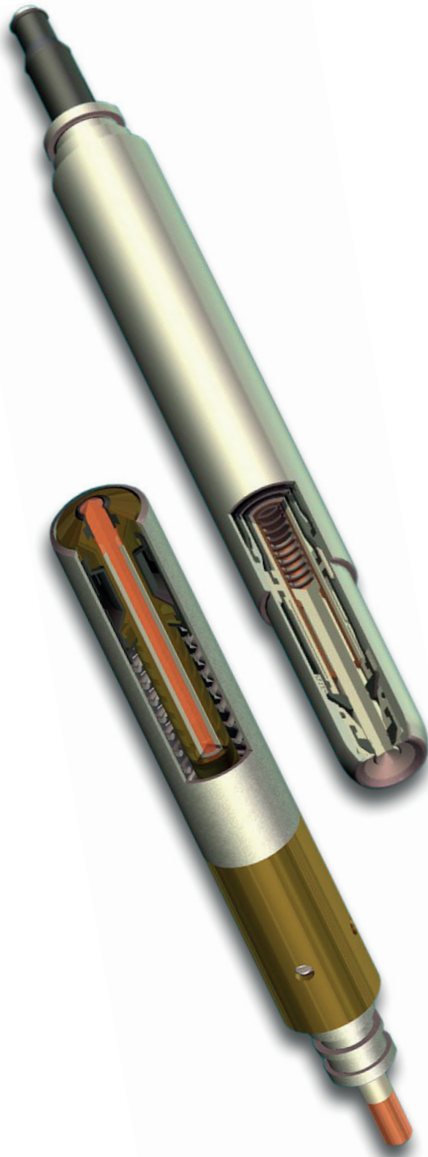


WellConnect™ Downhole Vertical Electrical Connector

The ESP connector system consists of three single phase wet-mate power connectors spaced around the production bore. The female connector halves are in (upper) retrievable component, while the male connector halves will be fixed within the (lower). The connector system will provide a long term reliable connection in a downhole environment, the lower half of the connection pair will remain permanently installed.



Design Philosophy

Main dielectric filled body: Pressure balanced
 Sealing: Dual electrical and mechanical barriers
 Electrical insulation Primary: Thermoplastic or Elastomer

Cable

Various Round and Flat ESP Cable

Operational Requirements

Design Life: Permanently Installed Connector 10 years
 Rated Pressure: 5,000 Psi
 Test Pressure: 7,500 Psi
 Design Pressure: 9,000 Psi
 Working Temperature Range: 0°C to 150°C (300°F)
 Storage Temperature Range: -22°F to 104°F
 Number of Cycles: 100

Mechanical Requirements

Diameter: 1.250"
 Length: <12.000"
 Stack up Tolerance: ± 0.25"

Electrical Specification

Rated Voltage: 2.02 / 3.5 kVAC (U0/U)
 Breakdown Voltage > 8U0 (16.1 kV)
 Ampacity: 80 A - 100 A
 Frequency Range: 30 - 85 HZ

Key Performance Features

Unique Dielectric Oil Treatment System
 Protective Contact on Male/Female Halves
 HPHT Application Materials
 Energised Seals
 Metal to Metal Sealing
 Gold-plated Contacts
 Crimp Technology

Material Specification

Housing: Stainless Steel, Inconel 625 and Superduplex to ISO15156
 Contacts: Gold Plated Beryllium Copper
 Insulation: PEEK 450G
 Non Metallic Material Specification: Norsok M710
 H2S Levels Norsok M710 compliant
 CO2 Levels Norsok M710 compliant

Qualification Testing

Standard Electrical Integrity Tests
 Dry Mated Test
 Mains Water Mate / Demate Cycle Test
 Seawater Mate / Demate Cycle Test
 Turbid Tank Test
 Helium Leak Test
 Cold Water Mate / Demate Cycle Test
 Simulated Environment Mate / Demate Cycle Test
 Simulated Environment Material Compatibility Test
 Rapid Mate / Demate Cycle Test

