated pressure relief device allows for torquing to any gasket specifications
- Withstands full vacuum
- CE marked

Easy Installation

1

Disassembly

2

Placement & Alignment

3

Torquing & Inspection

SAFETY EQUIPMENT

- Safety Goggles

- Gloves

- Other as required by facility

TOOLS & MATERIALS

- Torquing Specifications

- Torque Wrench

- Cleaning Solvent compatible with service media

Technical Specifications

PRODUCT DIMENSIONS: Standard height matches industry standard insert-style holders. Special height available to fit any flange type or configuration - consult factory for more information.

COMMON APPLICATIONS: Lethal service, difficult installations, high-cycling applications

Oseco Safety Cartridge™ featuring OPR+ / OPK+ technology

SIZE inches	OPR+		OPK+	
	MIN psig (barg)	MAX psig (barg)	MIN ⁽²⁾ psig (barg)	MAX psig (barg)
1"	100 (6.89)	250 (17.24)	250 (17.24)	1160 (79.98)
1.5"	50 (3.48)	250 (17.24)	250 (17.24)	1087 (74.95)
2"	30 (2.07)	250 (17.24)	250 (17.24)	1015 (69.98)
3"	15 (1.03)	250 (17.24)	250 (17.24)	507 (34.96)
4"	10 (0.69)	175 (12.07)	175 (12.07)	363 (25.03)
6"– 12"	Consult factory for technical specifications			

Download full technical specifications.



Oseco Safety Cartridge™ featuring FAS™ technology

SIZE inches	MATERIAL	MIN psig (barg)	MAX psig (barg)
1"	316 Inc Mon Hast C	220 (15.2) 200 (13.8) 140 (9.7) 270 (18.6)	2000 (137.9)
1.5"	316 Inc Mon Hast C	160 (11.0) 170 (11.7) 120 (8.3) 250 (17.2)	2000 (137.9)
2"	316 Inc Mon Hast C	120 (8.3) 130 (9.0) 100 (6.9) 200 (13.8)	1500 (103.4)
3"	316 Inc Mon Hast C	110 (7.6) 100 (6.9) 80 (5.5) 160 (11.0)	1500 (103.4)
4"	316 Inc Mon Hast C	110 (7.6) 100 (6.9) 90 (6.2) 140 (9.7)	1200 (82.7)
6"	316 Inc Mon Hast C	100 (6.9) 110 (7.6) 100 (6.9) 160 (11.0)	1000 (68.9)
8"	316 Inc Mon Hast C	110 (7.6) 120 (8.3) 100 (6.9) 170 (11.7)	500 (34.4)

Download full technical specifications.



K_R values – all sizes

OPR+	OPK+	FAS	
K _R ⁽¹⁾	K _R ⁽²⁾	K _{RG}	K _{RL}
0.78	1.5	0.223	0.19

(1) Low pressure rating with 316 Stainless Steel rupture disc – consult factory for other materials
(2) High pressure circular scored rupture disc with knuckle (results in higher K_R value)

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 Buckling Disc Assembly

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



High Performance Reverse Buckling Discs

LeKr™: Best-in-class low K_R value



OPR+/OPK+: Non-invasive burst detection system



High Performance Forward Acting Scored Disc

FAS™: Lowest K_R value available for forward acting discs



Composite Rupture Disc



Standard Rupture Disc



Explosion Protection



Burst Detection Sensors

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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