Electrical Penetrators & Connector Systems

performance with reliability
Vertical Wellhead Connector - NEXUS Series

The Single Mandrel 3-Phase Vertical Penetrator for ESP Wells is for use in 2.00" Bore Sizes and complex applications. It is suitable for High H₂S and/or High CO₂ wells and for the highest power ESPs.

**Key Performance Features**

**Unique Protection System**
Internals have total isolation from well fluid environment for exceptional reliability.

**Unique Pressure Barrier Technology**
Zero Gas Leakage, total safety security with zero possibility of surface explosions.

**Excellent Track Record of Reliability**
Total confidence of reliability.

**Factory Moulded Lower Pigtail or Field Attachable**
Only a horizontal splice is needed when factory moulded; no lower connector; removes wellbore mating interference. Eliminates weak spot and removes critical process from rig floor. No on-site specialist required.

**‘Plug & Play’ Design**
Single, factory assembled and tested product, prevents damage during installation. No special training, or specialist required. Saves rig time and eliminates human error.

**Permanently activated internal seals, tested during assembly**
No pressure-activated seals, no possibility of gas migration through penetrator, even at low pressures.

**Compact Design**
Entire penetrator is enclosed and protected by the wellhead, avoids penetrator damage when landing hanger.

**No Specialist Tooling Required**
Reduced risk of delays due to missing or broken specialist tooling.

**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 7500 psi working, 11250 psi test
Up to 5kVAC
Up to 180A
Up to 180ºC / 356ºF working temperature
Certified for Hazardous Area use

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂</td>
<td>Up to 90%</td>
</tr>
<tr>
<td>H₂S</td>
<td>Up to 40%</td>
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<tr>
<td>Pressure</td>
<td>Up to 7500 psi</td>
</tr>
<tr>
<td>Temperature</td>
<td>Up to 180ºC</td>
</tr>
<tr>
<td>Voltage</td>
<td>Up to 5kVAC</td>
</tr>
<tr>
<td>Current</td>
<td>Up to 180A</td>
</tr>
</tbody>
</table>

**Other Key Features**

- Debris caps provided
- Gold Plated Pins and Sockets
- Qualified to IEC60502
- Only NACE MR01-75 Materials used
- Bottom Fed for easy installation
- Available with 45º or 90º Surface Connectors

rmsspumtools.com
The Single Mandrel 3-Phase Vertical Penetrator for ESP Wells is for use in 3.25” Bore Sizes and complex applications. It is suitable for High H₂S and/or High CO₂ wells and for the highest power ESPs.

**Key Performance Features**

**Unique Protection System**
Internals have total isolation from well fluid environment for exceptional reliability.

**Unique Pressure Barrier Technology**
Zero Gas Leakage, total safety security with zero possibility of surface explosions.

**Excellent Track Record of Reliability**
Total confidence of reliability.

**Factory Moulded Lower Pigtail or Field Attachable**
Only a horizontal splice is needed when factory moulded; no lower connector; removes wellbore mating interference. Eliminates weak spot and removes critical process from rig floor. No on-site specialist required.

**‘Plug & Play’ Design**
Single, factory assembled and tested product, prevents damage during installation. No special training, or specialist required. Saves rig time and eliminates human error.

**Permanently activated internal seals, tested during assembly**
No pressure-activated seals, no possibility of gas migration through penetrator, even at low pressures.

**Compact Design**
Entire penetrator is enclosed and protected by the wellhead, avoids penetrator damage when landing hanger.

**No Specialist Tooling Required**
Reduced risk of delays due to missing or broken specialist tooling.

**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 7500 psi working, 11250 psi test
Up to 8kVAC
Up to 250A
Up to 180°C / 356°F working temperature
Certified for Hazardous Area use

**Other Key Features**
Debris caps provided
Gold Plated Pins and Sockets
Qualified to IEC60502
Only NACE MR01-75 Materials used
Bottom Fed for easy installation
Available with 45° or 90° Surface Connectors
The new RMSpumptools surface connector maintains the same user-friendly characteristics as the existing surface connectors in the range and can be used as a direct replacement for the following RMSpumptools single mandrel surface connectors: 016/12/213, 016/12/300 & 016/12/602.

Using evolutionary technology the new surface connector design provides a host of benefits over the previous design:

- **More Compact Profile**
  Up to 27% shorter than previous 90° version (016/12/602) (depending on cable type)

- **Increased Power Rating**
  From 160 Amps to 180 Amps

- **Simpler Design**
  - Increased wellhead compatibility
  - Faster delivery
  - Easier installation
  - Increased cable compatibility

**Options for Ordering**

- Factory moulded surface cable up to #2/0 AWG in size
- Internal earthing cable ground wires and braiding hard wired inside bodywork
- High power variant available up to 215 Amps, with no impact to the connector size or shape

**Qualification and Certificates**

- ATEX/IECEx Certified
- FM and CSA certification pending
- IP68 as standard
- 28kV FAT as standard
- Rigorous internal qualification:
  - Power frequency testing
  - Mechanical load and impact testing
  - Temperature cycling
  - Heat rise testing
  - Electrical endurance testing
Side-Entry Wellhead Connector - NEXUS Series

The Single Mandrel 3-Phase Penetrator for ESP Wells is for use in 2.00” Bore Sizes and complex applications. It is suitable for High H₂S and/or High CO₂ wells, and for the highest power ESPs.

Key Performance Features

Unique Protection System
Internals have total isolation from well fluid environment for exceptional reliability.

Unique Pressure Barrier Technology
Zero Gas Leakage, total safety security with zero possibility of surface explosions.

Excellent Track Record of Reliability
Total confidence of reliability.

Factory Moulded Lower Pigtail or Field Attachable
Only a horizontal splice is needed when factory moulded; no lower connector; removes wellbore mating interference. Eliminates weak spot and removes critical process from rig floor. No on-site specialist required.

‘Plug & Play’ Design
Single, factory assembled and tested product, prevents damage during installation. No special training, or specialist required. Saves rig time and eliminates human error.

Permanently activated internal seals, tested during assembly
No pressure-activated seals, no possibility of gas migration through penetrator, even at low pressures.

Compact Design
Entire penetrator is enclosed and protected by the wellhead, avoids penetrator damage when landing hanger.

No Specialist Tooling Required
Reduced risk of delays due to missing or broken specialist tooling.

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 7500 psi working, 11250 psi test
Up to 5kVAC
Up to 180A
Up to 180ºC / 356ºF working temperature
Certified for Hazardous Area use

Other Key Features
Debris caps provided
Gold Plated Pins and Sockets
Qualified to IEC60502
Only NACE MR01-75 Materials used
Bottom Fed for easy installation
Available with 45º or 90º Surface Connectors

SPECIFICATIONS

| Up to 90% CO₂ | Up to 180°C |
| Up to 40% H₂S | Up to 5kVAC |
| Up to 7500 psi | Up to 180A |
The Single Mandrel 3-Phase Penetrator for ESP Wells is for use in 3.25” Bore Sizes and complex applications. It is suitable for High H₂S and/or High CO₂ wells, and for the highest power ESPs.

### Key Performance Features

**Unique Protection System**
Internals have total isolation from well fluid environment for exceptional reliability.

**Unique Pressure Barrier Technology**
Zero Gas Leakage, total safety security with zero possibility of surface explosions.

**Excellent Track Record of Reliability**
Total confidence of reliability.

**Factory Moulded Lower Pigtail or Field Attachable**
Only a horizontal splice is needed when factory moulded; no lower connector; removes wellbore mating interference. Eliminates weak spot and removes critical process from rig floor. No on-site specialist required.

**‘Plug & Play’ Design**
Single, factory assembled and tested product, prevents damage during installation. No special training, or specialist required. Saves rig time and eliminates human error.

**Permanently activated internal seals, tested during assembly**
No pressure-activated seals, no possibility of gas migration through penetrator, even at low pressures.

**Compact Design**
Entire penetrator is enclosed and protected by the wellhead, avoids penetrator damage when landing hanger.

**No Specialist Tooling Required**
Reduced risk of delays due to missing or broken specialist tooling.

**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 7500 psi working, 11250 psi test
- Up to 8kVAC
- Up to 250A
- Up to 180°C / 356°F working temperature
- Certified for Hazardous Area use

**Other Key Features**
Debris caps provided
Gold Plated Pins and Sockets
Qualified to IEC60502
Only NACE MR01-75 Materials used
Bottom Fed for easy installation
Available with 45º or 90º Surface Connectors
Split Phase Wellhead Connector - NEXUS Series

The 3-Leg Penetrator for ESP Wells is a universal application for concentric and/or limited space wellhead configurations, providing unsurpassed reliable gas-tight 3-phase power to conventional ESP systems.

**Key Performance Features**

**3 Leg Configuration**

Each phase is split to penetrate wellhead through three separate bores. Interchangeable with any 3-leg wellhead system; completely gas tight using industry standard compression fittings.

**Unique Pressure Barrier Technology**

Zero Gas Leakage, total safety security with zero possibility of surface explosions - no need for surface ‘breathers’.

**Unique Stack-up Tolerant Design**

Providing variable space-out when installing. Eliminates risky cutting of 3/8” SS tubes, obsoletes terminating connections on site, preventing potential damage to insulation, improving reliability and speed of installation.

**‘Plug & Play’ Surface Connector**

Reusable, factory assembled and tested product. No special training, or specialist required. Saves rig time and improves reliability performance.

**Single Assembly Downhole Penetrator and 3-into-1 Breakout Module**

With moulded pigtail to downhole cable. No on-site cable phase separation and termination preparation required; only standard horizontal splice. Removes critical process from rig floor. No on-site specialist required. Saves rig time and improves reliability performance.

**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.

**Unblemished Reliability Track Record**

Total confidence of reliability.

**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 5000 psi working, 7500 psi test
- Up to 5kVAC
- Up to 180A
- Up to 125ºC / 255ºF working temperature
- Certified for Hazardous Area use

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**SPECIFICATIONS**

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<thead>
<tr>
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<th>Value</th>
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<tr>
<td>Up to 40% CO₂</td>
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<td>Low H₂S</td>
<td>Up to 5kVAC</td>
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<tr>
<td>Up to 5000 psi</td>
<td>Up to 180A</td>
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</tbody>
</table>
Split Phase Wellhead Connector - FRONTIER Series

The 3-Leg Penetrator for ESP Wells is for use in Harsh Environments and Complex applications. It is suitable for High H₂S and/or High CO₂ wells, and for the highest power ESPs.

Key Performance Features

**Dual Pressure Barrier Technology**
Provides double isolation between wellhead and bonnet cavity as well as bonnet cavity and surface, giving total protection against gas leaks to surface.

**3 Leg Configuration**
Each phase is split to penetrate wellhead through three separate bores; completely gas tight using metal-to-metal seals.

**‘Plug & Play’ Surface Connector**
Reusable, factory assembled and tested product. No special training, or specialist required. Saves rig time and improves reliability performance.

**Single Assembly Downhole Penetrator and 3-into-1 Breakout Module**
With moulded pigtail to downhole cable. No on-site cable phase separation and termination preparation required; only standard horizontal splice. Removes critical process from rig floor. No on-site specialist required. Saves rig time and improves reliability performance.

**Permanently activated internal seals, tested during assembly**
No pressure-activated seals, no possibility of gas migration through penetrator, even at low pressures.

**Unblemished Reliability Track Record**
Total confidence of reliability.

**Available with Optional Deck Connector System**
Enables surface connector and cable to be removed during workovers - prevents damage during workover.

**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 5000 psi working, 7500 psi test
Up to 8kVAC
Up to 250A
Up to 150°C / 300°F working temperature
Certified for Hazardous Area use
API 6A PR2 Certified

**Other Key Features**
Debris Caps provided
Gold Plated Pins and Sockets
Qualified to IEC60502
Metal to Metal Sealing
Only NACE MR01-75 Materials used
The RMSpumptools STEALTH Penetrator™ has been developed in response to growing demand for high-specification, compact penetrator applications which are small enough for Ø1.5” bores.

### Key Performance Features
- Small enough for Ø1.5” Bores
- 8” Adjustable Adapter Ø2.24”
- Non-adjustable Adapter Ø2.00”
- Accommodates up to #4 AWG Flat Cable
- Factory Moulded MLE Option
- NACE Approved Materials throughout
- V3 Rated

### 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.

### 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.

### Product Specification
- Up to 7500 psi working
- Up to 5kVAC
- Up to 140A
- Up to 130°C / 265°F ambient temperature
The Single Mandrel Packer Penetrator for ESP Wells delivers pressure-tight 3-Phase power through Downhole ESP packers and encapsulated ESP systems (Pods/Cans).

### 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 10000 psi working
- Up to 5kVAC
- Up to 200A
- Up to 180°C / 356°F working temperature

### Other Key Features

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

### SPECIFICATIONS

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<tr>
<th>CO₂</th>
<th>Temperature</th>
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<tbody>
<tr>
<td>90%</td>
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<tr>
<td>40%</td>
<td>5kVAC</td>
</tr>
<tr>
<td>10000 psi</td>
<td>200A</td>
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</table>
Single Mandrel Packer Penetrator - FRONTIER Series

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

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 / 356°F working temperature

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

<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
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<tbody>
<tr>
<td>Up to 90% CO₂</td>
<td>Up to 180°C</td>
</tr>
<tr>
<td>Up to 40% H₂S</td>
<td>Up to 8kVAC</td>
</tr>
<tr>
<td>Up to 15000 psi</td>
<td>Up to 250A</td>
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</tbody>
</table>
The 3-Leg Packer Penetrator for ESP Wells is a universal application, delivering pressure-tight 3-Phase power through Downhole ESP packers and encapsulated ESP systems (Pods/Cans).

**Key Performance Features**

**3-Leg Configuration**
Each phase is split to penetrate the packer (or Pod) through three separate bores. Interchangeable with other 3-leg packer penetrator systems, completely gas tight using industry standard compression fittings.

**Unique Pressure Barrier Technology**
Zero Gas Leakage, total safety security with zero possibility of gas migration.

**Unique Stack-up Tolerant Design**
Providing variable space-out when installing. Eliminates risky cutting of 3/8" SS tubes, eliminates terminating connections on site, preventing potential damage to insulation, improving reliability and speed of installation.

**‘Plug and Play’ Upper Connector and 3-into-1 Breakout Module**
With factory moulded power cable pigtail. No onsite cable separation or preparation required. 3-Leg breakout module pigtails can be pre spliced to main power cable. Removes all critical process from rig floor, no on site specialist required, saves rig time and improves reliability.

**Seal Integrity Test included as part of Installation Procedure for absolute peace of mind**
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.

**Unblemished Reliability Track Record**
Total confidence of reliability.

**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 5000 psi working
Up to 5kVAC
Up to 150A
Up to 135ºC / 275ºF working temperature

**Other Key Features**
Protective Caps provided
Gold Plated Pins and Sockets
Qualified to IEC60502
Only NACE MR01-75 Materials used
Kidney shaped breakout to minimise space requirement
**Split Phase Packer Penetrator - FRONTIER Series**

The 3-Leg Packer Penetrator for ESP Wells is a universal application, delivering pressure-tight 3-Phase power through Downhole ESP packers and encapsulated ESP systems (Pods/Cans).

### Key Performance Features

**3-Leg Configuration**

Each phase is split to penetrate the packer (or Pod) through three separate bores. Interchangeable with other 3-leg packer penetrator systems, completely gas tight using industry standard compression fittings.

**Unique Pressure Barrier Technology**

Zero Gas Leakage, total safety security with zero possibility of gas migration.

**Unique Stack-up Tolerant Design**

Providing variable space-out when installing. Eliminates risky cutting of 3/8” SS tubes, eliminates terminating connections on site, preventing potential damage to insulation, improving reliability and speed of installation.

‘Plug and Play’ Upper Connector and 3-into-1 Breakout Module

With factory moulded power cable pigtail. No onsite cable separation or preparation required. 3-Leg breakout module pigtails can be pre spliced to main power cable. Removes all critical process from rig floor, no on site specialist required, saves rig time and improves reliability.

**Seal Integrity Test included as part of Installation Procedure for absolute peace of mind**

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.

**Unblemished Reliability Track Record**

Total confidence of reliability.

**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 7500 psi working
- Up to 8kVAC
- Up to 250A
- Up to 150ºC / 302ºF working temperature

**Other Key Features**

- Protective Caps provided
- Gold Plated Pins and Sockets
- Qualified to IEC60502
- Only NACE MR01-75 Materials used
- Kidney shaped breakout to minimise space requirement

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**SPECIFICATIONS**

| Up to 90% CO₂ | Up to 150ºC |
| Up to 40% H₂S | Up to 8kVAC |
| Up to 7500 psi | Up to 250A |
SPEEDFiT
Field Attachable
for Wellhead and
Packer Penetrators

performance with reliability
**SPEEDFiT** - Field Attachable for Wellhead and Packer Penetrators

Less than 10 Minutes Assembly Time in the Field after the Cable is Stripped

RMSpumptools SPEEDFiT is the new benchmark for high-speed, consistently reliable field installations of downhole cable to wellhead and packer penetrators - saving you even more rig time. Requiring minimal parts and training, just a cable prep is required - SPEEDFiT requires no tapes, no epoxy, no gel and no assembly of parts.

**SPEEDFiT Specs...**

- Pressure Rating: 5000psi working, 7500psi test
- Temperature Rating: 150°C (302°F)
- Power Rating: Up to 160 Amps 5kVAC
- Min ID Wellhead Profile: Ø2"
- Max OD Coupling Nut: Ø2.25"
- Plug and Play Style Assembly
- Dual Sealing - retains the exclusive Field Proven RMSpumptools Pressure Barrier
- Back-up O-Ring Seals between Field Attachable Connector and Penetrators.
- Fully testable after being installed on the Cable.
- Suits a range of Cable Sizes.

*SPEEDFiT* is easily adaptable for use with different size cables, resulting in simple redress for re-use with only a minimum of spares required. The Vertical Penetrator can be installed top or bottom fed into the Tubing Hanger, allowing simple retrofit to existing wellhead equipment designs.
**SPEEDFIT - 3 Stage Guide to Simple Installation**

**STAGE 1**
Strip the cable and crimp the contacts.

**STAGE 2**
Insert the cable into the housing and secure the nuts from the front.

**STAGE 3**
Tighten the threads on the body to energise the seals.

Various Redress Options available including:
- Boot Sizes
- Contact Sizes
- Cable Gland Sizes
  (to suit both flat and round cable options)

All that is needed for redress kits are two seals and new pins.

No tapes, no epoxy, no gel and no assembly of parts - the new RMSpumptools Field Attachable
The SWITCH® is a new and innovative downhole product, designed to allow the operation of two ESPs from a single power cable, expanding the options for multiple ESP configuration. Workovers become less of a risk with minimum impact on downtime - in essence, The SWITCH® opens up new opportunities to the operator which were previously unachievable.

**Product Applications**
- Dual, Triple and Quad ESP Configurations
- Retrofit Single ESP Well to Dual ESP
- Dual ESP + Induction Heater
- Intelligent Well Completions (SmartWells)

**Product Specification**
- Rated Pressure: 5,000Psi
- Working Temperature: 0ºC to 121ºC (250ºF)
- Qualified Voltage (U): 5kVAC
- Qualified Current: 160A
- Design Life (Below packer): 10 years minimum
- Production Tubing: 4.5” maximum
  (secures to production tubing)
- Running OD 8.25” (9-5/8” 53.5lb or larger)

**Key Features**
- Single ESP feed through to surface
- Switch between two 3-phase ESP units
- Low profile (suitable for an 8.25” drift diameter with a production tubing up to 4.5”)
- Pressure compensated for long term seal performance
- NACE and NORSOK compliant materials
- Suitable for use below ESP packer
- Resistant to gas decompression
- Maintains standard packer, clamps and wellhead
- Up to 8” adjustability on the MLE terminations
- Cable terminations based on field proven penetrator technology
- Factory prepared connectors (no field servicing during installation)

**Qualification Testing**
- Hydrostatic Pressure Test and Temperature Cycling
- Gas Test and Rapid Gas Decompression Test
- Vibration and Shock Test
- High Current Temperature Rise
- Downhole Simulation
- Power Frequency