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)

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.