



Variseal® NW

FLANGE SEAL WITH EXCEPTIONAL CHEMICAL RESISTANCE



Variseal® NW

Turcon® Variseal® NW is a flange seal that provides exceptional chemical resistance. In this unique design, a Turcon® PTFE based case encompasses its energizing spring in such a way that there can be no possible contact between the spring or spring cavity and system media.

Manufactured in our MF grade materials, specially developed for hygienic environments, the seals are compliant to all major approvals. The compounds combine superior wear resistance with compatibility to virtually all chemicals. They can withstand extremely aggressive media in the most extreme of operating temperatures across all processing sectors, including the CIP&SIP regimes faced in production of consumable products. Specifically to semiconductor manufacturing, the seal is proven in fluorine gas at high temperatures and is capable of operating in a vacuum.

In dynamic flange sealing applications, the unrivalled friction characteristics of Turcon® MF gives the benefit of stick-slip free starting, even after extended periods of rest. There is also no potential of sticking or welding of material to counter surfaces, a possibility with elastomer sealing elements. This cuts down the need for hardware cleaning and maximizes seal life.

Features

- Operates in extreme temperatures from -253 °C/ -423 °F to +260°C/+500°F
- Vacuum capability in air to 10⁻⁹mbar/l/s²
- Excellent wear and friction characteristics
- Stick-slip free starting, even after extended periods of rest
- Alleviates potential sticking or welding of material to counter surfaces, a possibility with elastomer sealing elements
- Compatible with virtually all media and gases including fluorine gas at high temperature
- Low outgassing
- Unrivalled seal performance
- Materials available compliant to FDA 21 CFR 177.1550, 3-A, USP Class VI, Cytotoxicity <USP 87>, NSF, and the EU Machinery Directive
- Suitable for internal and external differential flange sealing
- Option of both internal or external support rings in stainless steel, aluminum or polymer to facilitate flange fitment
- Available in custom sizes or standard dimensions
- Easy retrofit for current NW elastomer seals

Materials

Variseal® NW jacket is available in the premium grade Turcon® MF materials from Trelleborg Sealing Solutions. These high purity PTFE based compounds have been specially engineered for hygienic applications. They combine superior sealing capabilities and material purity, with minimal impurities that could potentially contaminate processing systems. Spring can be supplied in stainless steel, Elgiloy or Hastelloy.

Test results

Turcon® Variseal® NW has been successfully proven in tests. The seal was exposed to 20% Fluorine gas for a period of two weeks. At +140°C /+284°F weight loss was only 0.004% and at +250°C/+482°F it was 0.01%.

Industries

- Food, beverage and pharmaceutical manufacturing processes
- Chemical processing
- Semiconductor fabrication

Trelleborg Sealing Solutions service

- Quality levels to ISO 9001:2000 including 100% inspection and zero defect philosophy
- Wash and pack to class100 standards
- Leading-edge in-house polymer development and test capabilities
- Extensive design facilities, including material specific non-linear Finite Element Analysis (FEA)
- Comprehensive technical support and after-sales service through the global Trelleborg Sealing Solutions network

