



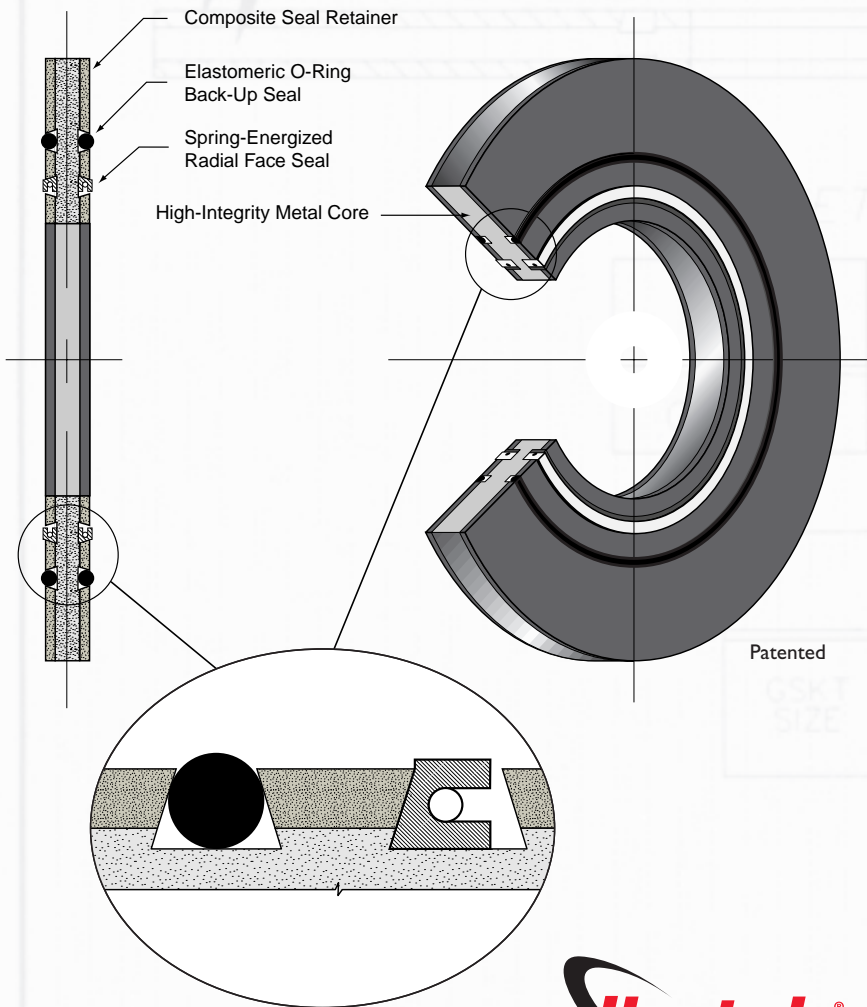
Flowlok® / Firelok® Gaskets & Seals

**High-Integrity Flange Gaskets & Seals for
Increased Pressure & Critical Service Applications**



Pikotek is the recognized industry leader in corrosion-resistant/critical service flange sealing for bolted end-connections. For over 20 years, the **Pikotek** VCS flange gasket with pressure-energized seals has become recognized for long term critical service flange sealing by virtue of its ability to mitigate the forces of corrosion, high internal and external loads and installation problems commonly encountered in high-pressure/high-temperature fluid/gas sealing applications.

Now **Pikotek** introduces a revolutionary new product that substantially reduces residual flange/bolt stresses and improves overall sealing performance under even the most extreme operating conditions. Flowlok gaskets will seal at higher system pressures than conventional flange gaskets by reducing gasket seating stress (ASME m and y factors), gasket seal diameter (ASME G dimension) and the flange moment arm whereby flange stress is substantially reduced while complying with all applicable piping codes. This allows for the use of smaller, lighter and less costly flanges by enabling system pressure to exceed standard pressure ratings while remaining within code. And the Flowlok system can be integrated into any manufactured (OEM) in-line component such as wellheads, valves, manifold systems, pumps, pressure vessels, compressor skids, etc. This practice is fully compliant with ASME boiler and pressure vessel codes as well as B31 piping codes, even when using standard B16.5 flanges.



PRIMARY FEATURES AND BENEFITS INCLUDE:

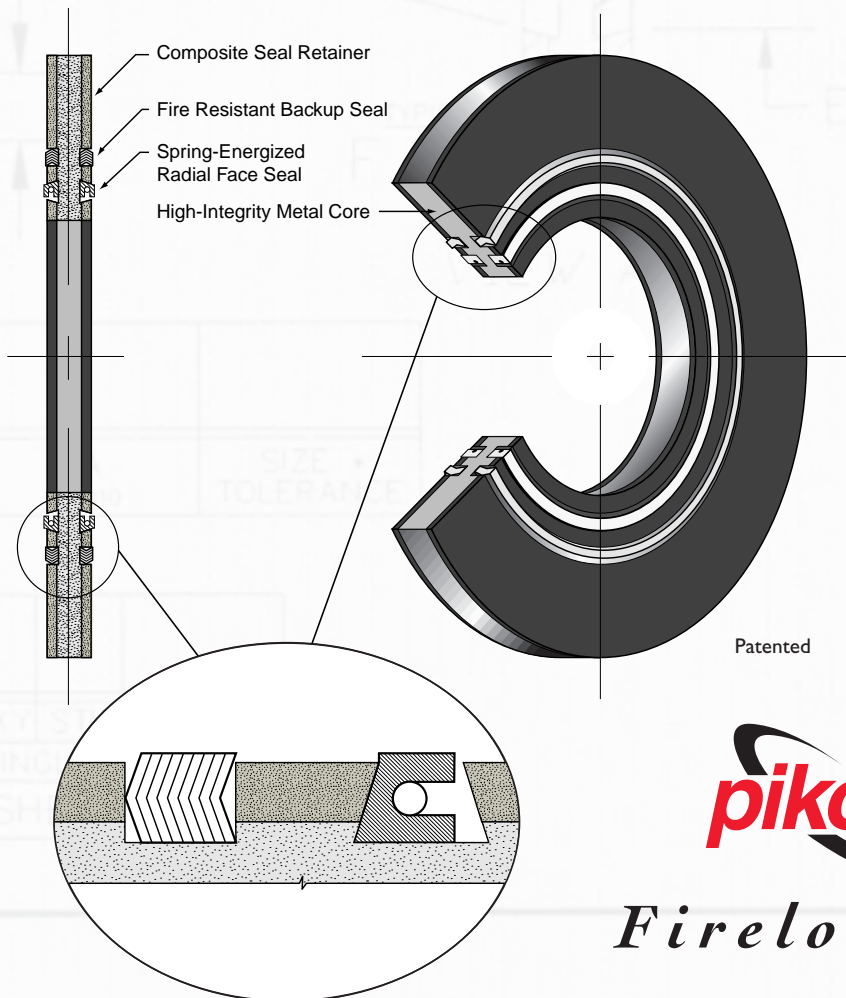
- HIGH INTEGRITY/MAINTENANCE-FREE/PRESSURE-ENERGIZED SEALING
- MITIGATES GALVANIC CORROSION IN DISSIMILAR METAL FLANGE JOINTS
- PROTECTS FLANGES FROM MEDIA-INDUCED CORROSION AND FLOW-INDUCED EROSION
- DECREASES FLANGE/BOLT MAKEUP STRESSES
- INCREASES FLANGE PRESSURE SEALING CAPABILITIES
- INCREASES FLANGE/BOLT EXTERNAL (BENDING AND TENSION) LOAD BEARING CAPABILITIES
- INCREASES FLANGE SUPPORT WITH A LARGER LOAD BEARING SURFACE AREA
- EASY INSTALLATION AND REMOVAL
- INCREASES RESISTANCE TO SEAL RELAXATION CAUSED BY THERMAL/PRESSURE CYCLING
- REUSABLE SEAL RETAINER AND SEALS
- 2000 °F FIRE SAFE DESIGN (API 6FB FIRE TEST)



Flowlok® VCS

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The Flowlok/Firelok is comprised of PTFE-based spring-energized jacketed radial face seals seated in a high-modulus composite seal retainer which is permanently bonded to a high-integrity metal core. The Flowlok's primary sealing mechanism is the combination of the fully-encapsulated, pressure-energized sealing elements compressed into the rigid seal retainer. Once compressed and encapsulated in the seal retainer which "coins" into the opposing flange faces, thus holding the retainer in place with a high frictional contact interface, these seals possess the ability to operate under even the most extreme chemical and mechanical forces (highly corrosive fluids/gases, internal system pressures, temperatures, external bending and tension loads). Also included is an elastomeric o-ring backup seal in the larger diameter gaskets (6" ID and above) for added reliability when used with imperfect flange faces. Because of the high modulus of elasticity of the composite seal retainer, the gasket possesses good recovery/memory characteristics which enables it to withstand long term pressure and/or thermal cycling conditions. The Firelok is based on the same encapsulated, pressure-energized seal design with the addition of graphitic metal-to-metal backup seals (passes API 6FB 2000° F hydrocarbon fire test) in place of the elastomeric o-ring seals.



Firelok® VCS

Flowlok/Firelok gaskets and seals are designed for use in all standard ANSI/ASME and API flange types (raised-face or RTJ) and pressure classes and meet all ASME Boiler and Pressure Vessel (BPV) code allowable flange/bolt stresses and B31 piping code requirements as well as API specification 6A dimensional and Appendix F

test requirements. Because of the Flowlok's engineered sealing design and superior mechanical characteristics, the gasket/seals can be used to seal in higher pressure piping systems using lower pressure class flanges with no flange modifications or deviations from the above referenced piping codes and specifications.



Flowlok® / Firelok® Advantages and Benefits

- Increases the rated working pressure of all standard ANSI and API flanges
- Reduces the cost and weight of piping systems by allowing reductions in flange classes
- No flange modifications required (RF or RTJ flanges)
- Maintenance-free/corrosion-resistant seal design
- Superior gas tight pressure-energized sealing
 - zero leakage
- Easy installation and make-up
 - low required bolt loads
 - self-aligning
- Protects flanges from corrosion and flow-induced erosion
- Also available with fire safe backup seals (API 6FB)
- Developed from the proven **Pikotek** sealing technology
- Lloyds reviewed and approved



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