



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 acting
rupture disc



OPR+/OPK+ Reverse acting
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

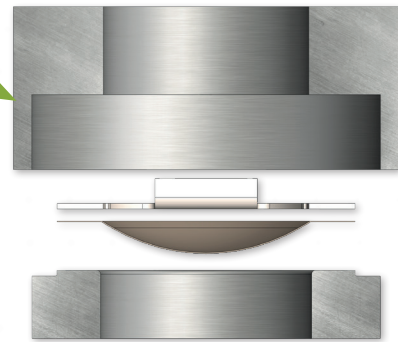
PAIN POINT: INSTALLATION

- 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

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

SOLUTION: HERMETICALLY SEALED DESIGN

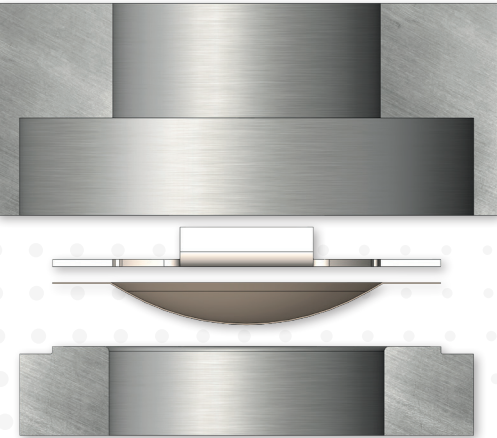
- Cannot leak outside of the piping
- Supports implementation of the Industrial Emissions Directive (IED) 2010/75/EU and BATs



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.**

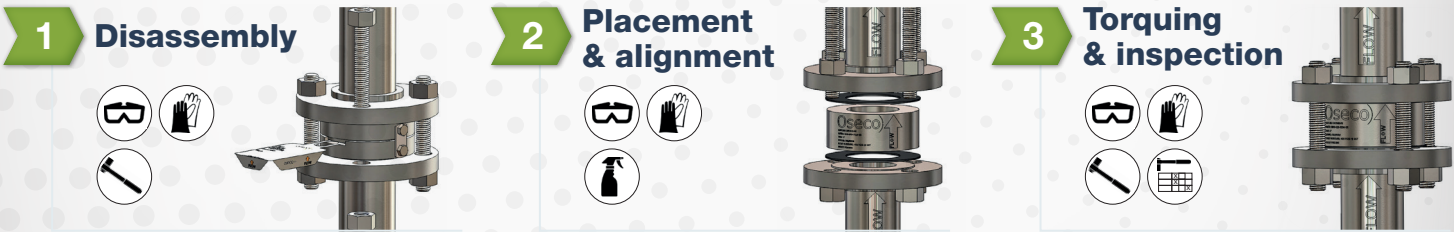
CROSS-SECTION



Three pieces welded into **ONE**.

- Sizes 25mm - 300mm
- 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



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 DN (mm)	OPR+		OPK+	
	MIN barg (psig)	MAX barg (psig)	MIN ⁽²⁾ barg (psig)	MAX barg (psig)
DN 25	6.89 (100)	17.24 (250)	17.24 (250)	79.98 (1160)
DN 40	3.48 (50)	17.24 (250)	17.24 (250)	74.95 (1087)
DN 50	2.07 (30)	17.24 (250)	17.24 (250)	69.98 (1015)
DN 80	1.03 (15)	17.24 (250)	17.24 (250)	34.96 (507)
DN 100	0.69 (10)	12.07 (175)	12.07 (175)	25.03 (363)
DN 150-DN 300	Consult factory for technical specifications			

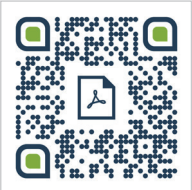
Download full technical specifications.



Oseco Safety Cartridge™ featuring FAST™ technology

SIZE DN (mm)	MATERIAL	MIN barg (psig)	MAX barg (psig)
DN 25	316 Inc Mon Hast C	15.2 (220) 13.8 (200) 9.7 (140) 18.6 (270)	137.9 (2000)
DN 40	316 Inc Mon Hast C	11.0 (160) 11.7 (170) 8.3 (120) 17.2 (250)	137.9 (2000)
DN 50	316 Inc Mon Hast C	8.3 (120) 9.0 (130) 6.9 (100) 13.8 (200)	103.4 (1500)
DN 80	316 Inc Mon Hast C	7.6 (110) 6.9 (100) 5.5 (80) 11.0 (160)	103.4 (1500)
DN 100	316 Inc Mon Hast C	7.6 (110) 6.9 (100) 6.2 (90) 9.7 (140)	82.7 (1200)
DN 150	316 Inc Mon Hast C	6.9 (100) 7.6 (110) 6.9 (100) 11.0 (160)	68.9 (1000)
DN 200	316 Inc Mon Hast C	7.6 (110) 8.3 (120) 6.9 (100) 11.7 (170)	34.4 (500)

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 acting disc assembly

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



High-performance reverse acting discs

LoKr™: *Best-in-class low K_R value*



Opti-Gard: *Versatile single disc solution*



Opti-Gard SoLo: *Innovative low pressure disc*



High-performance forward acting scored disc

Safe-Gard: *Low K_R value*



Burst detection sensors



Explosion protection



Pressure gauges

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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