PosiLaunch Rotating Cement Head

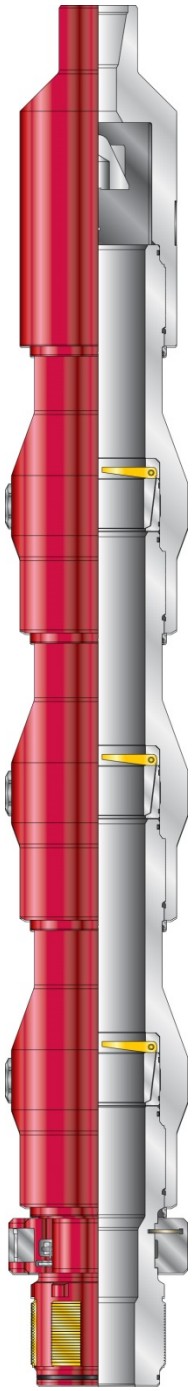
Launches multiple plugs selectively via positive displacement and a unique releasing mechanism that releases plugs instantaneously

Applications

- Cementing casing strings to surface with or without a top drive
- Cementing casing and liners in which high torque and high rotations per minute (rpm) are required for extended periods of time
- Reciprocation of casing or liner requiring high lift-through capability
- Limited rig-floor space requiring a compact design
- Cementing operations requiring the launch of multiple plugs during pumping operations
- Operating in extended-reach, horizontal wells that are often associated with shale plays
- Operating in wells requiring high displacement pressures

Features and Benefits

- A high working pressure of up to 10,000 psi (68.9 MPa) enables the PosiLaunch rotating cement head to achieve high circulation rates past the cementing plugs and to assist in cleaning the wellbore, which contributes to a high-quality cement job.
- Modular plug spools can accommodate wiper plug sizes ranging from 3-1/2 to 7-5/8 in. (88.9 to 193.6 mm). The plug spools can be added or removed to suit specific job requirements, which enhances operational flexibility.
- Plug spool configurations can be altered to accommodate single, dual, or triple plugs when required.
- The built-in flag sub provides positive indication that the plugs or darts have successfully launched.
- High-tensile (2,000 ton [1,814.36 tonne]), high-torque (45,000 ft-lb [61,011.80 N·m]), and high-pressure (10,000 psi [68.9 MPa]) capabilities enable the cement head to withstand conditions in high-angle or horizontal wells.
- The high-pressure cement head enables circulation when fully loaded with wiper plugs, which simplifies operations and reduces rig time.
- Positive displacement applies pressure directly onto the plug for a clean, positive plug launch.
- The plug spools, which have a large inside diameter, can be preloaded without deforming the plugs or darts.
- When used in conjunction with the Weatherford SpiraGlider®, VariForm®, or LoTORQ centralizers, the cement head optimizes mud displacement to help assure a high-quality cement job. The centralizers should be used when torque is limited by casing connections.



The Weatherford PosiLaunch rotating cement head enables the selective and reliable release of full-size cementing plugs, facilitates hole cleaning, enhances zonal isolation, and improves the quality of the cement job.

Weatherford®

PosiLaunch Rotating Cement Head

Tool Description

The Weatherford PosiLaunch rotating cement head selectively releases full-size cementing plugs without interrupting cementing operations. With a 2,000-ton (1,814.36-tonne) tensile capacity and the capability to withstand working pressures up to 10,000 psi (68.9 MPa), the cement head is suited for high-angle or horizontal wells in which reciprocation and rotation with high rpm are essential for well conditioning during the cementing process.

The PosiLaunch cement head contributes to a high-quality cement job by enabling high circulation rates past cementing plugs for effective mud removal. Featuring a high-performance swivel that facilitates reciprocation and rotation of the casing string, the cement head also improves cement placement and enhances zonal isolation. A high-quality cement job eliminates the need for remedial cement-squeeze operations and the associated nonproductive time and costs.

Before the cementing process begins, the PosiLaunch cement head is preloaded with compatible plugs and darts, and it can be racked in the derrick for easy access. The cement head is modular and features a breech lock that that enables multiple plug spools to be added or removed as needed, depending on job requirements. With the plugs loaded and resting on drop fingers located in the body of the cement head, circulation can be established through the pick-up sub and around the outside diameter (OD) of the spools. Activating the drop fingers enables the bottom spool to shoulder against a pin adaptor that redirects the fluid flow to the center of the spool to launch the bottom plug. Then the upper spool is released and lands on the lower spool to redirect the flow, which launches the top plug. A built-in flag sub provides positive indication the plugs or darts have launched successfully.

Specifications

Top connection	NC-50
Bottom connection	Breech lock*
Maximum torque	45,000 ft-lb (61,011.80 N·m)
Minimum operating temperature	-4°F (-20°C)
Maximum operating temperature	250°F (121°C)
Overall length per sub	25.75 in. (654.05 mm)
Swing diameter	16.846 in. (427.888 mm)
Weight per sub	500 lb (226.79 kg)
Working pressure	10,000 psi (68.9 MPa)
Tensile capacity	2,000 tons (1,814.36 tonnes)
Maximum pump rates for center spool and spool OD	20 bbl/min (3.18 m^3/min)

** Specifications vary as multiple breech blocks are used. The specifications listed above are of a single breech lock. As multiple breech locks are used, double or triple the figures accordingly.*

