Positive Displacement Ball

The Positive Displacement Ball is a solid inner ball with a flexible outer covering. Designed for use with the Halliburton Downhole Shutoff Collar, it helps ensure positive displacement of the ball to activate the Shutoff Collar and seal off the casing ID. Positive displacement during the completion reduces the risk of over-displacing fluids and helps ensure wellbore fluids are properly placed during completion.

The Ball helps reduce the cost of pumping additional fluids during displacement and decreases the risk of over-displacing a swelling fluid when Swellpacker® isolation systems are used for annular isolation. The Ball’s flexible outer covering also allows it pass through the restrictions of liner hanger and RapidSuite™ systems while still maintain positive displacement operations.

Features
- Solid inner with flexible outer ball
- Positively displaced to depth
- Activates Downhole Shutoff Collar Tool
- Seals off the casing ID
- Available for 4 ½-in. and 5 ½-in. casing size tools

Benefits
- Reduces risk of over displacing swelling fluids
- Separates well fluids during displacement
- Eliminate cost of over-displacement
- Decreases environmental impact
- Can be used with liner hanger systems and fracturing sleeve systems

Positive Displacement Ball - Specifications

<table>
<thead>
<tr>
<th>Casing Size (in.)</th>
<th>External Ball OD (in.)</th>
<th>Internal Ball OD (in.)</th>
<th>Min Restriction ID in. (cm)</th>
<th>Specific Gravity</th>
<th>Temperature Rating (deg°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 1/2</td>
<td>5</td>
<td>1</td>
<td>1.325 (3.366)</td>
<td>1.9</td>
<td>350</td>
</tr>
<tr>
<td>4 1/2</td>
<td>6</td>
<td>1</td>
<td>1.625 (4.128)</td>
<td>1.9</td>
<td>350</td>
</tr>
<tr>
<td>5 1/2</td>
<td>6</td>
<td>1</td>
<td>1.625 (4.128)</td>
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</tr>
</tbody>
</table>

For more information on Halliburton Unconventional Completion Tools, please call your local Halliburton representative or email us at completions@halliburton.com.

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