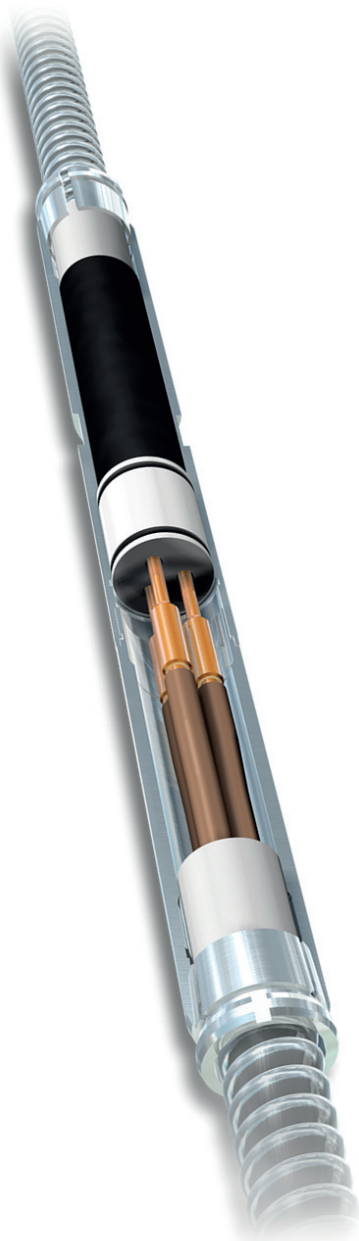


## Single Mandrel Packer Penetrator - (Harsh Environment Technology)

The Single Mandrel Packer Penetrator for ESP Wells delivers pressure-tight 3-Phase power through Downhole ESP packers and encapsulated ESP systems (Pods/Cans).

### HARSH ENVIRONMENT TECHNOLOGY

High CO <sub>2</sub>	Up to 180°C
High H <sub>2</sub> S	Up to 8kVAC
Up to 15000 psi	Up to 250A



### Key Performance Features

#### Single Mandrel Configuration

Industry standard with one single assembly. No field assembly required.

#### Unique Pressure Barrier Technology

Zero Gas Leakage, total safety security.

#### Double Seal Technology

Enables pressure testing via test ports in adapter and built-in redundancy giving total confidence of seal integrity during and post installation.

#### No Connectors

Elimination of possibility of connector contamination giving improved reliability.

#### Permanently activated internal seals, tested during assembly

No pressure-activated seals, no possibility of gas migration through penetrator, even at low pressures.

#### No Specialist Tooling Required

Reduced risk of delays due to missing or broken specialist tooling.

#### Unrivalled Reliability Track Record

Total confidence of reliability.

#### All Mating Materials Dissimilar

Avoids galling during installation.

#### MLE can be moulded directly into Penetrator

Eliminates the need for a splice below the packer/inside the Can, giving improved reliability and reduced rig time during installation.

#### Range of Adapters available

Available with a range of adapters to secure to the Packer, offering maximum completion design flexibility for different applications.

### Experience

The industry's unchallenged number one choice for reliability. Exclusive supplier to the demanding North Sea market for over 20 years.

### Product Specification

Up to 15000 psi working  
 Up to 8kVAC  
 Up to 250A  
 Up to 180°C / 350°F working temperature

### Other Key Features

Protective Caps provided  
 Qualified to IEC60502  
 Only NACE MR01-75 Materials used  
 Adjustable Adapters available

### Harsh Environment Technology

Suitable for up to 90% CO<sub>2</sub>

Suitable for up to 40% H<sub>2</sub>S

### Positive Pressure Technology

Suitable for up to 20% CO<sub>2</sub>

Suitable for up to 40% H<sub>2</sub>S

