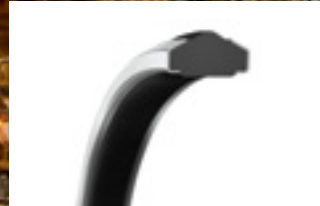
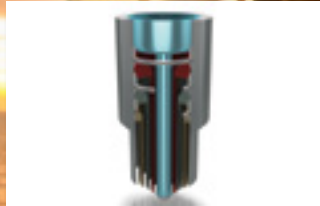


Metal End Cap Seals

CUSTOM ENGINEERED ELASTOMER-TO-METAL WELLHEAD SEALING SOLUTIONS



Combining the pressure and extrusion resistance of a metal-to-metal bonded component with the flexibility and sealing integrity of an elastomer for demanding Oil & Gas wellhead sealing.

Metal End Cap Seals from Trelleborg Sealing Solutions are custom engineered elastomer-to-metal seals that combine the benefits of a metal-to-metal component with the flexibility of an elastomer seal for maximum extrusion resistance in high pressure wellhead sealing environments.

These high performance elastomer-to-metal bonded sealing elements provide the high level of extrusion resistance necessary for high pressure casing and tubing applications. Combining the range of proprietary XploR™ Rapid Gas Decompression (RGD) and sour gas resistant elastomers with corrosion resistant metal end caps, Trelleborg Sealing Solutions engineers can design a customized sealing solution to meet specific oil field requirements.

Sealing is achieved by controlled deformation of the elastomer element which can compensate for sub-optimal surface finishes inside tubes and casings. Optimal stress distribution throughout the elastomer body is modelled through Finite Element Analysis (FEA) to ensure high performance sealing coupled with long seal life. Extrusion resistance is provided by the specially designed end caps that provide positive interference with the bore upon assembly and that deform into any potential extrusion gap under pressure.

Features and Benefits

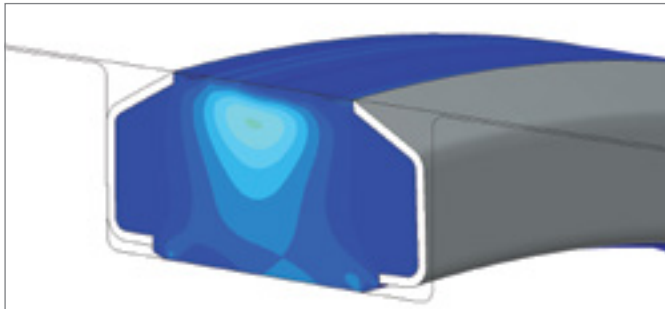
- Withstands pressures up to 100 MPa / 15,000 psi
- Temperature resistance up to +177°C / +350°F
- Chemically-bonded metal end caps provide a high level of extrusion resistance and metal-to-metal sealing
- Elastomer sealing element provides leak tightness against sub-optimal tubing surface finishes
- Custom engineered to fit existing tube sizes
- Materials certified to NORSOK, API and Total standards for demanding downhole environments

Applications

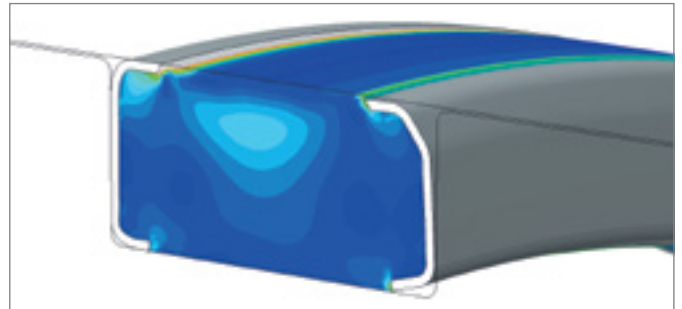
- High pressure wellhead sealing environments, such as casing strings and tubing hangers.

METAL END CAP SEALS

Finite Element Analysis (FEA)



Metal End Cap Seal installed in hardware



Metal End Cap Seal operating at 150°C / 300°F under 100 MPa / 15,000 psi

Technical Data

Temperature Range	-29 °C to +177 °C -20 °F to +350 °F
Pressure Resistance	100 MPa 15,000 psi
Sizes Available	Custom engineered to suit application required
Application	For static use in high pressure wellhead sealing environments, such as casing strings and tubing hangers

Note: Temperature range is reduced for high pressure and excessive e-gap. Pressure capability reduces as temperature increases. Excessive e-gaps also limit pressure resistance.

