CEMENTING

High Wiping Efficiency (HWE®) Cement Plugs

Another Halliburton Innovation, Offering Improved Efficiency, Drillability and Utility

Halliburton has designed a whole new class of cementing plugs to meet the requirements of deeper, hotter and more hostile reservoirs. The Halliburton HWE plugs meet this challenge with improved performance and the best value available today.

The new cup design provides more fin contact while reducing overall rubber and plastic content. The result is a plug that has both enhanced wiping efficiency and improved drillability.

HWE plugs are also suitable for high-pressure/high-temperature environments and both water and oil-based drilling fluids.

The bottom plug is supplied with a rupture disk rated to 750 psi, and, after rupture, the flow area within the plug is unobstructed.

Improved Wiping Efficiency

- · Deep cup design
- Greater wiper contact area
- · Greater wear resistance

Increased Drillability

- Reduced rubber and plastic content
- No metal components
- PDC drillable

Increased Utility

- HWE plugs feature common geometry among top and bottom plugs
- High-temperature high-pressure is standard
- 750 psi rupture disk in bottom plug standard
- Spans greater weight range per size.

These features – along with common geometry, state-of-the art tooling and consolidation of sizes – offer the best value in cementing plugs available today.



The new HWE plug set is available in a wide variety of sizes.



| HWE Cementing Top Plug Specifications | | |
|---------------------------------------|------------------------------|----------------------|
| Casing ID in. (mm) | Min./Max. ID* in. (mm) | Top Plug Part No. |
| 4 1/2 (114.3) | 3.65/4.14 (92.7/105.2) | 101241019 |
| 5 (127.0) | 3.83/4.69 (97.3/119.1) | 101213834 |
| 5 1/2 (139.7) | 4.38/5.09 (111.3/129.3) | 101237390 |
| 7 (177.8) | 5.66/6.54 (143.8/161.5) | 101229888 |
| 7 5/8 (193.7) | 6.24/7.13 (158.5/181.1) | 101236216 |
| 8 5/8 (219.1) | 7.20/8.10 (182.9/205.7) | 101227839 |
| 9 5/8 (244.5) | 8.16/9.06 (207.3/230.1) | 101214575 |
| 10 3/4 (273.1) | 9.09/10.09 (230.9/256.3) | 101235483 |
| 13 3/8 (339.7) | 11.79/12.72 (299.5/323.0) | 101235693 |

^{*} The IDs shown represent nominal casing IDs. Under certain conditions, plugs can be pumped through smaller IDs. For information about these conditions, contact Tools Systems at the Duncan Technology Center (DTC).

| HWE Cementing Bottom Plug Specifications | | |
|--|------------------------------|-------------------------|
| Casing ID in. (mm) | Min./Max. ID* in. (mm) | Bottom Plug Part No. |
| 4 1/2 (114.3) | 3.65/4.14 (92.7/105.2) | 101240191** |
| 5 (127.0) | 3.83/4.69 (97.3/119.1) | 101213832** |
| 5 1/2 (139.7) | 4.38/5.09 (111.3/129.3) | 101237389 |
| 7 (177.8) | 5.66/6.54 (143.8/161.5) | 101229886 |
| 7 5/8 (193.7) | 6.24/7.13 (158.5/181.1) | 101236215 |
| 8 5/8 (219.1) | 7.20/8.10 (182.9/205.7) | 101227837 |
| 9 5/8 (244.5) | 8.16/9.06 (207.3/230.1) | 101214570 |
| 10 3/4 (273.1) | 9.09/10.09 (230.9/256.3) | 101235482 |
| 13 3/8 (339.7) | 11.79/12.72 (299.5/323.0) | 101235691 |

^{*} The IDs shown represent nominal casing IDs. Under certain conditions, plugs can be pumped through smaller IDs. For information about these conditions, contact Tools Systems at the Duncan Technology Center (DTC).

^{**} Flow through 4-1/2- and 5-in. bottom HWE plugs should not exceed 2 hours at 10 bbl/min or 4 hours at 6 bbl/min. No pump time limit on rates below 5 bbl/min. Contact DTC for additional information.