

**Downhole Products**  
A Varel International Energy Services Company

## BLADERUNNER™

Patented.

The BLADERUNNER™ Ultimate Friction Reduction Spir-o-lizer performs equally in open or cased holes. Maximise drag reduction, minimise start up torque. Cost effective alternative to roller type centralizers. Based on already proven design used in some of the worlds most demanding wells completed in the past. (BP Wytch Farm, Caspian Sea, Sakhalin Island etc.)

### BLADERUNNER™



The Ultimate Friction Reduction Spir-o-lizer™ unit reducing both Torque & Drag with patented ultra-low friction buttons and sleeve. Performs equally in open or cased hole situations.

Cost effective alternative to roller type centralizers.

### BLADERUNNER LD™



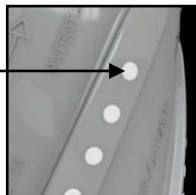
Maximise Drag Reduction in cased/open hole with the BLADERUNNER LD™ (Low Drag) Zinc alloy Spir-o-lizer™ enhanced with ultra-low friction buttons. Eliminates moving parts, and break down caused by ingress of cuttings.

### BLADERUNNER LT™

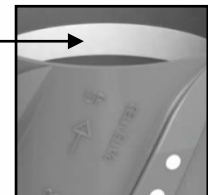


Minimise Start up Torque with the BLADERUNNER LT™ (Low Torque) Zinc alloy Spir-o-lizer™ incorporating ultra-low friction sleeve. Proven low friction zinc alloy construction with Spir-o-lizer™ features. For rotating liners and casings.

Solid single piece construction fitted with patented Ultra-Low Friction buttons.



No moving parts eliminating the possibility of failure & subsequent fishing caused by tool break up downhole.



- Works equally well in both cased hole and open hole regardless of deviation.
- Lower drag when running through cased hole sections and out into open hole through milled sections.
- Provides enhanced clean up and cement placement properties.
- Lowest friction co-efficient of any centralizer available today.
- The Blade Runner's patented Ultra-Low Friction buttons perform through even the longest casing runs.

#### For Further Information please contact:

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