Well Construction

Drilling Technologies

AERO™ Sleeve

Expro's AERO Sleeve is the next generation technology for ream-while-drilling applications globally. Based on our proven and patented line of AERO Reamer technology, our AERO Sleeve can be applied to existing bottomhole assembly (BHA) components to extend service life and improve performance. This functionality ultimately reduces vibration and torque, and improves the overall efficiency of the drilling system.

The patented AERO Sleeve technology is an integral stabilizing component of the BHA and is made up within the various rotary steerable systems (RSS), motors, and MWD components. With an ultra-low friction design, the AERO Sleeve maintains full engagement with the wellbore to alleviate wear on the BHA and improve the life of each component.

The ruggedized shell consists of specialized polycrystalline diamond compact (PDC) cutters with a combination of flat and dome inserts to help mitigate impact damage and improve torque control. As well as carrying out smoothing of the wellbore to reduce ledging and minimize wear on the BHA. These innovative features improve directional response, ensuring the drill string runs smoother through directional changes.

The AERO Sleeve works in combination with RSS tools to help reduce the risk of hole problems and stuck BHA.Expro's AERO Sleeves are available in steel or non-magnetic materials, allowing for runs in a wide range of BHA locations. Customizable and purpose-built for any application, the AERO Sleeve is an industry leader in innovative ream-while-drilling operations.

Features and benefits

- The AERO Sleeve's revolutionary design uses a combination of proprietary technology, enhanced materials, and geometric shapes to create a ruggedized shell that fully engages with the wellbore and alleviates wear on the BHA
- The unique design optimizes directional response of the drilling BHA by maintaining gauge with the AERO Sleeve while simultaneously removing micro-doglegs in the wellbore
- The ultra-low friction design allows the drilling string to operate more effectively, improving operational efficiency and saving costly non-productive time
- The AERO Sleeve works as the fulcrum point for the RSS and motor systems; strategically placed cutters are made of specialized polycrystalline diamond compact (PDC) or synthetic diamond material to allow for more durability and longer service life

Applications

- Open hole directional drilling in deepwater, shelf, or land applications
- Ideal for use in more deep, complex wells and environments