



The SPECTRUM ESP protector is located between the motor and pump intake and serves four primary functions:

- Isolates and protects the motor from well bore fluids
- Equalizes internal motor pressure with annulus
- Absorbs axial shaft thrust
- Allows for the expansion and contraction of motor oil due to thermal cycle

The protectors, or seals, are modular in design and their selection criteria includes: well geometry, well fluid characteristics, operating temperature rise and thrust handling requirements.

The SPECTRUM ESP Protector contains multiple redundant separation chambers of both labyrinth and bag design.

Labyrinth chamber seals are the seal of choice in the majority of applications, however, in deviated wells and applications with very light oil, a positive barrier bag chamber is required. Bags can be in series or parallel configuration; bags in series offer more protection due to redundancy but parallel bags offer more expansion capacity for high temperature applications.

High load bearings and high strength shafts are employed for high horsepower/head applications and allow deeper wells to be lifted. A selection of elastomers to meet all downhole conditions is also available.

Resistance to exterior corrosion is provided by Monel flame spray coatings or a ferritic steel construction.

APPLICATIONS

- Water wells
- Oil wells
- Offshore/remote ESP installations

BENEFITS

- Isolates and protects the motor from well bore fluids
- Equalizes internal motor pressure with annulus
- Absorbs axial shaft thrust
- Allows for the expansion and contraction of motor oil due to thermal cycle
- Longer run life due to radial stabilization

FEATURES

- Corrosion resistant K-Monel shafts
- High load downthrust bearing
- Radially stabilized versions available
- Minimum of 2 shaft seals above bearing
- Aflas elastomer bags as standard