

SoftSpeed II

Stick Slip Mitigator



The M/D Totco™ SoftSpeed™ II stick slip mitigator uses automated vibration dampening to mitigate torsional vibration and reduce stick slip oscillations during drilling operations. The platform provides the analytics and capabilities required to automatically detect and mitigate these stick slip oscillations, enabling you to maintain drilling efficiency and reduce equipment wear. The auto-tuning feature enables the speed controller to provide optimal damping to mitigate stick slip occurrences. The result is a stable, robust, and proven controller build on decades of experience and know-how.



**Reduces
stick slip**



**Longer
bit life**



**Maintains
wellbore quality**



**Enables
higher ROP**

Features

Fully auto tuning

- Remove manual tracking factors as system automatically detects correct stick slip frequency
- Dampens and mitigates stick slip oscillations to improve wellbore quality, increase WOB to improve ROP, and reduce equipment damage

Intelligent control governance for optimized performance

- Embedded with multiple features that ensure RPM oscillates in controlled and productive manner
- Programmed to activate at ideal time in stick slip cycle to ensure maximum efficacy
- Automatic analyzer finds optimal parameters to accurately estimate bit rotation speed, reducing transversal drillstring vibrations that can damage equipment or impact drilling performance

Industry-proven, mature, technology

- Proven system deployed on hundreds of rigs worldwide
- Relies on robust implementation method and thoroughly validated core algorithm

Added Plus features

- Updated pipe tally user interface allows users to classify BHA and Drill Pipe sections from the pipe tally page
- “Phase trigger” feature to delay SoftSpeed activation and mitigate stick slip at an optimal phase of the stick slip cycle
- “Smart ramp function” to avoid inducing new stick slip oscillation when speed command changes with SoftSpeed active during drilling operation
- “Stability detector” function with an algorithm that runs in the background and collects vital drilling parameters to measure the stability of the system, making SoftSpeed robust against torsional vibration induced by WOB oscillation and incorrect pipe tally settings. SoftSpeed will be automatically deactivated by the “stability detector” as needed
- Single motor operation that can activate SoftSpeed when one or two motors is selected.

Your Data – Made Easy™