Ultra Reach Flotation Collar

When running production casing in an extended reach wellbore, difficulties can arise because of high frictional forces present in the horizontal section. The additional forces make running casing inefficient and can prevent the casing from reaching target depth.

The Ultra Reach Flotation Collar (URFC) is a casing deployed flotation tool that allows air to be trapped inside the production casing. The trapped air increases the buoyancy of the casing below the URFC, reducing the frictional forces along the horizontal section of the wellbore. The URFC contains a glass barrier, and fluid is filled above the tool to surface. Once the casing has reached the desired depth, pressure is applied to the fluid, shattering the glass and allowing the well to be conditioned. The patented laminated glass material profiles a secure, non-corrodible seal under high temperatures and axial loads, and is capable of withstanding high differential pressures.

The optimal install location is determined based on the well trajectory, casing design, and fluid types. This allows us to provide quantitative data on hook load improvements that are made and provide an idea of how much applied pressure is required to activate the tool once it is installed.

Features

- Full-casing ID after opening
- ISO 14310 V6 tested
- Easy removal compared to deep-set/horizontal wireline plugs
- Hydraulic opening through differential pressure across a predetermined shear ring
- High debris tolerance; 5 to 10 mm is the range of diameter of the particles after glass barrier is shattered.
- Installed as part of the casing to run the completion string to the extended reach and reducing rig time
- No debris sub required due to small debris

Applications

- Long laterals, also known as extended-reach laterals
- Laterals where casing is difficult to achieve target depth

URFC Specification

Casing size in. (mm)	**Casing weight range** lb/ft (kg/m)	**Max. OD** in. (mm)	**Min. ID** in. (mm)	**Temp. rating** °F (°C)	**Differential pressure rating** psi (kPa)	**Length** in. (mm)
4.500 (114.30)	11.6 - 15.1 (17.26 - 22.47)	5.440 (138.18)	3.880 (98.55)	340 (171.11)	2,000 - 9,500 (13,790 - 65,500)	27.650 (702.31)
5.000 (127.00)	15.0 - 24.1 (22.31 - 35.86)	5.880 (149.31)	4.150 (105.41)	340 (171.11)	3,000 - 9,000 (20,684 - 62,053)	27.650 (702.31)
5.500 (139.70)	17.0 - 26.0 (25.30 - 38.69)	6.500 (165.10)	4.767 (121.08)	340 (171.11)	1,500 - 9,000 (10,342 - 62,053)	26.390 (670.31)
5.500 (139.70)	17.0 - 26.0 (25.30 - 38.69)	7.090 (180.09)	4.767 (121.08)	340 (171.11)	1,500 - 9,000 (10,342 - 62,053)	26.390 (670.31)
6.000 (152.40)	24.5 (36.46)	7.750 (196.85)	5.160 (131.06)	302 (150.00)	1,000 - 8,500 (6,894 - 58,605)	26.450 (671.83)

NOTE: Differential pressure rating available in 500-psi increments in pressures listed.