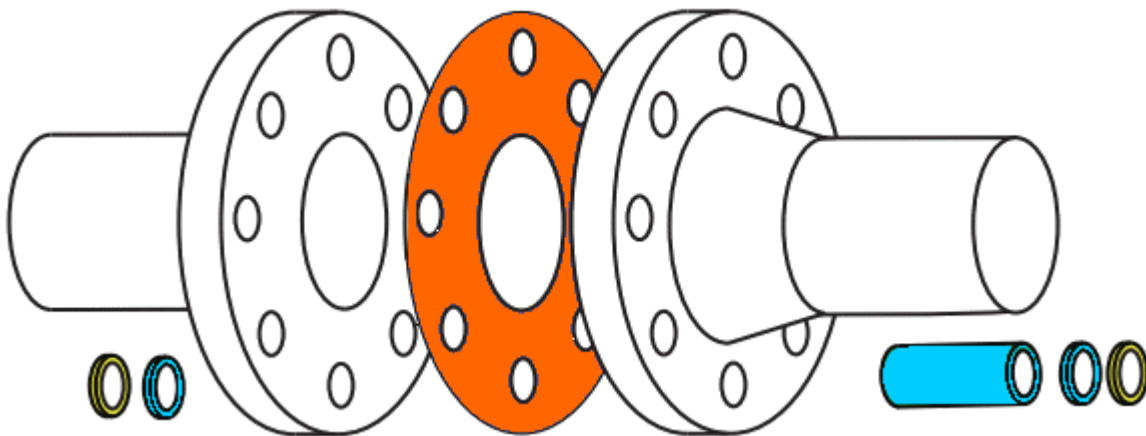


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# FLANGE INSULATION KITS



## FLANGE INSULATION KITS

Flange Insulation Sets are used in the petrochemical, oil refinery, offshore seawater environments, where the transfer of volatile fluids through the pipeline can create explosive conditions which could be ignited by stray electrical currents.

Even where there is no risk of explosion these Insulation Kits are still used to act as a non-conductive interface between the two mating flanges to reduce the potential threat of galvanic corrosion of the pipework in cathodic protection systems.

A typical flange Insulation Kit comprises;

- 1 Insulating Flange Gasket
- 1 Insulating Sleeve per bolt
- 2 Insulating Washers per bolt
- 2 Steel Washers per bolt

In order to achieve optimum results it is essential that Flange Insulation Kits follow certain design criteria;

The electrical resistance properties of the components are balanced for the purpose and location in the insulation system.

The components are manufactured from insulation materials with high compressive strength and good stability.

### Applications Include

Long distance pipelines for Oil, Water and Gas  
Offshore Installations  
Oil Refinery Pipelines  
Petrochemical Industry

### General Properties

Electrical Insulation of pipework  
Cathodic Protection  
Designed to minimize electro-chemical erosion  
The kits are produced using materials with high compressive strength  
The electrical resistance properties are balanced

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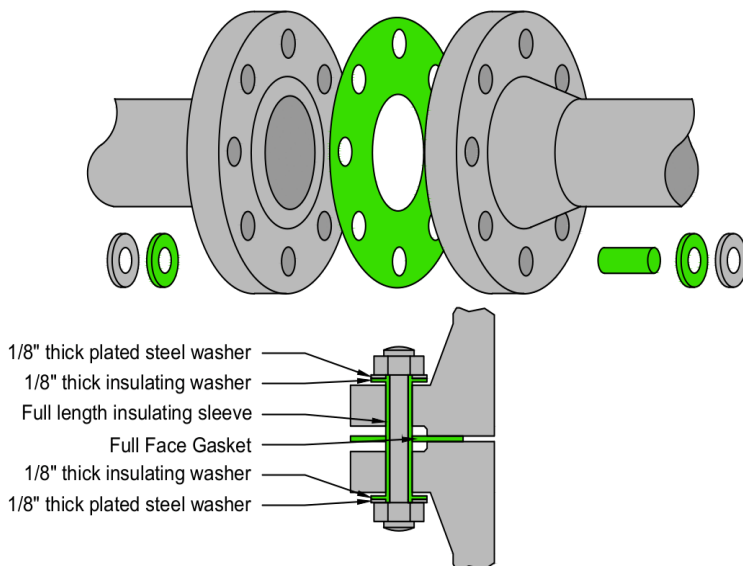
## Types Available

There are 4 main Types of Flange Insulation Kit, available in a wide range of materials to meet varying service conditions. Each Type consists of the same 4 elements but the central Flange Gasket differs

### Type E

The gasket in a Type E Kit is Full Face having the same outside diameter as the flange with precision cut holes allowing the bolts to 'slide through'. This Full face gasket reduces the risk of electrical bridging and the presence of foreign matter between the mating flanges

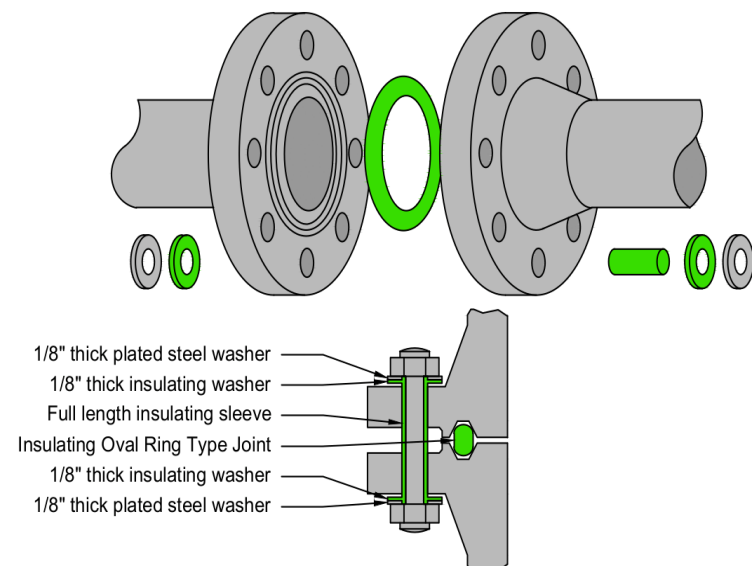
Type E



### TYPE D

The gasket in a Type D Kit is specifically designed to fit into the ring groove of RTJ (ring-type-joint) flanges

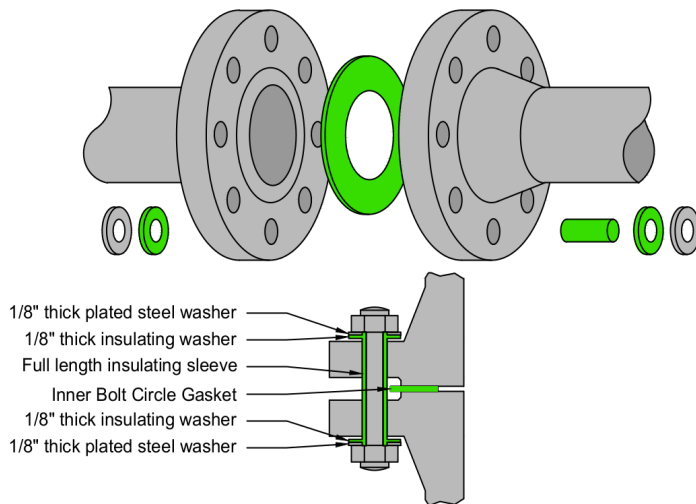
Type D



## Type F

The gasket in a Type F Kit is suitable for raised face flanges. It is an IBC gasket which sits inside the bolt circle of the flange. This type is not as efficient as the type E but is far easier to install as separation of the mating flanges is not necessary.

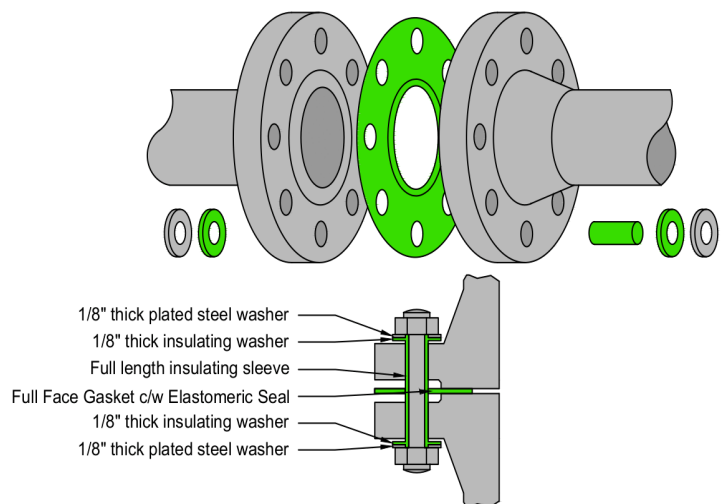
Type F



## Type G

The gasket in a Type G Kit is available in both the Full Face or IBC versions and incorporates an elastomeric sealing ring in the gasket faces. With the correct choice of insulating materials Type G Kits are capable of greater chemical and temperature resistance

Type G



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## AVAILABLE MATERIALS

### Standard

Our standard Flange Insulation Kit consists of ;

- Neoprene Faced Phenolic Central Gasket – The Neoprene facing providing an effective sealing surface with the phenolic core providing the necessary electrical isolation.
- Mylar Bolt sleeves
- Reinforced Phenolic Washers
- Zinc Plated Carbon Steel Washers
- Application Guidelines
- Basic pipeline flange isolation in oil, gas and other processing applications
- Can be used on the majority of flange specifications including ASME, API, EN, BS and DIN
- Flange insulation and electrical isolation in conjunction with cathodic protection
- To isolate flange and piping systems where dissimilar metals are present
- Temperature Range : -20° C to +100° C



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## Type G-10

The G-10 gasket consists of a modified u-shaped TFM seal energized with a phynox spring bonded to a high strength G10 glass reinforced epoxy and 316L stainless steel composite core, offering extremely high levels of electrical isolation from cryogenic temperature up to +150° C



Each Kit includes;

- G-10 Gasket
- G-10 Bolt Sleeves
- G-10 Washers
- 316 SS Back-up washers

## Application Guidelines

- Flange isolation for critical applications in the oil, gas and other processing applications
- Media compatibility with Natural Gas, Oils, other Hydrocarbon media and many corrosive environments
- Specified for plant wide use on the majority of flange specifications including ASME, API, EN, BS and DIN
- Flange insulation and electrical isolation in conjunction with cathodic protection
- Insulation between dissimilar metals to prevent galvanic corrosion
- The position of the TFM spring energized seal allows the gasket to be used across all types of flange styles including ring joint and raised face flanges
- Temperature Range : -150° C to +150° C



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## Type G11

Following the same highly effective design as the G-10 type but using a G-11 GRE composite material that extends usage to higher temperatures.

This G-11 gaskets consists of a modified u-shaped TFM seal energized with a phynox spring. This TFM material was chosen for its advanced mechanical properties and improved resistance to permeation. This seal is bonded to a high strength G-11 glass reinforced epoxy and 316L stainless steel composite core



Each Kit includes;

- G-11 Gasket
- G-11 Bolt Sleeves
- G-11 Washers
- 316 SS Back-up washers

### Application Guidelines

- Flange isolation for critical applications in the oil, gas and other processing applications
- Media compatibility with Natural Gas, Oils, other Hydrocarbon media and many corrosive environments
- Specified for plant wide use on the majority of flange specifications including ASME, API, EN, BS and DIN
- Flange insulation and electrical isolation in conjunction with cathodic protection
- Insulation between dissimilar metals to prevent galvanic corrosion
- The position of the TFM spring energized seal allows the gasket to be used across all types of flange styles including ring joint and raised face flanges
- Temperature Range :  $-150^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$

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## Type FS

This is a premium performance fire safe isolation gasket utilizing a triple seal design which incorporates a coated metallic core housing a modified u-shaped TFM seal energized with a phynox spring. On both the inside and outside of this seal are two kammprofile sections, the inner faced with modified PTFE, the outer with a proprietary high temperature material. G-11 GRE material is used to face the outer section of the metallic core.



Each Kit includes;

- FS Gasket
- G-11 Bolt Sleeves
- Isolating washers in modified high temperature material
- 316 SS Back-up washers

## Application Guidelines

- The FS kit combines exceptional chemical compatibility and electrical isolation with the capability of maintaining sealing performance after API 6FB 3rd Edition fire test
- Flange isolation for critical applications in the oil, gas and other processing applications
- Media compatibility with Natural Gas, Oils, other Hydrocarbon media and many corrosive environments
- Specified for plant wide use on the majority of flange specifications including ASME, API, EN, BS and DIN
- Flange insulation and electrical isolation in conjunction with cathodic protection
- Insulation between dissimilar metals to prevent galvanic corrosion
- The location of the triple seal design elements on the gasket face allows the gasket to be used across all types of flange styles including ring joint and raised face flanges
- Temperature Range : -45° C to +180° C



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## Type GRE

The GRE gasket consists of a G10 glass reinforced carrier with 2 modified PTFE sealing faces

Proprietary machining of the carrier allows correct location of the sealing faces, with the depth / profile designed to achieve correct compression and groove fill.



Each Kit includes;

- GRE Gasket
- G-10 Bolt Sleeves
- G-10 Washers
- Zinc Plated Carbon Steel or 316 SS Back-up washers
- 

Application Guidelines

- Specified for plant wide use on the majority of flange specifications including ASME, API, EN, BS and DIN
- Flange insulation and electrical isolation in conjunction with cathodic protection
- Insulation between dissimilar metals to prevent galvanic corrosion
- Temperature Range :  $-128^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$

We offer wide range of Insulation Gasket Kit that in compliance with ASTM, ANSI, API, NORSOK standards at best Market prices in India. To know more about the latest price of Insulation Gasket Kit please feel free to contact us on [sales@jadealloys.com](mailto:sales@jadealloys.com) or call us on +91 9987685906