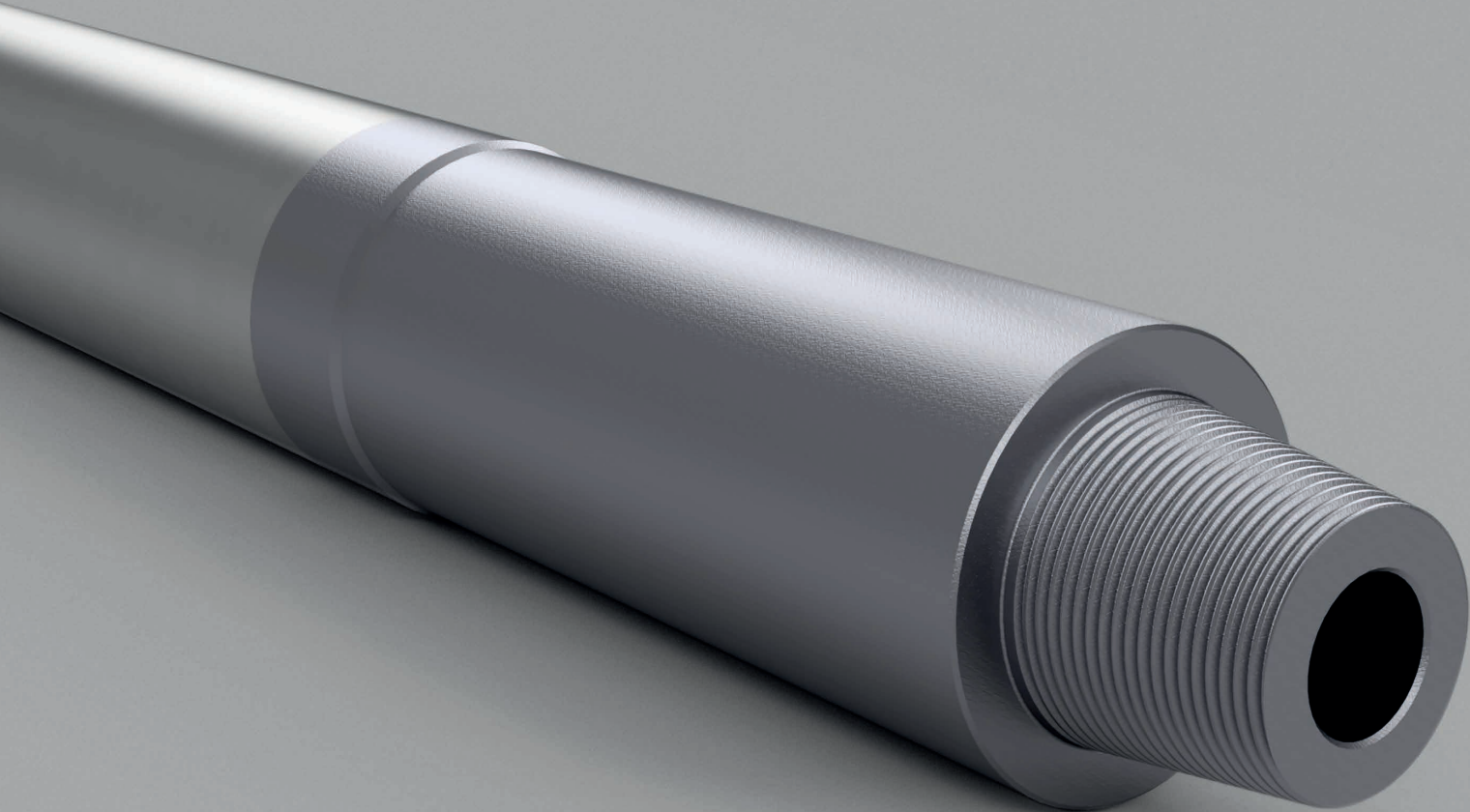


MECHANICALLY LOCKABLE

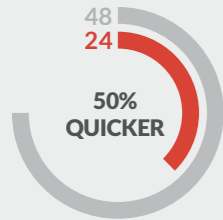
DRILL PIPE SWIVEL (ML-DPS™)



IN NUMBERS

Conventional Technology

ML-DPS™



24 HOURS SAVED

Using the ML-DPS™ guarantees getting to target depth safely on the first attempt.



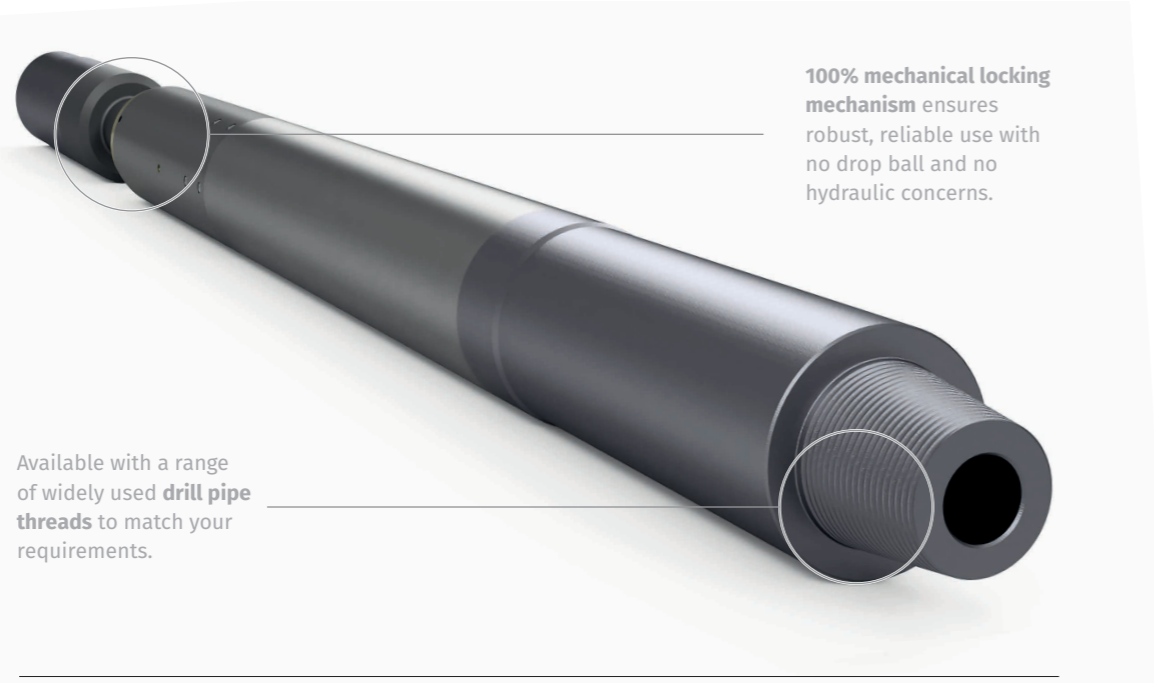
\$450,000 SAVED

By running a Liner/Completion in ERD well in half the time.



REDUCED HSE EXPOSURE

Personnel injury risk drops dramatically due to the minimal manpower requirement.



100% mechanical locking mechanism ensures robust, reliable use with no drop ball and no hydraulic concerns.

Available with a range of widely used drill pipe threads to match your requirements.

DRILL PIPE SWIVEL (ML-DPS™)

- A drill pipe deployed swivel tool allowing independent upper string rotation
- Enables **more weight** to be applied to push liners into extended reach drilling wells
- Can be **100% mechanically locked** without the need for flow, circulation or pressure
- Once locked it can be **rotated to the right or to the left in tension or compression**
- **Prevents potentially harmful rotation and torque** being applied below it

Our Drill Pipe Swivel tool can be run on any string where potential problems exist in reaching target depth due to torque and drag issues – typically in long, horizontal extended reach drilling (ERD) wells.

THE BENEFITS

- **Reduced requirement** for heavy-weight drill pipe or drill collars
- **Protection** from potentially harmful torque
- **Immediate locking** enables mechanical release of setting tools when required
- **Mitigates HSE risk** involved in handling multiple roller bearing subs



QUALIFICATION TESTING OF ML-DPS™

Our domestic and international patents pending tool has been extensively tested across a range of applicable parameters.

In addition to workshop, bench and duration testing, the ML-DPS™ has also been tested in tension, under compression, and with a significant dogleg. Our in-house engineers carried out the following comprehensive programme of tests of the ML-DPS™ over the course of five months:

- **Function tests** of prototype mechanical locking mechanism
- **Torque tests** of prototype mechanical locking mechanism to 50,000ft/lbs to left and to right
- **Trial build and function tests** complete fully functional tool
- **Pressure test** complete tool to 10,000psi in swivel and locked mode
- **Compression/rotating test** complete tool (bearings) with 150,000lbs
- **Compression/rotating test** complete tool (bearings) 100 revs 125,000lbs
- **Test locking mechanism/complete tool** with significant side-load/bending moment
- **Endurance test** complete tool (bearings) to 125,000 lbs compression at 50rpm over 12 hours

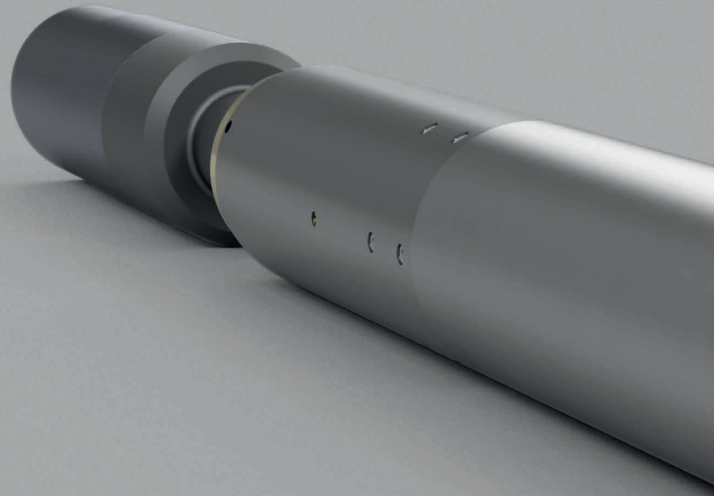
The Drill Pipe Swivel has passed all of these comprehensive tests and is now ready for field trials.

FASTER SIMPLER COMPLETIONS

Aberdeen-headquartered Deep Casing Tools is a global oil and gas technology development firm which provides unique, patented, drillable turbine technology.

For the last decade we have been challenging conventional Target Depth Technology and driving the boundaries of innovation. As a result, we have developed a unique suit of smart simple and proven drillable turbine technology in the TURBOCASER™ as well as other fluid powered tools such as the TURBORUNNER™, TD PILOT™ and DISPOSABLE-PDM™, to provide a complete solution across every stage of the drilling cycle.

Our track record speaks for itself: more than 400 tools sold to over 30 global customers, with a near perfect installation success rate.



**DEEP
CASING
TOOLS**

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