

# Twister Automated drillpipe oscillator



The M/D Totco™ Twister™ automated drillpipe oscillator is designed to rotate the pipe back and forth when the Directional Driller slides. The software ensures pipe is kept in rotation, resulting in a more efficient transfer of weight to the bit and improved performance of directional BHAs without adding costly pieces of equipment. Accessed from the Top Drive screen on the HMI, the driller can choose Bump, Follow, or Rock modes from an intuitive interface, allowing for precise tool face orientation or induce RPM oscillations in the drillstring to reduce the static friction that occurs during sliding operations. Our field-proven Twister system results in a considerably higher sliding ROP, better wellbore quality, reduced days to drill, and cost savings.



Increased  
sliding ROP



Smoother  
wellbore



Improved  
tool face control



Dynamic  
wrap adjustment

## Features

**Three driller-chosen modes allow for precise tool face orientation, or to induce torsional oscillations in the drillstring**

- **Bump Mode** – *Drill Bit Face Orientation*

Bump mode rotates the top drive shaft a fixed distance in one direction. The driller can choose Bump clockwise or Bump counterclockwise, depending on the desired direction. The top drive then smoothly rotates the shaft the desired distance in a specified direction.

- **Follow Mode** – *Drill Bit Face Orientation*

Follow mode gives the driller very fine control of the TDS model top drive shaft, and is best suited for bit-face orientation. In this mode, the top drive shaft follows the driller's commands from the Amphion™ chair's rotary encoder. This mode gives very accurate and fine control of the shaft in both clockwise and counterclockwise directions.

- **Rock Mode** – *Drillstring Stick Friction Reduction*

Rock mode rocks the drill string in a preset direction using a specified amount of energy, then reverses direction, and rotates back to the original position. This allows for maximum weight transfer as friction is broken while maintaining the tool face. The number of wraps applied in Rock Mode adjusts dynamically to achieve the rotational energy target in either direction.

**Automated drillpipe oscillation provides safe, reliable, and more efficient drilling operations**

- Keeps pipe in rotation during slide drilling, resulting in more efficient transfer of weight to the bit
- Energy setpoint system allows for a dynamic number of wraps to be applied during a slide to maximize the breaking of friction while minimizing the risk of unwanted tool face movement
- Breaks wellbore friction, allowing for more efficient transfer of weight to the bit
- Considerably higher sliding ROP and a better-quality wellbore, from an easy-to-use interface
- Allows for sliding at extended reaches by minimizing drag

**Your Data – Made Easy™**