

# POWER PLANT SUPPLY CO CANADA DISTRIBUTORS PSI

902 435 9899 Fax 902 435 9899

<mailto:atlantic@powerplantsupplyco.com>



Experience Counts!

416 752 3339 Fax 416 752 3339

<mailto:info@powerplantsupplyco.com>

<http://www.powercanadasolutions.com/flangegasket.html>

## Sealing/Isolating Gaskets and Flange Isolation Kits

### Sealing and Isolating Gaskets

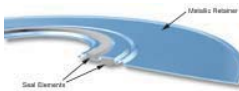
Two of PSI's premier sealing gaskets are available with isolating retainers. Both LineBacker® and GasketSeal® gaskets may be ordered with isolating retainers to match your application. In addition, you may choose from a wide variety of sealing elements so your completed gasket will consist of a combination of the best materials to seal the flange and maintain that seal for the life of the piping system.



LineBacker® Sealing/Isolating Gaskets  
GasketSeal® Sealing/Isolating Gaskets  
LineSeal™ Xtreme Critical Service Sealing Gaskets  
LineBacker® 61™ NSF Certified Sealing Gaskets

### Non-Isolating - Sealing Gaskets

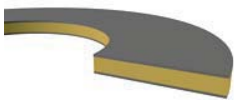
Three of PSI's premier sealing gaskets are available with non-isolating (metallic) retainers. In addition to the LineBacker® and GasketSeal® gaskets, the FlangeMate® sealing gasket features a unique configuration that allows the use of even soft metallic materials (grafoil) to be used as seal elements. The hoop strength of metallic retainers virtually insures against the possibility of a gasket blow-out under any and all conditions.



LineBacker® Non-Isolating Sealing Gaskets  
GasketSeal® Non-Isolating Sealing Gaskets  
FlangeMate® Non-Isolating Sealing Gaskets

### Flat Isolating Gaskets

Flat isolating gaskets are available in a wide variety of dielectric materials to eliminate the possibility of electrical currents passing through the flange. For additional protection, type "E" gaskets extend out to the O.D. of the flange to help eliminate the possibility of any metallic materials inadvertently becoming lodged between the flange faces and thus shoring-out the desired electrical isolation.



Rubber Faced Phenolic  
Plain Phenolic  
Red Devil  
Yellow Jacket  
Garlock  
Teflon®

### Specialty Gaskets

Significant chemical and material composition improvements are now being incorporated into sealing gaskets designed to address the regulations associated with asbestos type gaskets. Three versions are manufactured from new proprietary materials that provide excellent resistance against environmental leakage (zero environmental leakage) without the health hazards associated with asbestos type gaskets. All are available as either "E" or "F" type gaskets in isolating retainer materials.



LineBacker® Zero™ Sealing/Isolating Gaskets  
LineBacker® 250™ Sealing/Isolating Gaskets  
LineBacker® 251™ Sealing/Isolating Gaskets  
LineSeal™ Xtreme Critical Service Sealing Gaskets  
LineBacker® 61™ NSF Certified Sealing Gaskets

For over 40 years Pipeline Seal and Insulator, Inc. has been a technology leader in the field of high quality sealing and isolating products used to guarantee the safe flow of fluids passing through pipeline transmission, distribution and process piping systems.

An installed base of thousands upon thousands of gaskets and flange isolation kits, effectively sealing and maintaining the integrity of corrosion mitigation programs everywhere, confirms the effectiveness and reliability of the PSI system.

In fact, PSI flange isolation products are relied upon for applications subject to the most severe conditions (both internal and environmental), for specialized or exotic fluids or for applications subject to extreme temperature and pressure fluctuations.

Flange isolation products include a wide selection of isolating/sealing gaskets along with a variety of sleeves and washers. For maximum flexibility, components may be ordered separately or as part of complete flange isolation kits.

Additions to the PSI line of flange isolation products are the LineBacker Zero™ sealing gasket, LineBacker 250™ sealing gasket and Line-Backer 251™ sealing gasket, all designed to address problems associated with asbestos substitutes and fugitive emissions.



### Type E Gaskets

Type E Gaskets extend to the outside diameter of the flange. They feature precision located bolt holes, to automatically center the gasket, and offer maximum protection against foreign material shorting-out the flange.

Type E gaskets may be ordered in any one of the following configurations:

- LineBacker® Sealing Gaskets
- GasketSeal® Sealing Gaskets
- Rubber Faced Phenolic Gaskets
- Plain Phenolic Gaskets
- Red Devil Gaskets
- Yellow Jacket Gaskets
- Garlock Gaskets
- Teflon® Gaskets



When configured as a LineBacker® Se element may be positioned anywhere b gasket and I.D. of the bolt circle.

### Type F Gaskets

Type F Gaskets are made to fit within the bolt hole circle of the flange. The O.D. of the gasket extends out to the I.D. of the bolt hole circle for good protection against foreign material shorting-out the flange. Type F gaskets may be ordered in any one of the following configurations:

- LineBacker® Sealing Gaskets
- GasketSeal® Sealing Gaskets
- Rubber Faced Phenolic Gaskets
- Plain Phenolic Gaskets
- Red Devil Gaskets
- Yellow Jacket Gaskets
- Garlock Gaskets
- Teflon® Gaskets



When configured as a LineBacker® Se element may be positioned anywhere b gasket and I.D. of the bolt circle.

<http://www.powercanadasolutions.com/flangegasket.html>

### Custom Gaskets for Flanges

Custom sealing gaskets may be manufactured for flanges from 3/8" diameter and up. For added flexibility and to accommodate a wide variety of flange types, sealing elements may be positioned anywhere between the I.D. of the bolt circle and I.D. of the gasket. In addition, PSI can manufacture gaskets with a double seal upon request if flange size, surface condition or other concerns warrant. Please [contact factory](#) for more information.

#### Custom Shaped Gaskets

Custom shaped gaskets may be manufactured to precise customer specifications for sealing mating surfaces of any configuration.



[Contact PSI](#)

### Flange Isolation Kits

Flange isolation kits are available for all flange sizes, types, pressure ratings and materials. Each kit is individually and securely packed in a reinforced corrugated cardboard box, which is clearly labeled as to its contents for convenience in warehousing and field use inventory. Very large diameter gaskets are packaged separately from the sleeves and washers for convenience in storing and handling. Each gasket is labeled with the following information:

- Materials (Retainer Material or Retainer/Seal element combination)
- Pipe Size
- ANSI Class
- Date of Manufacture
- Type Flange (Weld Neck or Slip-on)



[Sealing Gasket Flange Isolation Kits](#)  
[Flat Gasket Flange Isolation Kits](#)  
[LineBacker® 61™ NSF Certified Flange Isolation Kits](#)

### PSI sealing gaskets far exceed the sealing capabilities of flat gaskets.

#### Here's why...

PSI sealing gaskets consist of a sealing element positioned within a groove on opposite sides of a retainer. Elastic memory characteristics of the confined sealing elements result in near zero m and y factors making it possible to effect a positive seal without the tremendous bolt loads that are required to crush flat gaskets into a configuration capable of producing a marginal seal, at best. Y = Compressive load necessary to effect a seal.

M = Extra load (above Y factor) necessary to hold fluid pressure over the operational pressure range of the system.

Near zero m and y factor sealing gaskets can be used to effectively seal mating surfaces made from glass, plastics, ceramics and other materials that would tend to shatter when over compressed. When used with flanged piping systems, lower bolt torques and lighter weight, lower pressure rated flanges may be used, resulting in additional material and installation savings.

#### Lower bolt torques required to effect a seal.

- Reduction in installation time and the need for impact wrenches or cheater bars.
- Eliminates the need for retightening due to flat gasket cold flow.
- Reduces the need for high tensile strength bolts or studs.
- Permits the use of lighter weight or lower ANSI rated flanges.
- Assures a positive seal first time, every time while eliminating costly delays to tighten leaking flanges during initial pressurization.

#### Pressure energized, controlled confinement of PSI sealing elements.

- Sealing elements maintain contact with mating surfaces even though the surfaces may tend to warp or separate due to thermal shock, pressure fluctuations or other external forces.
- Internal fluid pressure forces the seal elements against the mating surfaces increasing the effectiveness of the seals.

#### Micro-encapsulation of seal elements.

- Micro-exposure to either external or internal environments serves to shield seal elements from fire, chemicals, corrosive fluids or anything that would tend to destroy their effectiveness. • Micro-exposure to external or internal environments protects seal elements from deterioration by atmospheric conditions or internal media and dramatically lengthens the service life of the gasket.

#### Match gasket materials to service conditions.

- Sealing elements may be made of a broad selection of elastomers.
- Retainers may be made of a variety of dielectric materials or metals.
- With a choice of retainer and sealing materials in any combination, PSI sealing gaskets may be tailored for use with media that falls within the limitations of the elastomer used for the seal and the retainer material.

#### Sealing elements may be positioned anywhere between the I.D. of the gasket and the I.D. of the bolt circle.

- Allows the ability to use PSI sealing gaskets with ring joint, flat face, raised face or any combination of these flange types in a given size and pressure rating.
- Provides the option of having two or more sealing elements positioned on the gasket surface.

### Type D Gaskets

Type D Gaskets are available for RTJ flanges but the LineBacker® Sealing Gasket is an excellent alternative to D gaskets because the sealing element may be positioned anywhere between the I.D. of the gasket and I.D. of the ring groove. Inquire about the LineSeal® sealing gasket for RTJ flange applications.

### Single Washer Set

Single washer set flange isolation kits include the following items for each bolt:

- One - 1/8 thick steel washer
- One - Isolating washer
- One - Isolating sleeve

### Application Considerations

In buried applications, single washer configurations may be used to allow the Cathodic Protection (CP) current to reach the nuts and bolts. If desired, nuts on the opposite side of the cathodically protected flange may be included as part of the CP system.

### Double Washer Set

Double washer set flange isolation kits include the following components for each bolt:

- Two - 1/8 thick steel washers
- Two - Isolating washers
- One - Full length isolating sleeve

### Application Considerations

Double washer configurations may be used for added protection against the possibility of "shorting out" the nuts and bolts. In addition, double washer sets electrically isolate the nuts and bolts from both flanges.

### One-Piece Sleeve and Washer Sets

One-piece sleeve and washer set flange isolation kits include the following items for each bolt:

- Two - 1/8 thick steel washers
- One - One-piece Isolating sleeve

### Application Considerations

Easier to install, one-piece sleeves also allow the inspector a visual indication of sleeve usage. Due to the relatively low compressive strength of this material, its use is not recommended for high pressure or large diameter flanges that require high torque loads.

Note: G-10 One-Piece sleeve/washer assembly available for additional strength and convenience.