PHARMACEUTICAL

OsecoElfab Pharmaceutical

PHARMACEUTICAL AND BIOPHARMACEUTICAL SOLUTIONS

Innovative, high-performance pressure relief solutions from experts in pressure management

A Halma company

About OsecoElfab

Overview

Dedicated to protecting the lives of your people and safeguarding your critical processes and equipment, OsecoElfab is a leading provider of pressure management solutions for the pharmaceutical and biopharmaceutical industries.

Expertise

With extensive experience in providing solutions to optimise pharmaceutical manufacturing, we understand the rigorous demands you must meet. We actively support you in achieving and exceeding your goals for operational reliability and efficiency.

Innovation

Our innovative technologies include state of the art pressure management solutions for a variety of applications and a wide range of process conditions in both pharmaceutical and biopharmaceutical manufacturing.

Partnership Approach

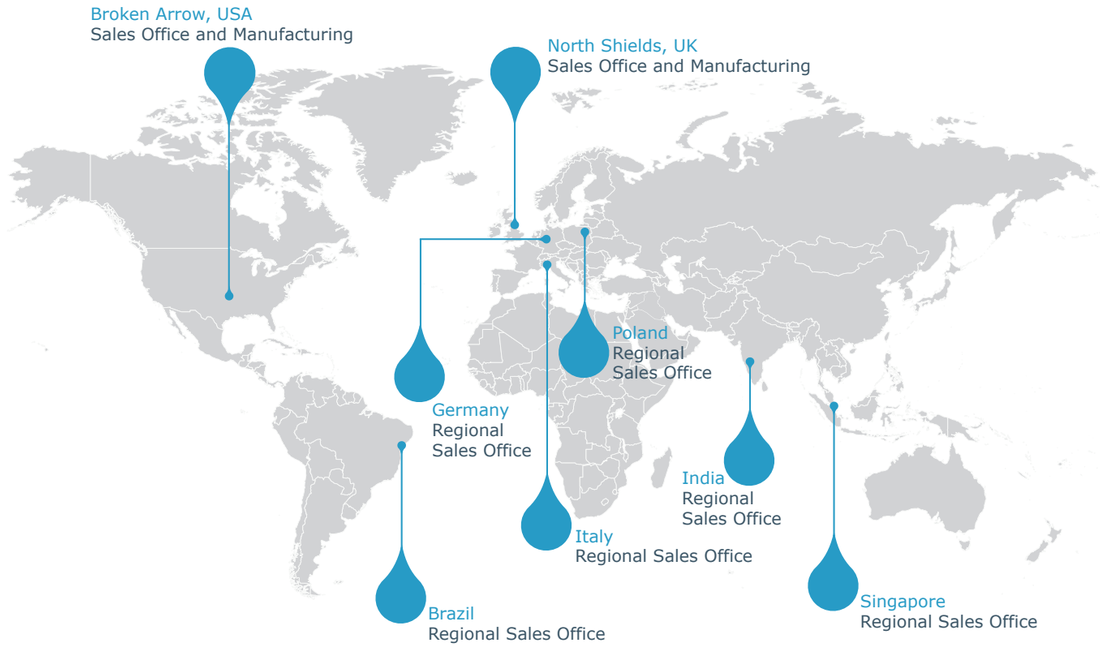
Through our partnership approach we will work with you to introduce solutions to drive efficiencies and reduce cost of ownership. We can engage with you at Group or individual plant level, depending on the requirements of your organisation.

Safety First

We understand the paramount importance of preventing catastrophic process failures. Our high-integrity pressure relief solutions alleviate potentially dangerous pressure build-up to ensure your process are safe and your people protected.

Global Reach

Our specialist global Pharmaceutical team is supported by two manufacturing facilities, one in North Shields in the UK and one in Broken Arrow in the USA. We have six regional sales offices and a network of channel partners dedicated to our Pharmaceutical customers.



Contact Us

To discuss your pressure relief requirements with a member of our Pharmaceutical team, please contact us:

Email: info@osecoelfab.com
Tel (US): +1 (918) 258-5626
Tel (UK): +44 (0)191 293 1234

Our Solutions

Pharmaceutical

Meeting the demanding requirements of the pharmaceutical process environment is vital for your success. Our portfolio offers an ideal solution for the stringent market requirements and is designed to protect a variety of processes and critical equipment such as reactors, pumps, heat exchangers and other processing equipment.

Opti-Gard

Our Opti-Gard rupture disc is a high-performance, full metal, non-fragmenting reverse acting disc delivering excellent fatigue resistance and longevity in the process. It withstands full vacuum without the need of supports. The disc's smooth surface finish helps prevent a build-up of contaminants, allowing easy cleaning, and is designed to sustain the rigours of CIP procedures.

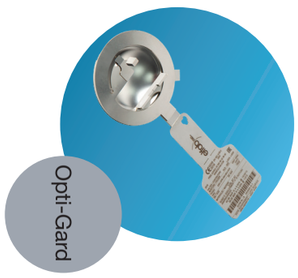
Low Pressure Solutions

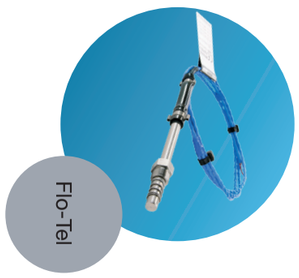
Our Opti-Gard SoLo is a low pressure variant of the Opti-Gard. It is suitable for use in processes where pressure are as low as 2 psig. The full metal, non-fragmenting design allows customers to protect low pressure applications and prevent contamination caused by alternatives such as graphite or composite designs.
Our ultra low-pressure disc, Milli-Gard, delivers overpressure protection at extremely low pressures down to 0.044 psig.

Detection

Our range of rupture discs can be integrated into process control systems through the use of our non-invasive Flo-Tel burst detection system. Providing a fail-safe solution for identifying when a rupture disc functions, Flo-Tel is a reusable solutions. And with no upstream or downstream contact with your product, it is unaffected by pressure fluctuations. This eliminates spurious alarms, minimising the risk of unscheduled stoppages.

In addition to these products, we also offer pressure relief solutions for specialisedprocess requirements. Please refer to the technical specifications or contact us for more details.





	Rupture discs							Holders			Burst Detection	Installation aid
Pharmaceutical Solutions	**Opti-Gard**	**Opti-Gard SoLo**	**Milli-Gard**	**Safe-Gard**	**FAS**	**Arma-Gard Graphite**	**G2 Graphite**	**Reverse acting holder**	**Forward acting holder**	**Insert holder**	**Flo-Tel**	**Test-Tel**
Product Description	Full metal High performance Reverse acting	Full metal High performance Reverse acting Low pressure	Composite Reverse acting Ultra low pressure	Full metal Forward acting Full liquid service High pressure	Full metal Forward acting Full liquid service High pressure	Non-torque sensitive graphite disc Holderless design for easy installation directly between industry flanges	Forward acting graphite	Multi-flange design holder	Multi-flange design holder	Available with FRDI and FRDH seating arrangements	Non-invasive, reusable detection	Portable tool to check correct disc installation
Common Applications	Reactors Pumps Heat exchangers	Glass dryers Evaporators	Storage tanks	High-pressure reactors Liquid discharge lines	Low Kr applications	Glass dryers Evaporators	Glass dryers Evaporators	For use with Opti-Gard, Opti-Gard SoLo, Milli-Gard	For use with Safe-Gard, G2 graphite	For use with FAS	Integration of rupture disc to process control systems	For use with Flo-Tel enabled rupture discs
Geographic Market												
USA	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	✓
EMEA/APAC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Technical Specifications												
Size Ranges (inches/mm)	1" - 24" (25 - 600 mm)	1"-6" (25 - 150 mm)	2" - 12" (50 - 300 mm)	< 0.5" - 20" (12 - 500 mm)	1" -18" (25 - 450 mm)	1" - 14" (25 - 355 mm)	1" - 12" (25 - 300 mm)					
Burst Pressure Range (psig/barg)	5 - 1,015 psig (0.3 - 69.9 barg)	2 - 60 psig (0.13 - 4.1 barg)	0.044 - 7.25 psig (3 - 500 mbarg)	51 - 2,680 psig (3.5-184.7 barg)	30 - 5,000 psig (2.0 - 344.7 barg)	0.44 - 798 psig (0.03 - 55.0 barg)	1 - 290 psig (0.06 - 19.9 barg)					
Temperature Range	-200°C to 600°C	-200°C to 600°C	-200°C to 600°C	-200°C to 600°C	-200°C to 600°C	-50°C to 180°C	-50°C to 180°C					
Operating Ratio	95%	95%	60%	90%	90%	85%	85%			n/a		
Tolerance	+/- 3%	+/- 3%	+/- 25%	+/- 5%	+/- 5%	+/- 10%	+/- 10%					
Non-fragmenting	✓	✓	✓	✓	✓	×	×					
Vacuum Resistant	✓	✓	✓	✓	✓	×	×					
Kr Values	1.74	0.8	n/a	0.68	0.223 g / 0.19 l	0.69	n/a					
Process media												
Gas + Liquid	✓	✓	×	✓	✓	✓	✓					
Gas	✓	✓	✓	✓	✓	✓	✓			n/a		
Liquid only	×	×	×	✓	✓	✓	✓					
Materials available												
Stainless Steel	✓	✓	✓	✓	✓	×	×					
Hastelloy	✓	✓	✓	✓	✓	×	×					
Inconel	✓	✓	✓	✓	✓	×	×					
Monel	✓	✓	✓	✓	✓	×	×					
Tantalum	✓	✓	✓	✓	✓	×	×			n/a		
Nickel	✓	✓	✓	✓	✓	×	×					
Graphite	×	×	×	×	×	✓	✓					
Linings	✓	Product-specific	×	✓	✓	✓	✓					

Our Solutions

Biopharmaceutical

The high risk of contamination in the biopharmaceutical manufacturing process and the operational challenges that this complexity presents drives the need for equipment specifically designed for the unique environment.

Pure-Gard

Pure-Gard is a one-piece cartridge with a rupture disc electron-beam welded between two ferrules. It provides a pressure relief solution independent of the gasket, allowing regular change of gaskets, as required, with no need to change the disc. Electron-beam welding achieves an exceptionally high integrity weld joint. This ensures the interface between the disc and the ferrule wall is crevice-free and meets industry expectations for cleanability.

Discs with integrated gaskets

Our sanitary rupture discs with integrated ferrule offer a unique construction that ensures full-face metal support across the ferrule platform. This eliminates leakage common with other gasket designs and means the discs are extremely tolerant to pipe misalignments. The full metal, non-fragmenting design allows you to protect low pressure applications and prevent contamination caused by alternatives such as graphite or composite designs.

Burst Detection

Vent-Tel is a non-invasive and fail-safe burst detection system for use with all Flo-Tel enabled sanitary discs. It is an independent, reusable solution that is mounted directly to the Tri-Clamp to eliminate leak paths and spurious alarms. Disc inspection and replacement is quick and simple, as the detector remains in situ and connected to the control system throughout. No re-wiring is necessary. Vent-Tel is compatible with ferrule and NAC/PAD type connections.

In addition to these products, we also offer pressure relief solutions for specialised process requirements. Please refer to the technical specifications or contact us for more details.

Biopharmaceutical Solutions	Rupture discs					Burst Detection		Installation aid
	Pure-Gard	BioFlat Composite	Safe-Gard Ferrule	Opti-Gard Ferrule	PRO-S	Vent-Tel	OSS Sensor	Test-Tel
Product Description	Full metal welded assembly Uses Opti-Gard technology Re-use assembly after replacing gaskets Low to high pressures	Ultra low pressures	Full metal Forward acting High pressure applications Liquid applications with sanitary connections	Full metal High performance Reverse acting For use with sanitary fittings	Full metal High performance Reverse acting For use with sanitary fittings Low pressures	Non-invasive Reusable For use with sanitary tri-clamps and other sanitary connections	Membrane style disc	Portable tool to check correct disc installation
Common Applications	Bioreactors Fermentation plants Chromatography columns Steam infrastructure	Bioreactors Fermentation plants Chromatography columns Steam infrastructure	Liquid discharge lines High pressure bioreactors	Bioreactors Fermentation plants Chromatography columns Steam infrastructure	Bioreactors Fermentation plants Chromatography columns Steam infrastructure	For use with sanitary discs	For use with PRO-S discs	For use with all Vent-Tel enabled rupture discs
Geographic Market								
USA	✓	✓	✓	✓	✓	✓	✓	✓
EMEA/APAC	✓	✓	✓	✓	✓	✓	✓	✓
Technical Specifications								
Size Ranges (inches/mm)	1" - 4" (25 - 100 mm)	1" - 6" (25 - 150 mm)	1" - 4" (25 - 100 mm)	1" - 4" (25 - 100 mm)	1" - 4" (25 - 100 mm)			
Burst Pressure Range (psig/barg)	5 - 300 psig (0.3 - 20.6 barg)	0.5 - 1.5 psig (0.03 -0.1 barg)	51 - 2,680 psig (3.5-184.7 barg)	13 - 300 psig (0.8 - 20.6 barg)	16 - 150 psig (1.1 - 10.3 barg)	5 - 75 psig (0.3 - 5.1 barg)		
Temperature Range	to 260°C	-40°C to 200°C	-40°C to 200°C	-40°C to 300°C	-40°C to 200°C	-40°C to 200°C		
Operating Ratio	95%	60%	90%	95%	90%	95%		
Tolerance	+/- 3%	+/- 5%	+/- 5%	+/- 3%	+/- 5%	+/- 3%		
Non-fragmenting	✓	✓	✓	✓	✓	✓		
Vacuum Resistant	✓	Partial: with vac support	✓	✓	✓	✓		
Kr Values	0.85 (low-mid pressures) 1.74 (high pressures)	n/a	n/a	1.74	5.07	0.85		
Process media								
Gas + Liquid	✓	✓	✓	✓	✓	✓	n/a	✓
Gas	✓	✓	✓	✓	✓	✓	n/a	✓
Liquid only	×	✓	✓	×	✓	×	n/a	✓
Materials available								
Stainless Steel	✓	✓	✓	✓	✓	✓	n/a	✓
Hastelloy	✓	✓	✓	✓	×	✓	n/a	✓
Inconel	✓	✓	✓	✓	×	✓	n/a	✓
Monel	✓	✓	✓	✓	×	✓	n/a	✓
Tantalum	✓	✓	✓	✓	×	✓	n/a	✓
Nickel	✓	✓	✓	✓	×	✓	n/a	✓
Graphite	×	×	×	×	×	×	n/a	×
Linings	×	×	×	×	✓	×	n/a	×

OsecoElfab Pharmaceutical

UK office
Alder Road, North Shields
Tyne & Wear, NE29 8SD
UK

T: +44(0)191 293 1234
E: uksales@osecoelfab.com

US office
1701 W. Tacoma
Broken Arrow, OK 74012
US

T: +1 (918) 258-5626
E: info@osecoelfab.com

©OsecoElfab December 2021 All rights reserved. Version 3.3