Frontier Drop Ball Frac Sleeve

Technical Data Sheet
OVERVIEW

The Ball-Open Frac Valve is actuated by a corresponding ball to seat combination. Once a ball is dropped and pumped down onto a seat, hydraulic differential pressure causes the inner sleeve to shift down into the open position, Communication with the annulus is now established and the breakdown of the formation creates a flow path which allows the fracturing treatment of that zone to begin. Each zone led into the well bore is incrementally progressive from the toe to the heel.

FEATURES

• 10,000 PSI differential pressure rating
• 50+ Stages
• Full casing ID (After Drill Out)
• Field Adjustable Opening Pressure
• Compact Design for Easy of Handling
• Ball & Seat Optimized to Give Required Pressure Rating
• Compatible with Dissolvable or Composite Frac Balls
• Flow Area Through Ports Greater than Liner ID
• Re-Closeable Options Available

APPLICATIONS

• Open hole uncemented multistage isolations
• Cemented installations
# Specifications and Dimensions

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</thead>
<tbody>
<tr>
<td>4-½</td>
<td>11.6# - 15.1#</td>
<td>5.705</td>
<td>23</td>
<td>4.000</td>
<td>6.125</td>
<td>10,000</td>
<td>4660</td>
<td>37,280</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Seal Element Material</th>
<th>Thread Type</th>
<th>Material/ Grade</th>
<th>Max. Number of Shear Pins</th>
<th>Shear Pin Value (PSI/Pin)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 Duro HNBR</td>
<td>BTC/LTC 8rd</td>
<td>L-80</td>
<td>8</td>
<td>277</td>
</tr>
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<td>90 Duro HNBR</td>
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<td>P110</td>
<td>8</td>
<td>277</td>
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<thead>
<tr>
<th>Max. Temperature (°F)</th>
<th>Shear Value Pressure (PSI)</th>
<th>Piston Area (SQIN)</th>
<th>Flow Area Thru Ports (SQIN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>325</td>
<td>2,216 psi (8 pins)</td>
<td>16.31</td>
<td>19.5</td>
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15% +/- Shear Tolerance on Shear Values
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