Liner Hanger with Metal-to-Metal Tieback System

Incorporating the premium COLOSSUS CMT cemented liner hanger system tied back to surface

### Rated to 8,000 psi [55 MPa]

### Rated to 300 degF [150 degC]

### APPLICATIONS
- Wells requiring a liner and tieback to
  - protect the parent casing string during high-pressure testing operations
  - accommodate a narrow window for the pore-pressure fracture gradient during installation
  - address tubing movement concerns
- Wells requiring a gas-tight seal between the tieback receptacle and tieback string
- Remedial applications such as scab or stub liners

### BENEFITS
- Combines the flexibility of reaming and rotation during running in and cementing with the sealing integrity of a full casing string
- Improves ECD during cementing
- Anchors the upper casing to the liner for the life of the well using Metalmorphology* metal-to-metal sealing and anchoring technology
- Eliminates hydraulic anchors, midstring packers, and the need for cemented tiebacks

### FEATURES
- No elastomers, slips, or hydraulic cylinders required for tieback
- Immediate annular seal on completion of liner cement job to prevent gas migration
- Compatible with the Schlumberger metal-to-metal load anchor
- Reinstatement of tieback string (if cut for casing repair or workover) using the Casing Reconnect* metal-to-metal, gas-tight casing repair system

### Conventional options to tie back a liner to surface include cementing the tieback string in place or using hydraulic double-grip anchors, midstring packers, or floating seal assemblies. These solutions typically require
- elastomers, slips, packers, and hydraulic cylinders that introduce potential leak paths or axial loading issues
- a cement job that limits future sidetrack options.

### Combine the advantages of a liner and full casing string

The fully integrated premium COLOSSUS CMT* cemented liner hanger system with metal-to-metal, gas-tight liner tieback eliminates these concerns while combining all the benefits of running a liner—ream-down capability, rotation during cementing, instant annular seal, and improved ECD—with the sealing integrity of a full casing string. The installation sequence is a simple three-step process.

1. The liner is run in hole with the liner tieback system receptacle incorporating the metal-to-metal sealing elements and connected to the liner hanger. The liner is cemented in place.

2. The tieback casing string is run in with the tieback system stinger on the bottom; the stinger is positioned within the receptacle.

3. The stinger is expanded (morphed) into the receptacle with the expansion tool, simultaneously anchoring the tieback casing and providing a permanent metal-to-metal, gas-tight connection between the liner and the tieback string.

If the tieback string requires replacement at a later date (for example, because of casing damage or a workover), it can be cut above the permanently connected stinger. Subsequently, a new casing tieback string can be connected using the Casing Reconnect metal-to-metal, gas-tight casing repair system.

### Premium Liner Hanger with Metal-to-Metal Tieback System Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Size, in [cm]</td>
<td>9 3/4 x 13 3/4 [24.44 x 33.97]</td>
</tr>
<tr>
<td>9 3/4-in liner weight, lbm/ft [kg/m]</td>
<td>47–53.5 [70.08–79.78]</td>
</tr>
<tr>
<td>Max. system OD, in [cm]</td>
<td>12.100 [30.73]</td>
</tr>
<tr>
<td>Stinger OD, in [cm]</td>
<td>9 3/4 [24.44]</td>
</tr>
<tr>
<td>Max. internal and external pressure, psi [MPa]</td>
<td>8,000 [55.15]</td>
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*Mark of Schlumberger

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