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

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**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

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**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>CO₂</th>
<th>Temperature</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>
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<tr>
<td>Up to 7500 psi</td>
<td>Up to 250A</td>
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