

*Flexitallic*<sup>®</sup>

# FLANGE RESCUE GASKET

**FRG**

Proactive and reactive  
sealing solutions that  
save you time and money.

# SHUT DOWNS COST INDUSTRY MILLIONS

## PROTECTION FOR YOUR PLANT IS NOW HERE

When corrosion or damage occurs to flange faces, impact on operating costs due to downtime repairs can be significant. So what if you could fit a product to new assets, that not only extends the life of equipment, but also offers additional corrosion inhibiting properties?

The Flange Rescue Gasket (FRG) can be used for **remedial repairs** on corroded equipment AND as a **preventative solution** on new equipment to prolong its life and avoid costly shutdowns. The FRG is also easy to install.

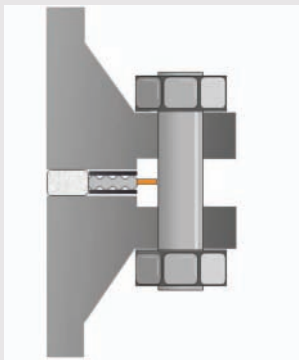
## COST EFFECTIVE SOLUTIONS FOR FLANGE CORROSION

A direct response to the oil and gas industry's requirement for effective closure on damaged flange faces, a full range of cost-effective FRG products is available for a wide range of hostile environments for use in:

- Oil and gas
- Chemical
- Power generation
- Petrochemical



## THE WORLDS ONLY FLANGE RESCUE GASKET



The FRG enables bolted joints to be easily and effectively sealed to prevent internal corrosion. The soft SIGMA inner ring of the FRGs conform seamlessly to the flange face, even if already damaged to:

- Save you time and reduce lost production
- Provide a major cost saving when compared with replacing flanges, welding and machining
- Gets you back up and running within a day.



Call our Customer Service Team on **+44 (0)1274 300 330**

# FLANGE RESCUE GASKET



## FIRE SAFE. GUARANTEED

### FRG-FS

The FRG-FS is a fire-safe gasket that uses our exclusive, insulating, fire resistant material, **Thermiculite®**, to effectively seal damaged flanges even at high temperatures.

Thermiculite® is certified to the API 6FB fire test which means it is ideal for use on Hydrocarbon systems. Unlike graphite, Thermiculite is inert and inorganic so doesn't promote corrosion especially in offshore environments.

FRG gaskets are sized to suit standard ASME B16.5 flanges, therefore there is no need for alterations or special adaptations, however if you have a bespoke application we can design and manufacture to suit your requirements.

#### IDEAL FOR:

- Topside & subsea applications
- Seawater pipework
- Vessel & equipment nozzle connections
- Hydrocarbon systems
- Cooling water applications
- Raised face to RTJ connections



We can also provide a Subsea FRG which features a unique identification handle for easy and safe installation.



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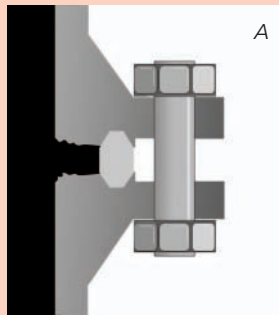
# RING JOINT



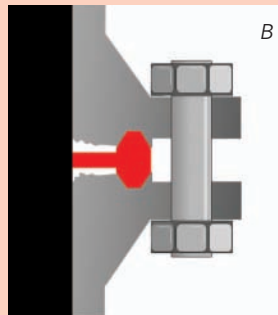
## SPECIALIST SEALING AT HIGH PRESSURE

**FRG-RJ**

Ring type joints are used extensively in the oil and gas industry or where very high pressures are used. Traditional RTJ flanges corrode and erode due to the stand-off between the flanges creating a crevice. The FRG-RJ fills this gap so preventing and repairing leaking flanges. The design is matched to the pipe bore to ensure a smooth internal diameter even at the flange.



A



B

*A: standard Octagonal RTJ  
- liquid can get in between  
flanges and cause erosion/  
corrosion in this area.*

*B: FRG-RJ - inboard of the  
RTJ is filled with SIGMA PTFE  
on an integral metal support  
- fills the gap thus eliminating  
the problem.*

### IDEAL FOR:

- High pressure applications
- Topside & subsea pipework
- Hydrocarbon & seawater systems
- Matched to pipe bore to:
  - Ensure successful pigging operations
  - Minimise turbulent flow

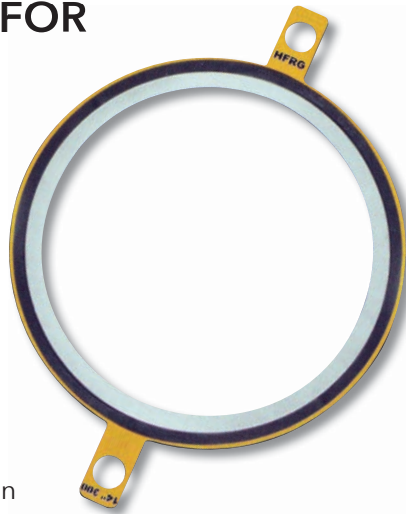
# HF ALKYLATION



## ULTIMATE SEALING FOR CRITICAL SERVICES

### FRG-HF

Typical refinery HF Alkylation units are plagued with flange corrosion because traditional gasket solutions leave crevices and gaps. The FRG-HF is designed to eliminate all crevices and prevent the onset of corrosion ensuring reliable and leak free operations. Alternative materials can be selected to suit other chemical applications if required.



#### BENEFITS:

- Eliminates costly, time consuming repairs
- Avoid the use of sealing clamps
- Capable of sealing against partial existing corrosion

## FRG-HF Success Story

### UOP Licensed HF Alkylation Unit

- Flanges that chronically develop leaks after start-up requiring subsequent clamps have sealed with the FRG-HF with no leaks or clamps to date since January 2012.
- Most FRG-HF gaskets are in the most difficult service - the Depropanizer.
- Most FRG-HF is sealing against repaired as well as damaged surfaces.
- No changes or Improvements were made to installation procedures. Success is truly from the gasket as opposed to improved installation or controlled torquing.

***"Maintenance and Operations love the new gasket and want to use it everywhere"***

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# UNCOMPROMISING SOLUTIONS FOR UNCOMPROMISING CONDITIONS

## THE FRG PRODUCT RANGE



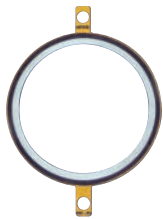
### FLANGE RESCUE GASKET - ORIGINAL

- Restructured Sigma® PTFE bonded to high integrity metal core
- Leak-free seal and blow out resistance
- Bright & easily identifiable for inspection
- Corrosion resistant coating.



### FIRE SAFE

- Thermiculite® high temperature insulating corrosion resistant material
- Certified to API 6FB for fire-safe applications.



### HF ALKYLATION

- Low stress sealing Sigma® - a tighter seal
- Fire-safe graphite faced serrated metal core
- Designed for ease of identification with problematic connections on HF Acid Plants.



### HIGH PRESSURE

- Stops turbulent media flow to prevent erosion, corrosion and flange degradation
- Available in Style R Oval, R Octag, RX and SRX
- Ideal for topside or sub-sea applications.



### CRYOGENIC

- Aluminium core as standard
- Core material can be adapted to match the flange materials
- PTFE ring performs in temperatures from cryogenic to 260°C.



### FRG SUBSEA

- Easy sub-sea installation with integrated removable handle
- Use to connect RTJ & RF flanges.

# *Flexitallic*<sup>®</sup>

## WE'VE GOT YOUR PERFECT SEALING SOLUTION... ...WHEREVER YOU ARE

Not only do we deliver industry-leading products but our commitment to customer care is unrivalled, too. So whatever environment your industry is in, and wherever you are, we can supply you with the specialist sealing solutions you need.



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**About The Flexitallic Group**

The Flexitallic Group is a global leader in specialised sealing solutions and products serving the oil and gas, power generation, chemical and petrochemical industries in emerging and developed markets. Focused on the upstream, downstream and power generation sectors, it has operations in France, the United States, Canada, Mexico, the United Kingdom, Germany, the United Arab Emirates, Kazakhstan and China plus a network of worldwide licensing partners and distributors.  
[www.theflexitallicgroup.com](http://www.theflexitallicgroup.com)

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