## Sealing Integrity for Oil and Gas - Application Based Solutions









# Meeting and exceeding your most rigorous sealing requirements.

Safety and emissions compliance are essential to hydrocarbon refineries. Garlock companies offer not only ideal sealing solutions to meet these stringent requirements, but also a number of other products and services that provide the highest level of operational efficiency to result in bottom-line improvement in process yield.

Garlock programs for the Oil & Gas industry include solutions for on-site maintenance, turnkey emission monitoring and repair programs, Integrated Pollution Prevention Control reporting, comprehensive plant sealing, specialty projects and low emissions through the use of products such as 1303-FEP and EVSP 9000. Each solution offers a cost effective approach to meet your requirement for plant operation and maintenance. From simple solutions to critical applications, we meet your sealing needs for today and the future.

## A culture of safety.

The Garlock family of companies is acknowledged as the global leader in high-performance fluid sealing products, committed to a culture of safety-- making the world safer, sustainable and more reliable.

Our commitment to safety stems from our workplace culture and dedication to sealing integrity. We embrace safety not only for our employees, but for all of our customers as well. Our sealing products and solutions are tested to meet or exceed industry and regulatory agency standards. That's a standard that defines who we are, and what Garlock stands for.

Through innovation and engineering excellence we strive to exceed the requirements of Oil and Gas users globally. Our product portfolio is designed to provide solutions for the most demanding circumstances and is supported by our teams of engineers at all our locations.



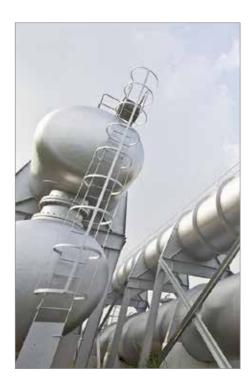
# Sealing products for the Oil and Gas industry.

The Garlock family of companies play a major role in providing sealing solutions for the Hydrocarbon Processing Industry. Garlock's products and technical expertise can help you cut costs, improve efficiency, and reduce downtime to ensure uninterrupted production.

Garlock's technical experts and a network of authorized distributors provide prompt service and delivery anywhere in the world.



### **Applications - Pressure Vessels**



As the performance expectations of pressure vessels has intensified within facilities, Garlock has developed products that match those needs. The high temperature THERMa-PUR™ gasket family allows Garlock to meet the highest temperature applications down to the standard materials that are used daily in many applications.

**Recommended Products:** 

#### > FLEX-SEAL<sup>®</sup> Spiral Wound Gasket

Application: Media: Filler/Facing Material: Manways, handholes and auxiliary flanged connections steam 4122 THERMa-PUR<sup>™</sup> and Graphite

#### > GRAPHONIC<sup>®</sup> Gasket

Application: Media: Filler/Facing Material: Manways, handholes and auxiliary flanged connections steam 4122 THERMa-PUR™ and Graphite

#### > Kammprofile Gasket

Application: Media: Filler/Facing Material: Manways, handholes and auxiliary flanged connections steam 4122 THERMa-PUR™ and Graphite

Applications - Piping, Flanged Connections



Flanged connections, extensive piping runs and large sprawling complexes are where you will find many of Garlock's products.

**Recommended Products:** 

#### > GYLON® Styles 3510, 3545

Flanged joints hydrocarbons, acids, caustics, solvents

#### > Gasket Styles 3128, 3125SS, 3125TC

Application: Media:

Application:

Media:

Flanged joints

hydrocarbons, corrosives, steam, boiler feed, condensate

#### > FLEX-SEAL<sup>®</sup> Spiral Wound Gasket

Application: Media:

Flanged joints hydrocarbons, corrosives, steam, boiler feed and condensate

#### > GRAPHONIC<sup>®</sup> Gasket

Application: Media:

Flanged joints hydrocarbons, corrosives, steam, boiler feed and condensate

#### > Kammprofile Gasket

Application: Media:

Flanged joints hydrocarbons, corrosives, steam, boiler feed and condensate



6

#### Applications - Reciprocating Plunger Pumps



Triplex or quintuplex plunger pumps are most commonly associated with well stimulation or hydraulic fracturing to pressurize a mix of sand, water and chemicals. To accommodate these aggressive medias, Garlock produces a full portfolio of seals and packings.

Recommended Products:

#### > Blue DURA-TUFF® WSP

Application: Media: Fluid end plunger packing sand, water, chemicals

#### > Valve Seals

Application: Media: Fluid end replaceable valve seal sand, water, chemicals

Drive end oil seal and rod scraper

hydraulic fluid, atmospheric debris

#### > Pony Rod Seal

Application: Media:

#### > MULTI-SWELL® 3760

Application: Media: Pump access covers hydraulic fluid, atmospheric debris, sand, water, chemicals

#### **Applications-Pumps**



In the Oil and Gas sector, reciprocating, centrifugal and rotating pumps are all utilized in the refining and transmission process. Each pump style has its own requirements and the Garlock portfolio of packings and expansion joints meets all those necessities.

Recommended Products:

#### > Compression Packing Style 98

Applications: Media: Pump packing filled and unfilled asphalt, cat cracker slurry, boiler feed, condensate, crude oil

#### > Compression Packing Style 1333-G

Applications: Media: Pump packing boiler feed, condensate, crude oil, non-abrasive services

#### > Compression Packing Style 5889

Applications: Media: Pump packing strong chemicals

#### > Expansion Joint Styles 204 and 206

Applications: Media: Piping boiler feed, condensate

### Applications - Diesel Generators



Generators often have service conditions that challenge the flange connections to deliver high performance. As a result, Garlock has a portfolio of Expansion Joints and high temperature THERMa-PUR<sup>™</sup> spiral wound gaskets specifically designed to meet those requirements.

Recommended Products:

#### > Expansion Joint Style 206 (ABS, CRN Approved)

Application: Media: Piping offset, vibration boiler feed, condensate, exhaust

#### > 4122 FLEX-SEAL<sup>™</sup> Spiral Wound Gaskets (ABS Approved) (API 6FB Fire Safe approved)

Application: Media:

Filler/Facing Material:

Flanged Joints hydrocarbons, corrosives, steam, boiler feed and condensate, high temperature exhaust 4122 THERMa-PUR™

#### Applications- Pump Jack Stuffing Box



The stuffing box assembly that houses the gland seal prevents the leakage of water, steam or oil and we have a range of cone and stuffing box packings to suit these applications.

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Recommended Products:

#### > DURAGOLD<sup>™</sup> Cone Packing

Application: Media:	Hercules Style Stuffing box gland packing oil, water
> Fluid Seal Cone Packing	

oil, water

pplication: Hercules and Jack Box Style Stuffing box gland packing

Application: Media:

> LubriPak<sup>™</sup> Packing

Application: Media: Cross Twin Stuffing box gland packing oil, water

#### > Blue DURATUFF<sup>®</sup> Cone Packing (Anti-Extrusion)

Application: Media: Hercules Style Stuffing box gland packing steam, oil, water,  $\rm H_2S, \rm CO_2$ 



#### Application - Heat Exchanger



In heat exchanger equipment, flanges and bolts tend to expand and contract. The compressive force is typically increased to counteract the effects. As a result we have a full range of materials reducing the need for over Torquing.

Recommended Products for Thermal Cycling, Severe Chemicals and Damaged Flanges:

#### >FLEX-SEAL® Spiral Wound Gasket

Application: Media: Filler/Facing Material: Tube and Shell Heat Exchanger flanges hydrocarbons 4122 THERMa-PUR™, Graphite

#### > GRAPHONIC<sup>®</sup> Gasket

Application: Media: Filler/Facing Material: Tube and Shell Heat Exchanger flanges hydrocarbons 4122 THERMa-PUR™ , Graphite

#### > Kammprofile Gasket

Application: Media: Filler/Facing Material: Tube and Shell Heat Exchanger flanges hydrocarbons 4122 Therma-Pur™, Graphite

Recommended Products for Severe Chemicals:

#### > GYLON<sup>®</sup> Style 3545 Gasket and Style 3510 (Caustics)

Application:Tube and Shell Heat Exchanger flangesMedia:hydrocarbons, acids, caustics

> G.E.T. and TEPHONIC<sup>®</sup> Gasket Application: Media:

Tube and Shell Heat Exchanger flanges hydrocarbons, acids, caustics

#### > Kammprofile Gasket

Application: Media: Filler/Facing Material: Tube and Shell Heat Exchanger flanges hydrocarbons, acids, caustics Graphite, Gylon<sup>®</sup>, 4122 Therma-Pur<sup>™</sup>

Tube and Shell Heat Exchanger flanges

Tube and Shell Heat Exchanger flanges

hydrocarbons, acids, caustics

hydrocarbons

Recommended Products Damaged Flanges Thermal Cycling:

#### > Style 3128 Graphite Sheet Application:

Media:

#### > GYLON<sup>®</sup> Style 3545 Application:

Media:

> G.E.T. and TEPHONIC<sup>®</sup> Gasket Application: Media:

Tube and Shell Heat Exchanger flanges hydrocarbons, acids, caustics

#### > Kammprofile Gasket

Application: Media: Filler/Facing Material:

#### > GRAPHONIC® Gasket

Application: Media: Filler/Facing Material: Tube and Shell Heat Exchanger flanges hydrocarbons, acids, caustics Graphite, GYLON®, 4122 Therma-Pur™

Tube and Shell Heat Exchanger flanges hydrocarbons 4122 THERMa-PUR™ , Graphite

#### Applications - Sucker Rod Pump Reciprocating plunger pump



Sucker Rods produce a unique set of operating requirements with constantly moving components. Garlock provides engineered solutions for these pump and rod applications.

Recommended Products:

#### > Valve Cups (API, Lip Type, Wood Style)

Application: Media:

Down hole reciprocating plunger pump oil, water

#### > Pressure Actuated ("PA") and Composition Rings

Application: Media:

Down hole reciprocating plunger pump wiper oil, water

#### > Seat Cups

Application: Media:

Down hole reciprocating plunger pump hold down seal oil, water

#### Applications - Pipeline Isolation



With the need for the security of flange connections as the industry transmits all kinds of product across the globe, Garlock has the full range of isolation products for these transmissions. The new ElectroStop® range of isolation fittings complement the PSI® / Pikotek® isolation joints and provide the most comprehensive and secure portfolio available to the market.

#### Recommended Products:

#### > ElectroStop®

Application: Media:	Electrical isolation hydrocarbons, corrosives, steam, boiler feed and condensate
> VCXT™	
Application: Media:	Critical service extreme temperature electrical isolation hydrocarbons, corrosives, steam, boiler feed and condensate
> VCS	
Application: Media:	Electrical Isolation and High Integrity Sealing hydrocarbons, gas and corrosives
> VCFS	
Application: Media:	Fire Safe Electrical Isolation and High Integrity Sealing hydrocarbons, gas and corrosives





With the wide range of valves available today, Garlock has a high integrity portfolio of gland and valve packings including the renowned EVSP packings and the Low Emission 1300 packings.

Recommended Products:

#### > FLEX-SEAL®, GRAPHONIC®, Kammprofile Gaskets

Application: Media: Ball, gate, globe, slide valves, body to bonnet seal hydrocarbons, hydrogen, solvents, saturated steam

#### > Compression Packing Style 9000 EVSP - Low Emission Engineered Set

Application: Media: Valve stem packing hydrocarbons, hydrogen, solvents, saturated steam

#### > Compression Packing Style 1303-FEP Low Emission Packing

Application: Media: Valve stem packing hydrogen, solvents, saturated steam

#### > Compression Packing Style 5888

Application: Media: Valve stem packing strong chemicals

#### Applications - Frac Manifold/Wellhead/Christmas Tree/Frac Stack/Frac Tree/API 6A Gate Valves

Where the frac manifold has a varied arrangement of fittings and valves on both the up and downstream of each tree, the Garlock range of packings and gaskets are designed to provide the highest levels of seal integrity.

#### Recommended Products:

#### > VCS

Application:Well head flanges, Critical service electrical isolationMedia:hydrocarbons, corrosives, steam, boiler feed and condensate

#### > Ring-Type Joint Gaskets

Application:API 6A Gate Valve flanges, frac manifolds, wellhead flangesMedia:hydrocarbons, hydrogen, solvents, saturated steam,<br/>frac fluids

#### > Compression Packing Style 1303-FEP (Spool/Die-Formed)

 Application:
 Valve stem packing

 Media:
 hydrocarbons, hydrogen, solvents, saturated steam, frac fluids

#### > Compression Packing Style 9000-EVSP (Engineered Set)

Application: Media: Valve stem packing hydrocarbons, hydrogen, solvents, saturated steam, frac fluids





Many of these applications involve connections where the pipe is penetrating a wall, floor or ceiling and sealability is required between the pipe and the penetrated surface. Through wall applications are an area where a mechanical seal needs to be utilized in order to reach complete sealability.

Recommended Products:

#### > LINK-SEAL® Modular Seal

Application: Media: Through wall penetration hydrocarbons, corrosives, steam, boiler feed and condensate

#### > End Seals, Wall sleeves and Compact Seals

Application: Media: Through wall penetration hydrocarbons, corrosives, steam, boiler feed and condensate

Technical Support on www.garlock.com

If you need further technical support, please feel free to reference resources on our website at www.garlock.com.





#### Applications - Single Buoy Mooring (SBM) or Single-Point Mooring (SPM)



In order to make the transition of the loading or offloading of gas or liquid as safe and efficient as possible, Garlock's expansion joints and KLOZURE® oil seals help keep the fluids running smoothly. Garlock has a suite of products to withstand harsh corrosive environments.

Recommended Products:

#### > Expansion Joint Style 204 EPS (ABS Certified)

Application: Media: Offshore Buoy applications, rugged conditions hydrocarbons

#### > KLOZURE<sup>®</sup> Oil Seal Model 23

Application: Media: Offshore Buoy applications, rugged conditions hydrocarbons

#### Applications - Low Load Fluid Sealing Piping and Flanged Connections



Where the industry has applications that involve connections that do not allow high bolt loading, Garlock produces an array of products that will seal under low load.

#### Recommended Products:

#### > EDGE<sup>®</sup> Spiral Wound Gasket

Application:	Flanged Joints
Media:	hydrocarbons, corrosives, steam, boiler feed and condensate
> Kammprofile Gasket	
Application:	Flanged Joints
Media:	hydrocarbons, corrosives, steam, boiler feed and condensate
> GRAPHONIC®	
Application:	Flanged Joints
Media:	hydrocarbons, corrosives, steam, boiler feed and condensate
> Graphite Sheet Styles 3128, 3125SS, 3125-TC Gaskets	

Application:Flanged JointsMedia:hydrocarbons, corrosives, steam, boiler feed and condensate

### Metallic Gaskets



#### Style 4122-KAMM Gasket The THERMa-PUR<sup>™</sup> Kammprofile gasket carries the same properties as the THERMa-PUR<sup>™</sup> gasket family, however can match the flange rating

however can match the flange rating for pressure and PxT. An extreme gasket for extreme applications.



#### **Jacketed Gasket**

Garlock manufactures the complete range of jacketed exchanger and manhole seals. Custom configurations are available in a wide range of materials and styles to provide solutions for almost any application.



#### FLEXSEAL® Spiral Wound Gasket

Garlocks FLEXSEAL® spiral wound gaskets with Controlled Density™ technology provide consistent compressibility. This process of precise winding density control provides a gasket designed to meet your specified seating stress and assures consistent sealing of your most critical fluids.

#### G.E.T. Gasket

GET<sup>™</sup> (Graphite Expanded Polytetrafluoroethylene) gaskets are field rugged and extremely versatile. They provide reliable fail-safe operation under relatively low bolt load (e.g.,150# pipe flanges) thereby avoiding potential damage to human health plant equipment and the surrounding environment.

#### TANDEM<sup>™</sup> Spiral Wound Gasket

The TANDEM Spiral Wound Gasket is chemically-resistant and fire-safe. It has a PTFE envelope that withstands aggressive chemicals and corrosive media and the spiral wound seals to the ID of the pipe bore.

#### **GRAPHONIC®** Gasket

Corrugated metal core encapsulated by soft sealing elements. Excellent for high temperatures and corrosive chemicals. Works well in less-than-perfect flanges and thermocycling applications.

#### TEPHONIC® Gasket

The TEPHONIC Gasket is chemically inert, forms a tight seal under low bolt load, and conforms to minor sealing surface imperfections. The TEPHONIC also withstands temperatures up to 500°F (260°C).







#### Style 98

Manufactured from high purity (95+ carbon assay) premium carbon staple yarn. Individual yarns are single-end coated and single-end dried prior to braiding with high temperature non-petroleum based lubricant with graphite dispersion. Ideal for pumps or valves.



#### Style 1333-G

Garlock Style 1333-G is braided from graphite fiber reinforced flexible graphite yarns and high purity graphite filament yarns that appear on the corners as well as throughout the body of the packing. The graphite reinforcement of the flexible graphite yarns provide greater tensile strength. The placement of the graphite filament yarns add abrasion resistance for rotary services and antiextrusion resistance for valve applications. No additional end ring material is required for valve installations.



#### Style 1303-FEP

Style 1303-FEP is manufactured from a proprietary yarn consisting of several strands of high purity GRAPH-LOCK<sup>®</sup> contained by an INCONEL filament jacket. This INCONEL wire filament is only 0.004" diameter, making the finished braid non-scoring and thermally conductive. Is in compliance with the most stringent VOC and VHAP emissions regulations.



#### Style 9000 EVSP Simplified

The 9000 EVSP Simplified set combines two superior Garlock products - Style 98 carbon packing and cup and cone GRAPH-LOCK® die-formed rings. The nearly chemically inert set expands radially when the glad is tightened for a positive valve stem OD seal as well as stuffing box ID seal. The 9000 EVSP set is extremely useful in hydrocarbon industry processing, or any valve application where elimination of encrustation, chemical attack, or health hazard is required.



#### Style 5888 PTFE Packing

This dimensionally stable, firm, high-density PTFE continuous filament fiber packing is similar to Style 5889, but most useful in slower shaft speed applications. Its PTFE dispersion provides a low friction finish and prevents leakage through the braid. Style 5888 is resistant to all chemicals but molten uranium salts. Asbestos-free, with very little water absorption, this packing is often used in check and needle valve stems, reciprocating rods, rams, and plungers, and safety injection system valves.

#### Style 5889 PTFE Packing

A continuous filament PTFE fiber. Style 5889 is a dimensionally stable yet relatively soft and flexible packing. Treated with PTFE dispersion and an inert ingredient, it's an excellent choice for high speed rotary shaft service in most volatile applications. Pre-shrunk to avoid packing wear and shaft scoring, Style 5889 is also very non-porous. It's often found in sump pumps, chlorinators, alkaline softeners, strong acid situations, coke plant hot oil pumps, reciprocating rods, rams and plungers.





Style 204 spool-type expansion joints can be constructed as single- or multiple-arch types. They connect pipe flanges in concentric or eccentric tapers, to join piping of unequal diameters. The Style 204 is fully laboratory and field-tested for long life and exceptional reliability. High pressure and vacuum resistance increases safety and ensures suitability for wide range of applications.



#### Style 204 EPS (Extreme Pressure Service) is a fully customizable abrupt arched expansion joint for rigid piping systems. This rubber expansion joint is to be used in applications where necessary rated pressures exceed those of the Garlock Style 204 designs. Style 204EPS is available in concentric or eccentric designs.



EZ-FLO® expansion joints contain a single wide flowing arch, eliminating the need for filled arches on slurry services. Garlock EZ-FLO® expansion joints have successfully served all major industries, including pulp and paper, steel, waste and water, HVAC, power generation, chemical, petrochemical and marine.

Please note: In Europe our expansion joints are suitable for applications with pressures below 0,5 bar.



#### Model 23

Model 23 is your repair-in-place sealing solution for your primary metals application. It is a split seal that allows for easy installation, and results in a short MTTR. Because of the molded-in finger spring, spring dumping is prevented. Material selection includes MILL-RIGHT® N, ES and V as well as silicone and shaft diameters of 3" (76.2mm) and up.



#### Pony Rod Seal

Garlock's pony rod seal was specifically designed for the harsh conditions experienced by well service plunger pumps in hydraulic fracturing, cementing, acidizing, and mud pumping applications. The dual functional seal excludes contamination with a heavy duty urethane excluder, keeping contamination out of the pumps drive crank case, while retaining lubrication with an engineered elastomer sealing lip, extending power end component life.



#### Blue DURATUFF<sup>®</sup> Cone Packing

Blue DURATUFF cone packing fits into all stuffing box designs that use traditional cone packing. Top and bottom Blue DURATUFF components are used in conjunction with LUBRIKUP® DURATUFF® components to extend packing life for upright or inverted set designs. Sets can be designed to optimize performance based upon stuffing box design, service conditions, and user requirement.





## DURAGOLD™ Cone Packing

Packing that is formulated for excellent resistance to petroleum oils and gasoline. DURAGOLD<sup>™</sup> uses the same compound as our Regular formulation, with the addition of brass flakes designed to eliminate foreign material build up on the polish rod. DURAGOLD<sup>™</sup> has excellent heat resistance and flexibility in low temperatures.



#### Fluid Seal Cone Packing

Fluid-Seal<sup>™</sup> rod packing incorporates the proven theory of lip-type action (sealing from pressure), with space provided between each ring to assure a perfect, non-binding fluid seal for lubrication of the rod. This packing requires no tightening. It performs best when run loose (finger-tight). Normal operating pressure expands the lips to compensate for wear until the packing is completely worn out.



#### LubriPak<sup>™</sup> Rod Packing LUBRIPAK<sup>™</sup> rubbers

(2 sets per package) are made in all polished rod sizes for Type B and X stuffing boxes. Special rubber compounds of proper durometer assure excellent service under all operating conditions.



#### Seat Cups

LUBRIKUP™ Type HR Seating Cups are manufactured to comply with API Standard 11AX. Molded in proper density, the cups assure precision fit in a seat formed in accordance with API standards. Type HR Seating Cups are available in Regular Composition, High Tempreature, and Nylon-Plastic.



#### Blue DURATUFF<sup>®</sup> Well Service Packing

Blue DURATUFF® was designed to provide maximum sealability for high pressure well service pumps. The proprietary material was developed to eliminate extrusion and provide excellent abrasion resistance for fracturing, acidizing and cementing pumps.

#### Valve Cups

LUBRIKUP™ Valve Cups are available in API design, Lip-Type and our original Wood-Type design in hard, medium and soft densities. Product compositions are duck and rubber, and our premium reinforced material is specially formulated for LUBRIKUP™, along with our Lo-Friction material.

#### Style 8950 Pressure

Actuated Ring The LUBRIKUP® "PA" ring is designed to give superior service in the time-tested pressure-actuated plungers used extensively in the oil industry. Field tests have shown excellent ring life and high pump efficiency.

#### Type "B" and Resistoil

Composition Rings LUBRIKUP® Type "B" flange and split composition rings are made from a blend of duck and rubber specially compounded for oil well pumping. Each ring is precision ground to assure uniformity of bearing contact in precision barrel tube or working barrel.

#### Gasket Products



#### **GRAPH-LOCK® 3125**

Pure exfoliated graphite material handles extreme temperatures, resists nearly all non-oxidizing chemicals, and offers excellent compressibility and low creep relaxation. Available in homogeneous material, or with metallic or non-metallic inserts.



#### **GRAPH-LOCK® Style 3128 HOCKDRUCK®** High performance multi-layer

graphite with 316SS inserts provides high compressive strength, blow-out resistance, excellent handling properties and improved tightness.



#### **Ring Type Joint Gaskets**

High temperature and pressure applications require a high integrity seal and ring type joints meet that need. Manufactured in accordance to the API 6A standard and designed to seal up to 5000 psi. Also for use on high integrity vessel joints, drilling and completion equipment.



#### GYLON® Style 3510 Gasket

GYLON Style 3510 offers chemical resistance within a wide range of chemicals for a wide variety of applications. Best suited for media of strong caustics, moderate acids, chlorine, gases, water, steam, hydrocarbons, cryogenics and aluminum fluoride. Style 3510 also offers improved performance over conventional PTFE and cuts operational costs through reduced fluid loss, energy consumption, maintenance and inventory cost.



#### GYLON® Style 3545 Gasket

Our innovative Style 3545 offers a tighter seal by highly compressible PTFE outer layers sealing under low bolt load which is suitable for many non-metallic flanges. The pure PTFE makeup withstands a wide range of chemicals and can easily be cut from larger sheets, reducing inventory costs and downtime.



#### MULTI-SWELL® Style 3760 Gasket

Creating compressive load in light weight flanges in oil and water services, this gasket will seal where most others will not. MULTI-SWELL® performs well in flanges that might crush an elastomer gasket and is easy to cut and handle.





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.

The VCS withstands severe service

conditions including temperature and

of CO<sub>2</sub> and H<sub>2</sub>S, produced water and

aggressive inhibitors.

pressure fluctuations as well as corrosive

environments, including high concentrations

VCS Gasket

The VCFS provides complete flange

electrical isolation with tandem seal

technology. PTFE sealing system has

20+ years successful track record. The

VCFS offers e-ring sealing systems and

is dual purpose fire safe and backup. It

has passed API 6FB, 3rd Edition Fire Test.

Best if used in conjunction with cathodic

protection systems. The VCFS mitigates

potential flange rotation and provides

a tighter seal under low bolt loads.

**VCFS Gasket** 



#### VCXT<sup>™</sup> Flange Insulating Set

The Pikotek<sup>®</sup> VCXT<sup>™</sup> flange insulating set is comprised of an insulating gasket, insulating sleeves, insulating washers and metal backing washers. The insulating gasket is constructed from a machined metal core utilizing a unique serration profile. The metal core is faced with a high performance sealing material incorporating proprietary vermiculite based sealing technology. Correct gasket location is ensured by the inclusion of a high performance spacer ring, located around the periphery of the serrated metal core.



#### LINK-SEAL<sup>®</sup> Modular Seal

From ductile iron to pre-stressed concrete to metal or plastic pipe, conduit or cables - whatever your application - LINK-SEAL<sup>®</sup> modular seals will effect a hydrostatic seal capable of holding 20 psig (40 feet of static head) between the pipe and the penetration cylinder through which the pipe passes.



#### ElectroStop® Monolithic Isolation Joints

The ElectroStop® monolithic isolation fittings will serve as a positive leak proof, long lasting block against the flow of electric current in all piping systems. When the ElectroStop® isolation fitting is buried, you bury Maintenance costs forever - an especially important feature for system operators and engineers. The ElectroStop® eliminates short circuits and provides a welded in line isolation joint that proves maintenance free particularly in below ground pipe systems.



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