WWT Super Slider 3 (SS3) Non-Rotating Protectors (NRP)™

- Reduce torque and drag
- Protect against casing, riser, and drill pipe wear
- Reduce buckling, heat checking, vibration and stick-slip
- Open-hole capabilities

Model SS3 Specifications

<table>
<thead>
<tr>
<th>WWT NRP Model</th>
<th>SS3-400-SLIM</th>
<th>SS3-400</th>
<th>SS3-450-SLIM</th>
<th>SS3-450</th>
<th>SS3-500</th>
<th>SS3-550</th>
<th>SS3-578</th>
<th>SS3-658-SLIM</th>
<th>SS3-658-XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill Pipe Size</td>
<td>4.00&quot;</td>
<td>4.00&quot;</td>
<td>4.50&quot;</td>
<td>4.50&quot;</td>
<td>5.00&quot;</td>
<td>5.00&quot;</td>
<td>5.88&quot;</td>
<td>6.63&quot;</td>
<td>6.63&quot;</td>
</tr>
<tr>
<td>Sleeve Max OD</td>
<td>5.50&quot;</td>
<td>5.75&quot;</td>
<td>6.25&quot;</td>
<td>6.75&quot;</td>
<td>7.30&quot;</td>
<td>7.75&quot;</td>
<td>8.00&quot;</td>
<td>8.75&quot;</td>
<td>9.13&quot;</td>
</tr>
<tr>
<td>Sleeve Effective OD</td>
<td>5.30&quot;</td>
<td>5.47&quot;</td>
<td>6.00&quot;</td>
<td>6.25&quot;</td>
<td>6.79&quot;</td>
<td>7.26&quot;</td>
<td>7.52&quot;</td>
<td>8.31&quot;</td>
<td>8.52&quot;</td>
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<tr>
<td>Collar OD</td>
<td>5.07&quot;</td>
<td>5.38&quot;</td>
<td>5.88&quot;</td>
<td>6.00&quot;</td>
<td>6.50&quot;</td>
<td>7.00&quot;</td>
<td>7.38&quot;</td>
<td>8.13&quot;</td>
<td>8.13&quot;</td>
</tr>
<tr>
<td>Sleeve Length</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>Sleeve Volume</td>
<td>111 in³</td>
<td>120 in³</td>
<td>153 in³</td>
<td>168 in³</td>
<td>177 in³</td>
<td>203 in³</td>
<td>206 in³</td>
<td>233 in³</td>
<td>252 in³</td>
</tr>
<tr>
<td>Sleeve Weight</td>
<td>6.7 lbs</td>
<td>8 lbs</td>
<td>9.5 lbs</td>
<td>10 lbs</td>
<td>11 lbs</td>
<td>12.5 lbs</td>
<td>12.5 lbs</td>
<td>13.3 lbs</td>
<td>14.0 lbs</td>
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<tr>
<td>Side-Load Rating</td>
<td>2,200 lbs</td>
<td>2,200 lbs</td>
<td>3,000 lbs</td>
<td>3,000 lbs</td>
<td>3,000 lbs</td>
<td>3,000 lbs</td>
<td>3,500 lbs</td>
<td>3,500 lbs</td>
<td>3,500 lbs</td>
</tr>
<tr>
<td>Cross-Sectional Area</td>
<td>9.5 in²</td>
<td>10.9 in²</td>
<td>12.4 in²</td>
<td>14.8 in²</td>
<td>16.6 in²</td>
<td>17.6 in²</td>
<td>17.3 in²</td>
<td>19.8 in²</td>
<td>22.6 in²</td>
</tr>
</tbody>
</table>

Total Flow Area
- 7" x 32 ppf Csg. | 7.1 in² | 5.7 in² |
- 7" x 29 ppf Csg. | 8.0 in² | 6.6 in² |
- 7" x 26 ppf Csg. | 8.9 in² | 7.5 in² |
- 7-5/8" x 39 ppf Csg. | 12.4 in² | 11.0 in² | 6.2 in² |
- 9-5/8" x 53.5 pff Csg. | 35.1 in² | 33.7 in² | 28.9 in² | 26.5 in² | 21.0 in² | 15.8 in² | 12.8 in² |
- 10-3/4" x 55.5 pff Csg. | 52.7 in² | 51.3 in² | 46.5 in² | 44.1 in² | 38.6 in² | 33.5 in² | 30.4 in² | 20.5 in² |
- 13-3/8" x 72 pff Csg. | 97.7 in² | 96.3 in² | 91.4 in² | 89.0 in² | 83.5 in² | 78.4 in² | 75.3 in² | 65.5 in² | 62.7 in² |

Collar Material | 6061-T651 Extruded Aluminum Alloy |
Sleeve Material | Advanced Low-Friction Polymer, Nitrile Rubber and Alloy Steel Sheet |
Max. Temperature | 220º F (105º C) |

Features and Benefits
- Sleeve design enhances torque and drag benefits.
- Positive protection against casing and riser wear during drilling and completion operations.
- Significant torque reduction created by WWT’s patented fluid bearing design allows for improved ROP, RPM, and hole cleaning.
- Compatible with almost all drilling and completion fluids.
- SS3 Protector design allows for open-hole applications.
- Optimum operating performance range of 20 – 250 RPM.
- Each assembly accepts up to 36,000 lbs. of axial force before slippage.
- Installation time per assembly: less than 1 minute.
- Free, no-obligation, confidential torque, drag and wear analysis.
- Global leadership in some of the world’s most challenging drilling environments since 1989.
- On/off-site technical support 24/7.

WWT International

www.wwtinternational.com

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