



Steady Core™

TORSIONAL STICK SLIP MITIGATION

While coring, the effects of stick-slip can cause the core bit to rapidly accelerate and decelerate. In some instances, this can cause backward rotation of the core bit. Utilizing downhole sensors in the bit, the near bit stabilizer, and the inner tube hanger, data can be collected to see the measured effect of stick-slip.

Steady Core from Canamera Coring mitigates the effects of stick-slip by converting excess torque into axial movement, reducing weight-on-bit as needed.

The torque conversion is done through a torsional absorber component utilizing a helical spline. As torque increases the helical spline causes the Steady Core to decrease in length. This temporary shortening of the tool reduces weight-on-bit to decrease bit cutting depth. As torque decreases the Steady Core extends in length to maintain weight-on-bit. The axial extension and compression are controlled by a stack of high strength disc springs.

As the Steady Core maintains a constant weight -on-bit it decreases stick-slip thereby increasing the rate of penetration by keeping the bit rotating for a higher percentage of time. The torsional and axial vibrations absorbed by the Steady Core is beneficial to the life of the bit and other downhole components.

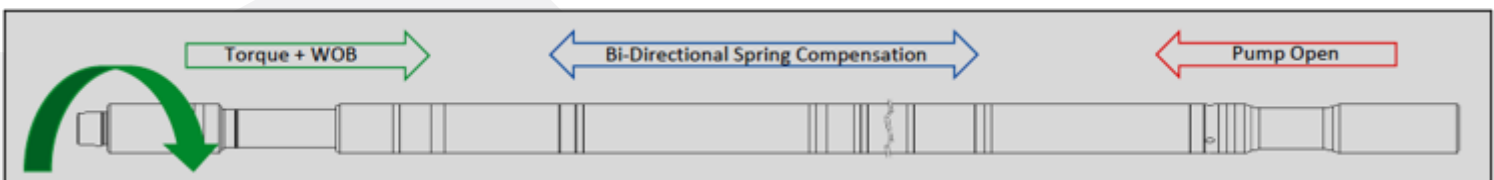
The Steady Core is sprung in both extension and compression – this allows it to function with a minimal amount of torque or axial loading.

Benefits:

- Improved core quality
- Increased run lengths
- Eliminate stick-slip induced core fractures
- Reduced jamming due to induced fractures
- Reduced fluctuations of surface torque readings
- Higher ROP due to higher cutting efficiency
- Extended bit life

SPECIFICATIONS		
Tool OD	5.25"	7.25"
Hole Size	6-1/4" - 6-3/4"	8-1/2" - 8-3/4"
Connections	Fit As Required	
Tool ID	1.75"	2.50"
Tool OAL	25 ft	29 ft
Weight	1,670 lbs	2,700 lbs
Maximum Tensile Load	452,400 lbs	1,050,000 lbs
Maximum Axial Travel	12"	14"

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