



MSE® SEALS

Mechanical Spring Energized Seals

HIGH-TEMPERATURE MATERIAL

The MSE® Seal consists of precision machined Avalon® PTFE, filled PTFE or other polymeric components energized by a corrosion-resistant metal spring or an elastomeric O-ring.

When the seal is seated in a gland, the spring is under compression, applying force on the gland sealing surfaces, thereby creating a tight barrier to prevent gas or fluids from leaking. While spring force provides adequate force for sealing at low pressure, at high pressure the system pressure augments the spring force to provide an even tighter seal. The spring also delivers resiliency to compensate for seal wear, gland misalignment or eccentricity.

Greene, Tweed offers over 100 seal materials, a variety of standard spring materials and three standard spring designs to develop the best seal for each dynamic or static application.

FEATURES & BENEFITS

- Chemically inert for virtually unlimited chemical compatibility
- Low friction
 - Smooth and consistent breakout and running friction
 - Low power absorption and torque requirements
- Standard application temperature ranges from -65°F to 600°F (-54°C to 315°C) (other temperature ranges are possible with customized engineered solutions)
- Standard application pressures from 0 to 5000 psi (other pressure ranges are possible with customized engineered solutions)
- Used in dynamic and static seal applications

APPLICATIONS

- HPLC—Pump piston seals and injection valve seals

Contact Us

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MSE CONFIGURATIONS

Standard Spring Configurations—made from 301 SS, 316 SS, 17-7 PH and Elgiloy

- Finger Spring Energized—Features a balance of good sealability, long life and low friction; primarily used for dynamic applications
- Coil Spring Energized—Features higher spring force than finger spring; primarily used for static applications

Additional Spring Configurations

- O-ring Energized—Alternative energizer to coil spring when size permits lower sealing force; primarily used for dynamic applications
- Double Coil Spring Energized—Features very high spring force; used for static applications

Jacket Material Options

MSE seals are available in a variety of Avalon® PTFE, filled PTFE, UHMWPE or other polymeric materials and designed for virtually unlimited chemical compatibility, low friction/wear and a wide range of temperatures and pressures. Consult your local Greene, Tweed engineering representative to help choose the right design for your application.

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.

Prior to actual use it is recommended compatibility tests be run to determine suitability in a specific application. This is critical where failure could result in injury or damage. A regular program of inspection and replacement should be implemented. Greene, Tweed technical personnel are available to help with a recommendation.