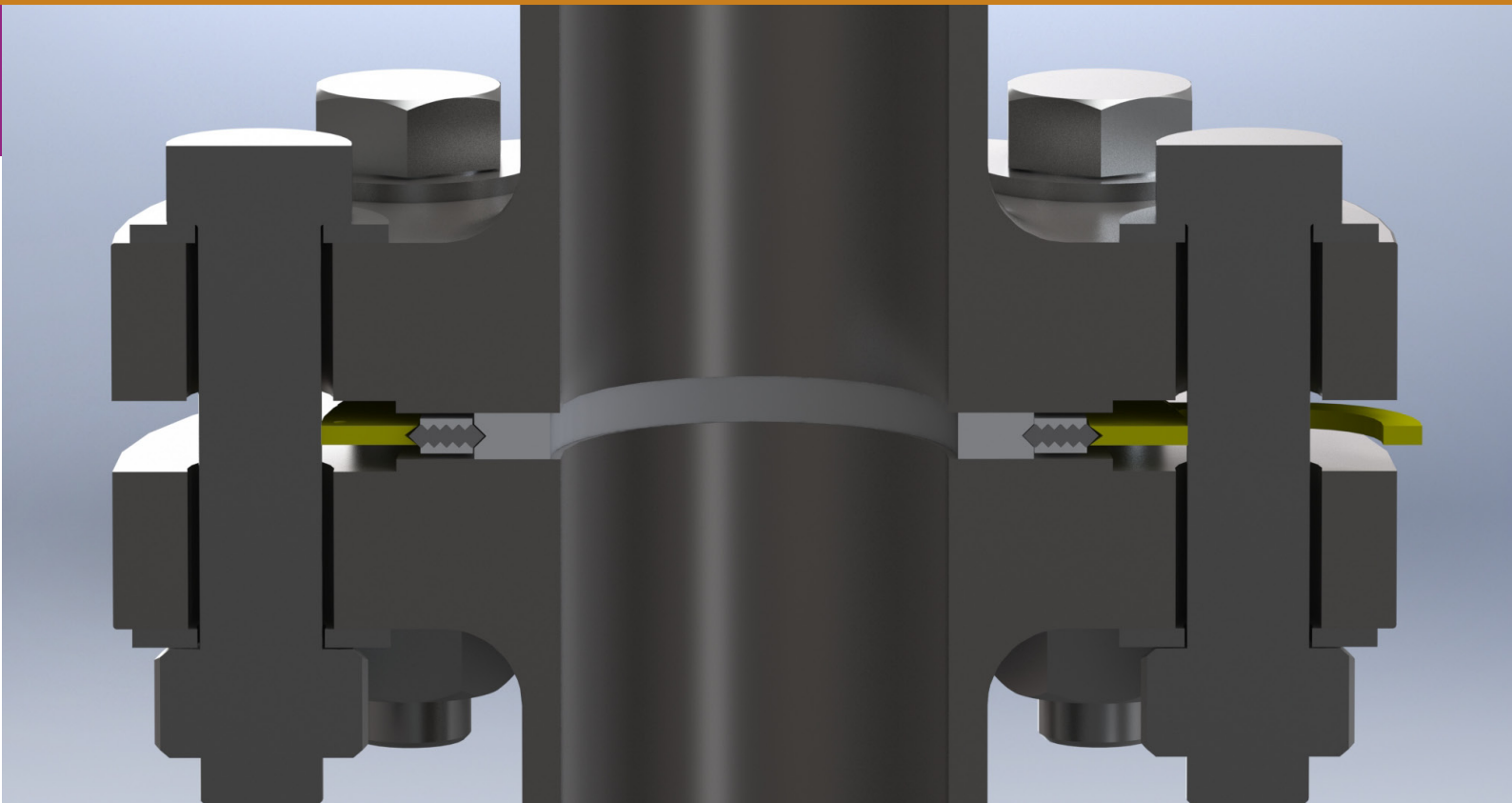


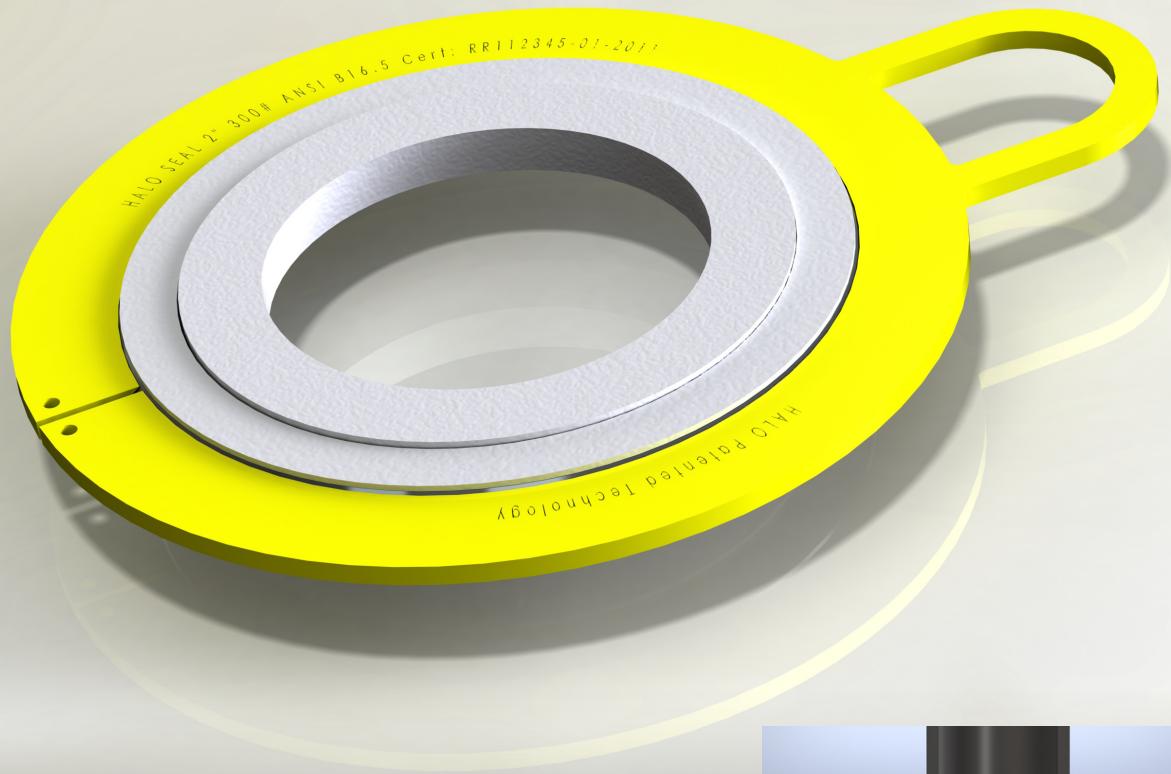
HALO FRS

HALO Flange Recovery System for Corrosion Control
and Flange Maintenance



HALO Flange Recovery System for Corrosion Control and Flange Maintenance

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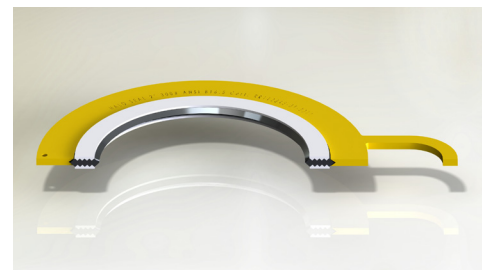
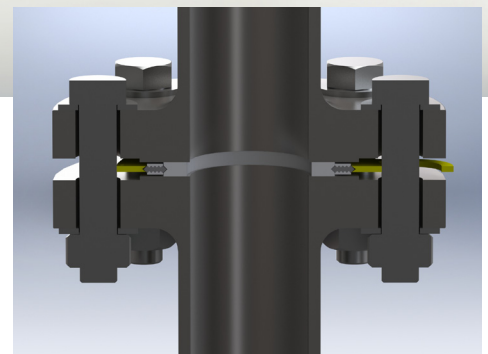


HALO FRS

The Halo Seal comprises a Sealing Element based on Kammprofile technology and a unique, reusable outer ring.

The revolutionary FRS incorporates additionally a specially constructed insert that is designed to minimise and manage corrosion in new and existing flanged joints. This combination provides a more comprehensive and significantly lower cost option than any other currently available Industry alternatives.

The product combination is designed to be a common solution for every pipe size, regardless of pressure class or international flange standard, thus reducing inventory and minimising the risk of installing the wrong gasket.



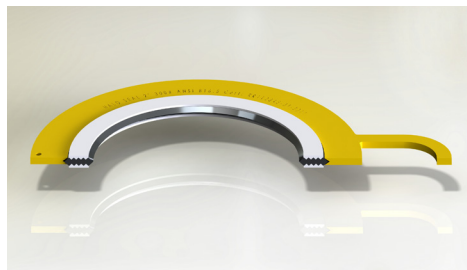
HALO FRS

A revolutionary step in Corrosion Control and Preventative Maintenance

Uncontrolled corrosion can cause immense damage to unprotected flange joints and faces; causing premature failure or high levels of fugitive emissions, resulting in a large amount of unwanted cost due to downtime and equipment repair:

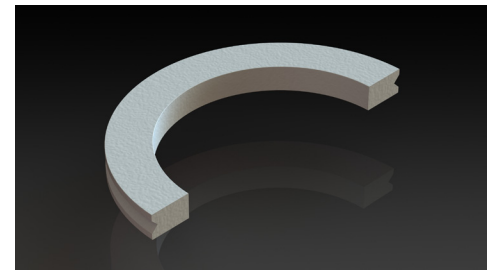
The **HALO FRS** is a patented Corrosion Control & Flange Maintenance System that offers Industry a solution against corrosion. The patented **HALO FRS** has been designed to virtually eliminate the risk of corrosion in new flange faces and to prevent further damage in corrosion affected flange faces.

The new **HALO FRS** Insert allows the End-user to adapt his standard HALO Seal into an engineered solution for the control and management of corrosion in the Oil & Gas, Mining, Desalination, Chemical and Process Industries.



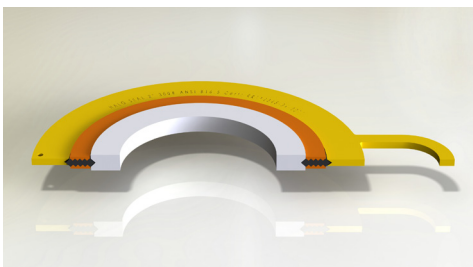
Standard HALO Seal

The standard HALO Sealing Core has been designed with an internal 'V' Wedge to accommodate the FRS Insert. The HALO FRS is part of the HALO Sealing System suite of technical solutions.

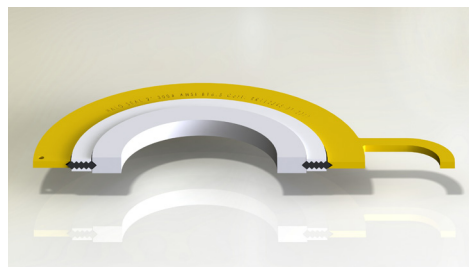


HALO FRS Insert

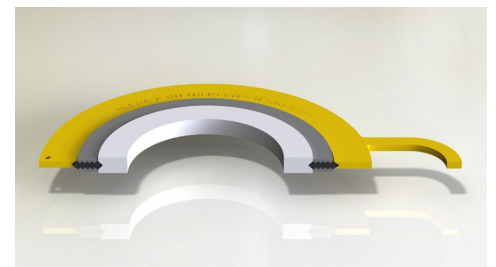
The FRS Insert is installed into the internal diameter of the HALO Sealing Element and kept securely in place during the handling and installation process. The installed FRS Insert completes the HALO FRS Assembly, which provides patented double sealing technology for new and corrosion affected flange joints.



HALO FRS-MC (Mica)



HALO FRS-TF (PTFE)



HALO FRS-GP (GRAPHITE)

HALO FRS Seal Advantages and Applications

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Benefits of the Halo Seal and FRS

- Provides a significantly lower cost option than any other Industry alternatives
- Suitable for all pressure classes and international flange standards
- Less leaks and lower fugitive emissions
- Reduced inventory (reduces cost of transport to off-shore & remote sites)
- Minimised risk of incorrect gasket installation
- Less waste with reusable HALO guide ring and re-conditionable sealing core
- Reduced corrosion damage to new equipment extends service life
- Enables the recovery of the Flange / FRS interface in corrosion damaged flanges (Assessment by qualified personnel required)
- Reduced failure rate
- Reduced downtime
- Reduced OH&S risk
- Reduced environmental impact through leaks and disposal
- Unlimited shelf life
- Seals extremely well at low loads
- Seals extremely well at high pressures
- FRS Insert provides patented double sealing technology

Halo FRS Product Application

- General Service Application
- Fire Safe Solution Applications
- Cryogenic Applications
- Chemical Applications
- Corrosion Affected Applications
- High Attrition Applications (Mining)
- Aged Plants

Thickness	
Core	3 mm
Outer Ring	2.5 mm
Facing	0.5 mm
FRS	6 mm
Materials	
Core	316L (Other materials available on request)
Outer Ring	304L (Other materials available on request)
Facing	Graphite, PTFE, PG-Therm, PG-Therm & Graphite, Silver
FRS	Expanded PTFE (Other materials available on request)
Dimensions	
	To suit: B16.5, B16.47 A & B, BS 10, DIN, JIS.
	Non-Standard sizes available on request.
Flange	
Surface Finish	3.2 to 6.3mm Ra (125-250 RMS)

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