

# Well Construction

## Tubular Products and Services

### Spring ARK Anti-Rotational Key

Expro's Spring ARK Anti-Rotation Key ("Spring ARK") is an antirotational device designed to impede vibration induced rotation (movement) of a fully made-up large OD connection that can occur during drilling and running operations. The Spring ARK will increase the breakout resistance of a connection, reducing the possibility of gradual loosening of the connection.

Expro's Spring ARK is a hands-free anti-rotation device, preinstalled in the connection at the manufacturing facility as opposed to the rig site thereby eliminating the need for personnel in the redzone to install a "traditional" anti-rotational key. Once the connection is successfully made-up on the rig the Spring ARK self-engages and locks in place. Ultimately, this reduces make-up time by several minutes as there is no need for an anti-rotational device to be installed by hand in the redzone and either screwed, hammered, or drilled in place.

#### Applications

- Offshore deepwater
- Drilling rig is over high currents / rough seas
- When extended rotary hang-off time of the casing string is unavoidable

#### Benefits

- Reduces personnel on board and allows Expro's proprietary connections to make-up automatically with the added security of increased breakout resistance in the connections which reduces concerns of a dropped casing string at the rig site
- Spring ARK reduces client's installation time which results in rig cost savings
- Clients are not required to subcontract a dedicated thread representative who must install conventional anti-rotation keys by hand in the redzone as is done today in the field
- Spring ARK aims to increase the overall safety of personnel at the rig site by removing them from the redzone directly reducing risk of injury, increasing productivity and eliminating opportunities for dropped objects
- Minimizing the possibility of dropped objects reduces delays, rig and equipment costs, and environmental concerns. Clients get to enjoy the financial benefits of reduced rig time and personnel on location

