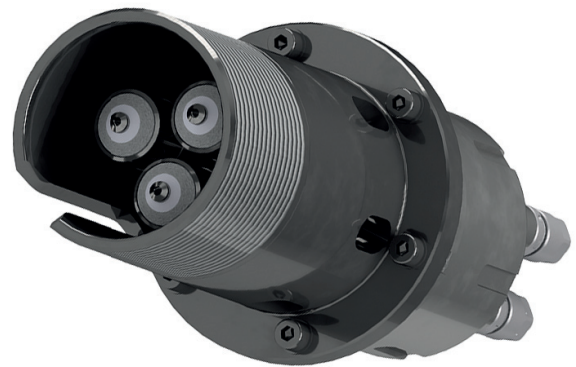


WellPower™

Diver-Mate Single Mandrel

The 3-Phase Diver-Mate Connector System is used in Subsea Tree, TH, THRT & Downhole environments and consists of two connectors, a Male Plug Connector as the termination of the EFL and a Female Receptacle Connector for connection to the Tree. The connectors provide a 3 phase wet-mateable connection held together by diver installed locknut connection. Each connector contains three WellPower Split-Phase Connectors providing a reliable long-term electrical connection which can be mated and de-mated as required. The EFL is protected within an oil-filled pressure compensated hose.



Operational Requirements

Design Life:	25 years
Rated Pressure:	5,000 Psi (3,500m)
Connector Test Pressure:	7,500 Psi
Connector Design Pressure:	9,000 Psi
Working Temperature Range:	-18°C to 93°C (0°F to 200°F)
Storage Temperature Range:	-30°C to 40°C (-22°F to 104°F)
Number of Cycles:	100

Mechanical Requirements

Diver-Mate Plug

Diameter:	122mm (Lock Nut)
Length:	610mm (Connector Body)
Hose Length:	To suit application

Diver-Mate Receptacle

Diameter:	145mm (Mounting Flange)
Length:	386mm
Bolt Circle:	6 x M8 on 125mm PCD

Electrical Specification (3 Individual Phase Connectors)

Rated Voltage:	3.6 / 6.0 kVAC (Uo/U)
Breakdown Voltage:	> 8Uo (23.1 kV)
Ampacity:	150 A
Frequency Range:	0 - 85 HZ

Material Specification

Body

Housing:	316 Stainless Steel
Lock Nuts:	H5 Cupro Nickel Alloy

Connectors

Housing:	316 Stainless Steel, Inconel 625 (nipple), H5 Cupro Nickel Alloy
Contacts:	Gold Plated Beryllium Copper
Insulation:	PEEK 450G

Design Philosophy

Main Dielectric Filled Body:	Pressure Balanced
Sealing:	Dual Electrical and Mechanical Barriers
Electrical Insulation Primary:	Thermoplastic or Elastomer
	Lower Connector Pressure Barrier

Cable

Contained within oil-filled pressure compensated hose
Various Cable Options

Qualification Testing (Phase Connectors)

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
Temperature Rise (current)
High Voltage
Vibration

Key Performance Features

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