

Applications

- » High pressure flanges
- » Critical service applications
- » High pH Service
- » Locations where one prefers an integral seal element
- » A more convenient spiral-wound type gasket replacement

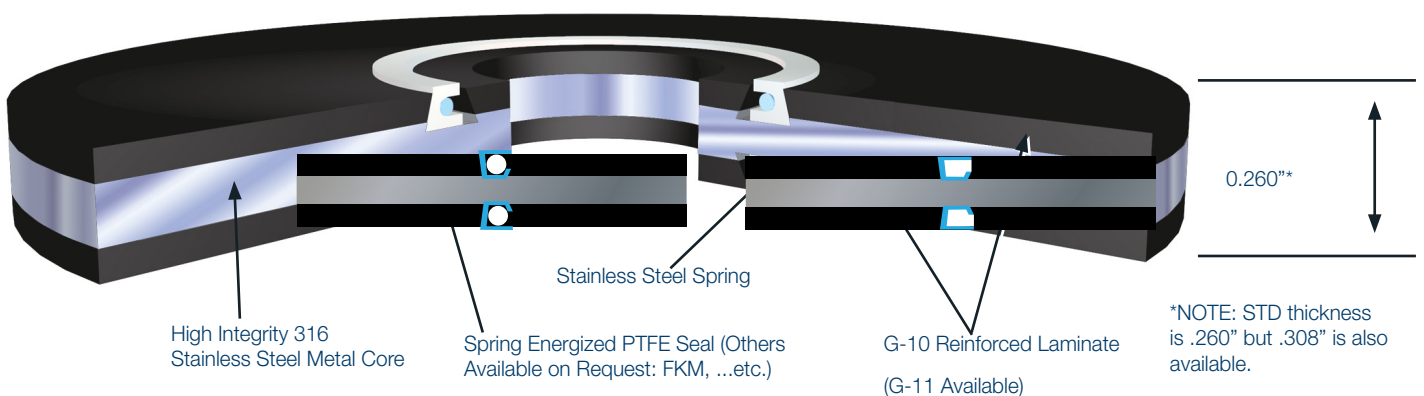
VCS® gasket

The VCS® gasket delivers outstanding insulation and overall sealing performance in challenging applications involving aggressive materials. It is well-suited for use in various services, including those with ANSI 2500# and API 10,000# ratings¹.

Thanks to its distinct pressure-activated sealing mechanism, this gasket requires significantly less bolt stress compared to other gasket options in order to achieve a proper seal². Additionally, the VCS® gasket features an inner diameter precisely matched to the flange bore, which helps eliminate turbulent flow and prevents erosion/corrosion of the flange face. The seal elements within the gasket retainer are replaceable, ensuring the gasket's reusability.

Features

- » Extreme, high-reliability sealing and electrical isolation solution for critical service applications
 - » *Seals and isolates all pressure ratings through ANSI 2500 class and API 10,000 psi service.
 - » *Withstands severe service conditions including vibration, temperature and pressure fluctuations
 - » Designed to withstand corrosive environments
 - » Good electrical isolation properties for cathodic protection. Reference the VCS® data sheet for further information
 - » Pressure-activated seals provide high confidence sealing, eliminates costly leaks and provides a solution for fugitive emissions
 - » Gasket is sized to the bore to protect flange faces from media-induced corrosion and flow-induced erosion
 - » Minimizes turbulent flow at flanged connections
 - » Mitigates galvanic corrosion in dissimilar metal flanges
 - » High-strength laminate material resists failure due to excessive compression
 - » Available to match any flange specification (ANSI, ASME, API, MSS, BS, DIN, AS, others)
 - » Can mate mismatched RTJ with raised-face flanges
 - » Easy installation, make up and removal
 - » Sealing system is not sensitive to low bolt loads - providing reliable sealing through a range of bolt stress
 - » Gasket is self-aligning and centering - quick to install and no special tools are required
 - » Maintenance-free corrosion-resistant design is resistant to deforming under load
 - » Works in Ring Joint Flanges, reducing fluid entrapment, flow induced erosion and media induced corrosion between flanges
 - » Reusable by simply replacing sealing ring
- *Contact KLINGER for further information



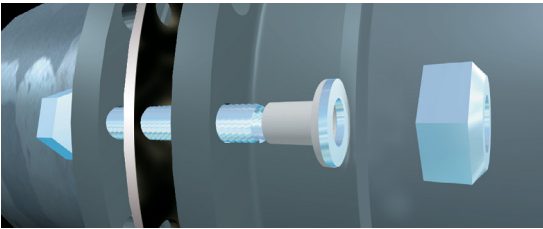
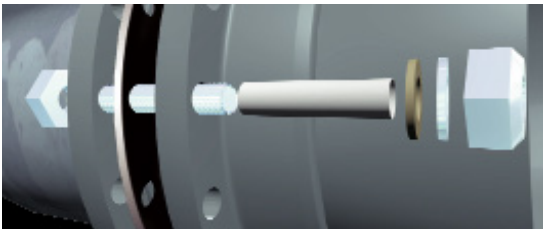
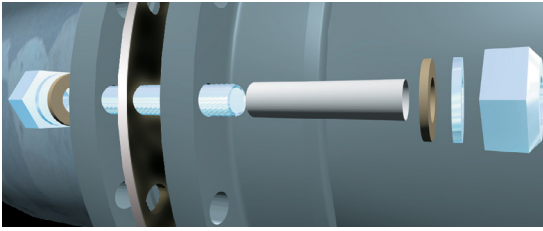
Before Tightening

The flange faces come into contact with the sealing elements, which extend slightly above the surface of the retainer. As the flange is tightened the sealing elements are compressed into the machine groove, developing an initial high unit pressure against the flange faces.

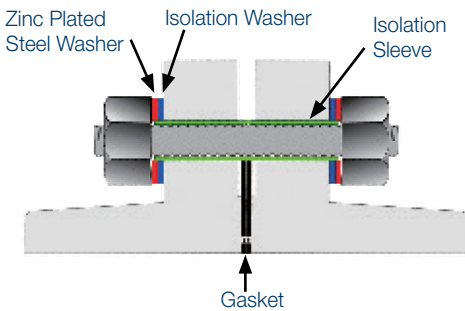
NOTE: Can work for ring joint flanges reducing fluid entrapment.

After Tightening

The flange faces come into firm contact with the retainer, thus compacting the sealing elements within grooves. At the same time, the unique VCS® spring energized seal provides elastic memory for a polymer not normally associated with this characteristic - resulting in a simple flat gasket with extremely high loading and self energizing characteristics without adverse cold flow problems.



Full length sleeve, double washer set configuration



Buried Application

Note: Consider using the ElectroStop™ monolithic isolation fitting

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

G-10 One-Piece Sleeve and washer set

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

- One - 1/8" thick steel washer
- One - 1/8" thick G-10 Washer
- One - G-10 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 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.

Easier to install, one-piece sleeves also allow the inspector a visual indication of sleeve usage.

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

Zinc Plated Steel washers

Zinc plated steel washers are designed to fit over the isolating sleeve or the retainer ring on the one-piece sleeves and washers. The outside diameter is sized to fit within the bolt facing on ANSI standard flanges. They are made of 1/8" (3.2mm) thick plated hot-rolled steel. (Stainless steel available)

Diamond-hyde™ washers

DIAMOND-HYDE™ coated washers, simplify washer installation, eliminate GRE washer cracking and resists the elements better than any coated isolator washer.

Extreme Critical Sealing for Industries

Production fields and offshore

In gathering and injection piping, tank farms, oil and gas processing systems, and sour gas and water handling systems. Christmas trees, pumps, valves, and wherever it is important to guard against the loss of product.

Petroleum Marketing Facilities

In terminal and tank farm piping, marine and airport fueling systems and other product handling facilities where it is essential to prevent loss of product or damage due to a flange leak or blowout.

LNG AND SNG SYSTEMS

For loading, unloading, liquefaction, regasification and processing of LNG, the production and processing of SNG, and wherever it is essential to provide a leak-proof flange for use from cryogenic to very high temperatures.

Pipeline and Distribution Piping

In compressor and pumping station piping, metering and measurement facilities, valves and other control equipment and elsewhere on a mainline piping system where a long-lasting, leak-proof flange is essential. In gas distribution piping - underground storage facilities, town border stations, industrial meter, regulator sets, and district regulators.

Refineries

In piping systems for heavy gasoline, caustic and acid based materials, carbon slurry, and wherever it is essential to protect plant and personnel from damage due to flange leaks or blowouts.

GPT

The VCS® Insulating Systems are manufactured at a GPT facility that has a registered ISO 9001:2008 Quality Management System.

KLINGER Limited is the authorised distributor for Pikotek products. We are able to supply the full range of Pikotek Insulation sets, including the PGE™, VCS®, VCFS®, VCS®-ID and Evolution®. For further information on these products, please call us today or send us your enquiry.

Statements and recommendations in this publication are based on our experience and knowledge of typical applications of this product and shall not constitute a guarantee of performance nor modify or alter our standard warranty applicable to such products.

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