CMIB
Cement heads for COLOSSUS CMT system

**APPLICATIONS**
- Cementing operations with top-drive system on the rig
- Cementing operations requiring rotating and reciprocation of a liner
- Cementing operations with single or dual wiper plugs
- Well operations requiring ball drops
- Deepwater applications (Ultradeepwater CMIB)
- Shallow- to intermediate-depth land operations with smaller rigs (Light CMIB)

**BENEFITS**
- Prevents contamination of top drive and associated maintenance costs
- Improves cement integrity and enhances well stability and safety by enabling rotating or reciprocating a liner during cementing
- Maximizes rig safety during handling and rotation because of flush OD profile
- Increases rig safety with option for remote control of cement manifold from outside the rig floor

**FEATURES**
- Through bores up to 4 in [102 mm] for high displacement rates
- Modular system for different ball-drop and wiper-plug operations
- Optional remote-control unit
- Single-piece swivel housing that eliminates threads, flanges, and welds
- Optional Kelly valve for use in upper or lower end of swivel
- Design that prevents plugs or balls from floating into drop mechanisms
- Integral antirotation tie-off on the swivel housing

CMIB cement heads control the flow of cement and displacement fluids during liner cementing operations.

CMIB cement heads are internal-bypass manifolds that can be used when cementing liners with a top-drive system on the rig. The CMIB creates a flow path for cement and displacement fluids without allowing them to pass through the rig’s top-drive assembly, preventing cement contamination of top-drive components.

A CMIB comprises a swivel and a manifold with modular ball-drop and plug-drop assemblies. The CMIB one-piece swivel housing eliminates threads, flanges, and welds while increasing strength and reducing the bending loads imposed on the inlets. Drop mechanisms are self-contained for low maintenance.

A CMIB head can be configured for single-plug, dual-plug, or single-ball-drop operations. They are also suitable for running and cementing all types of liner hangers, including rotating liner-hanger systems such as the COLOSSUS CMT* cemented liner hanger system.

Rotating and/or reciprocating the liner while cementing improves cement integrity, enhancing well stability and safety.

**Standard and deepwater applications**
The Standard CMIB unit is suited for most oilfield applications. The Ultradeepwater CMIB unit is designed for rugged applications requiring high hook loads.

**Optional remote control**
The Standard and Ultradeepwater CMIB units can also be operated with a remote control unit. The unit is operated with a tablet that communicates over WiFi. The tablet, actuators, enclosure, connectors, conduit, antenna, and switch are ATEX-certified. Actuators have manual override capabilities, the system can be configured for single- or dual-plug operations, and the flag sub is resettable for dart launch indication.

**Light unit for shallow land applications**
The Light CMIB unit is well suited for smaller rigs on land where weight and handling are constraints, and for shallow- to intermediate-depth wells. The unit cannot be used with remote control.
### CMIB Specifications

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Size, in [mm]</th>
<th>Upper Connection, in</th>
<th>Lower Connection, in</th>
<th>Nominal OD, in [mm]</th>
<th>Minimum ID, in [mm]</th>
<th>Hook Load Rating, lbm [kg]</th>
<th>Torque Rating, ft.lbf [N.m]</th>
<th>Overall Length,† in [mm]</th>
</tr>
</thead>
</table>

### CMIB Swivel Specifications

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Size, in [mm]</th>
<th>Pipe Connection, in</th>
<th>Inlet Connection, in</th>
<th>Apparent Diameter, in [mm]</th>
<th>Nominal ID, in [mm]</th>
<th>Overall Length,† in [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard and Ultradeepwater</td>
<td>6.625 [168.3]</td>
<td>6.625 full hole</td>
<td>WECO 2-1n 1502</td>
<td>22.000 [558.8]</td>
<td>4.000 [101.6]</td>
<td>66.000 [1,676]</td>
</tr>
<tr>
<td>Light</td>
<td>3.235 [84.5]</td>
<td>4.500 IF</td>
<td>WECO 2-1n 1502</td>
<td>22.000 [558.8]</td>
<td>3.235 [84.5]</td>
<td>64.000 [1,625]</td>
</tr>
</tbody>
</table>

† Overall length depends on tool configuration.

### Remote Control Specifications

<table>
<thead>
<tr>
<th>Temperature Range, degF [degC]</th>
<th>Battery Life,‡ hours</th>
<th>Indicators</th>
<th>Security</th>
<th>Plug Configuration</th>
<th>ATEX Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard and Ultradeepwater</td>
<td>–40 to 140 [–40 to 60]</td>
<td>more than 12</td>
<td>Battery and WiFi levels</td>
<td>User PIN</td>
<td>Single or Dual</td>
</tr>
</tbody>
</table>

‡ Under flush cycle (highest current draw) and ambient temperature.