RockStrong™ Coring System

RELIABLE CORING AND ANTI-JAMMING SYSTEM DESIGNED TO HANDLE EVEN THE MOST EXTREME ENVIRONMENTS

OVERVIEW
For today’s oil and gas operations, a coring system was needed that would help provide reliability even in extreme conditions. Responding to this need, Halliburton has introduced the RockStrong™ coring system, which was designed to be reliable in any environment, including high-pressure/high-temperature (HP/HT) environments and hard, abrasive rock formations where vibration can cause tool damage and compromise coring performance.

The RockStrong coring system features a unique swivel assembly, making it the most robust coring tool on the market. Because of its superior design, the RockStrong swivel has advantages in any type of application. To date, it is the only coring system specifically designed for extreme wellbore environments with no practical pressure and temperature limits. It has been field proven to deliver high-quality core samples in even the harshest conditions.

RELIABLE ANTI-JAMMING DESIGN
Because minimizing vibrations is a crucial key to reducing core jamming, the RockStrong anti-jamming design includes a top spacer assembly that acts like a preloaded spring to absorb axial vibrations along the inner assembly. In addition, the double bearing on the shaft keeps the inner barrel in a stable and vibration-free position that helps to facilitate smooth core entry.

ENGINEERED VIBRATION MITIGATION
To further ensure smooth performance of the RockStrong system in vibration-inducing environments, Halliburton employs unique bottomhole assembly (BHA) modeling programs that model critical vibration RPMs and optimal RPM operating ranges. Based on an advanced understanding of BHA and drillstring dynamics, this advanced capability enables the distance from the bit to be precisely measured, and also models maximum and minimum vibration levels in order to achieve optimum coring performance in extreme conditions.

FEATURES
» Robust swivel assembly for reliable coring in even the harshest environments
» Anti-jamming design that helps eliminate unnecessary trips to surface
» Vibration-compensation spring for smooth core entry
» Four times the normal space-out capacity to accommodate long core barrels
» Ultra-stable double bearing system for improved core recovery
» Preloaded adjustment system to withstand vibrations
» Secure locking mechanism to ensure proper space-out

BENEFITS
» Reduced rig time
» Maximum recovery of high-quality core samples
» No practical temperature limitations
» Large core size in 6-inch hole applications
RockStrong™ Coring System Technical Specifications

<table>
<thead>
<tr>
<th>Hole Size Compatibility</th>
<th>4½ in. x 2½ in.</th>
<th>5½ in. x 3¼ in.</th>
<th>6¼ in. x 4 in.</th>
<th>7¼ in. x 4 in.</th>
<th>8 in. x 5¼ in.</th>
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<tbody>
<tr>
<td></td>
<td>5⅝ in. to 7 in. (149 mm to 178 mm)</td>
<td>6 in. to 7 in. (152 mm to 178 mm)</td>
<td>7½ in. to 8½ in. (200 mm to 222 mm)</td>
<td>8½ in. to 9½ in. (216 mm to 241 mm)</td>
<td>9¼ in. to 12¼ in. (251 mm to 311 mm)</td>
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<tr>
<th>Core Barrel Size</th>
<th>Core Size</th>
<th>Makeup Torque</th>
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</thead>
<tbody>
<tr>
<td>4⅝ in. (121 mm)</td>
<td>2⅝ in. (67 mm)</td>
<td>9,600 ft-lbf / 1300 daN.m</td>
</tr>
<tr>
<td>5½ in. (140 mm)</td>
<td>3¼ in. (83 mm)</td>
<td>13,300 ft-lbf / 1800 daN.m</td>
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<tr>
<td>6¼ in. (171 mm)</td>
<td>4 in. (102 mm)</td>
<td>25,800 ft-lbf / 3500 daN.m</td>
</tr>
<tr>
<td>7¼ in. (184 mm)</td>
<td>4 in. (102 mm)</td>
<td>31,150 ft-lbf / 4250 daN.m</td>
</tr>
<tr>
<td>8 in. (203 mm)</td>
<td>5¼ in. (133 mm)</td>
<td>36,900 ft-lbf / 5000 daN.m</td>
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For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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