



Gulf Coast Seal

High Performance S-Seals

Overview

High Performance S-Seals (Spring Seals) are designed for extreme applications in the oil tool industry for down-hole, sub-sea, and wellhead equipment where exposure to well bore fluids at elevated pressures and temperatures demands a robust sealing solution. Their unique design incorporates two non-extrusion devices and a sealing element in a single-piece construction, offering bi-directional sealing while incorporating a simple symmetric profile. The non-extrusion devices, utilizing an endless coiled spring on both sides of the sealing element, allow large extrusion gaps to be bridged at high pressures. The non-extrusion devices when made of metal springs limit the seal to static applications. They are available in stainless steel as well as Inconel X750, meeting NACE MR-01-75 specifications. The non-extrusion devices are also available in virgin PEEK, which expands the use of this profile to include dynamic applications. Examples of successful tests include 22,500 psi at 350°F in static condition, and in a dynamic condition with a 0.028" gap at 21,000 psi at 300°F, and in a dynamic condition with a 0.040" gap at 24,000 psi at ambient temperature.

Materials

High Performance S-Seals are available in a wide array of rubber compounds including HNBR, FKM, FFKM, Aflas® and geothermal EPDM to meet the most demanding applications.

Advantages

High Performance S-Seals offer unique features and benefits over traditional seal arrangements. They are designed to be used in standard O-Ring grooves, allowing the upgrade of existing equipment.

- Anti-extrusion springs allow much broader clearances between mating parts.
- PEEK anti-extrusion springs allow use of the profile in dynamic applications.
- Single piece construction replaces traditional three piece assemblies, saving time and money.



More Information

For more information regarding our High Performance S-Seals, please contact your local Gulf Coast Seal salesman, our Houston, TX operation center or email us at seals@gulfcoastseal.com.