



FLEXFUSION

FlexFusion is an elevated advancement in drilling automation that seamlessly integrates cutting-edge technologies with Helmerich & Payne's industry-leading FlexRig® fleet to deliver unparalleled performance and consistency. While it is not the first automation solution, it is the most comprehensive on the market today, designed to help operators achieve greater consistency, efficiency, and performance in their drilling operations.

By automating the key processes of drilling a stand and providing real-time data and insights, FlexFusion can help operators:

INCREASE ▲ **CONSISTENCY, ROP, OPTIMIZATION**
REDUCE ▼ **CYCLE TIMES, TRIPS, BIT & BHA FAILURES**



Full Stand Automation

FlexFusion is a combination of industry leading control technologies designed to efficiently drill a stand. Together, these technologies are designed to mitigate the effects of bit bounce, bit whirl and stick-slip to improve ROP and extend BHA life.

- Autodriller Pro reduces effects of bit bounce by prioritizing stable block velocity.
- FlexTorque® technology mitigates stick-slip by actively responding to torque fluctuations.
- Sequenced automation helps manage the effects of bit whirl by consistently executing the process of applying and removing WOB.

Regardless of personnel changes, experience or knowledge level H&P rigs can seamlessly repeat these processes. Operators can also optimize these processes and communicate their desired set points via a parameter roadmap to further enhance drilling performance across their operations by applying their own best practices.

Consistent Execution at Scale:

- Standardize every connection for every rig using the same set points to eliminate variability
- FlexFusion helps achieve consistent execution at scale, eliminating the variability that was previously challenging to manage

Reduced Trips & Cycle Times:

- Improve ROP and minimize unplanned trips related to tool failure
- Consistently stay engaged with the formation

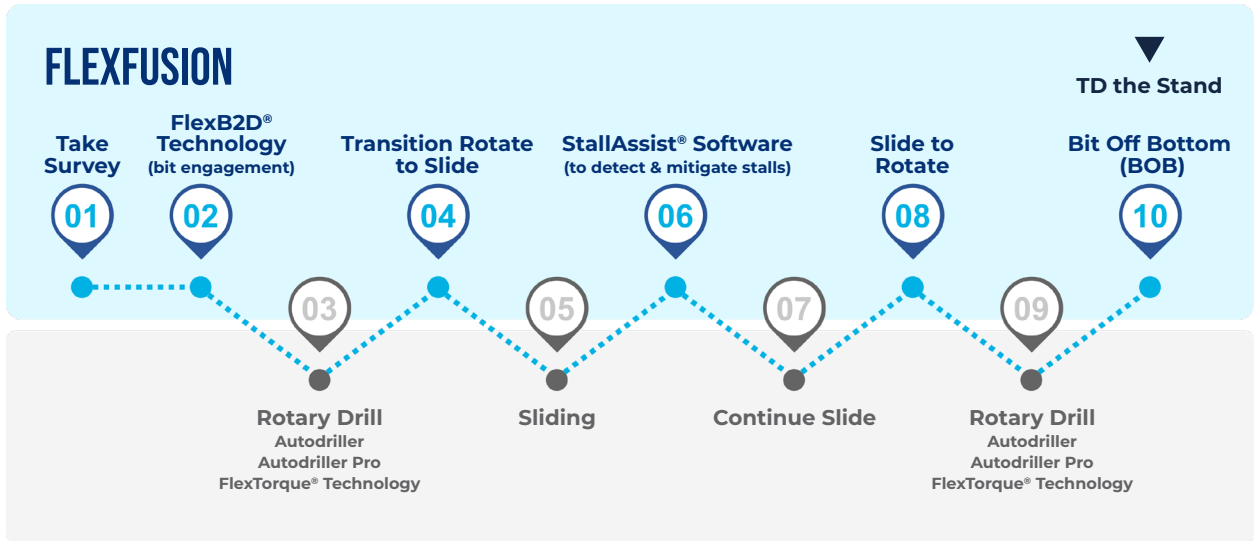
Agile Process Development & Optimization:

- Reduce human variability through automation
- Enable optimization through process insights to tackle more challenging wells



With Automation Demand Exceptional

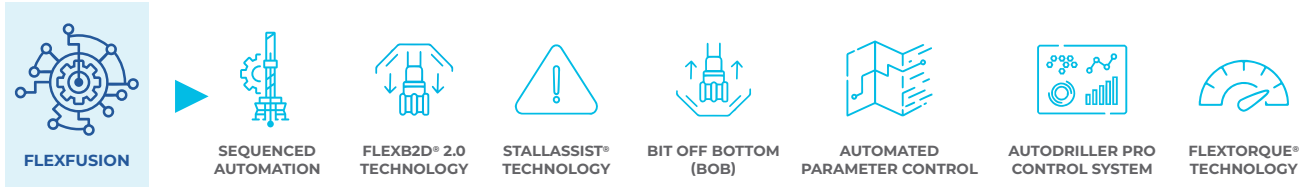
FlexFusion represents the pinnacle of drilling automation, offering a comprehensive solution that addresses key challenges in the industry while delivering unmatched efficiency, safety, and consistency. With its innovative features and customizable capabilities, FlexFusion sets a new standard for automated drilling platforms, empowering operators to achieve optimal results in even the most demanding drilling environments.



Standout Features

Process Automation	Reduces pressure on the driller to provide both fast and consistent process execution, giving time back to the driller to lead the team.
Sequenced Automation	Serves as a handshake between different technologies to efficiently drill a stand, focusing on minimizing the effects of bit whirl, bit bounce and stick-slip
Automated Parameter Execution	FlexApp parameters can be configured to automatically execute preplanned procedures for bit engagement/disengagement, slide set-up and stall recovery
Safely Releasing Torque	With a novel control method, FlexFusion supports the safe release of top drive torque, enhancing operational safety and efficiency
Improved application of WOB	FlexB2D [®] technology manages bit whirl, helping to extend bit and BHA life and reduce unplanned trips
Faster bit disengagement and removal of WOB	Bit off bottom (BOB) helps to quickly disengage the bit while rotating, further mitigating bit whirl, extending tool life, and reducing unplanned trips
Stall detection and recovery	StallAssist [®] technology detects and recovers from downhole motor stalls, minimizing costly downtime
Automated pre- and post-slide processes	Improve consistency and reduce time associated with slide set-up
Autodriller Pro	Industry-leading block velocity stability to keep the bit consistently engaged and reduce bit bounce related trips

A Comprehensive Automation Package



FlexFusion is a pre-configured package that includes essential technologies needed to automate the process of drilling a stand. This creates a seamless process for operators to quickly get started in leveraging the enhanced performance that automation provides.

FlexFusion Package Enhancements

H&P's Advanced Well Engineering team offers premium engineering services to maximize the efficiency of your well delivery process.

- **Optimized Roadmap Creation:** Leverage DrillScan® physics-based modeling software and advanced simulation techniques to create an optimized drilling roadmap. This unified approach considers operational constraints in combination with Predictive Vibration Mapping to identify resonant RPMs, mitigate downhole vibration, and comprehensively enhance the selection of drilling parameters.
- **BHA Analysis:** Harness the extensive experience of H&P's engineering team and industry-leading DrillScan® Digital Solutions to provide swift and comprehensive 3D predictions and analysis of bottom hole assembly (BHA) directional tendencies, including build/drop and rotating tendencies. Our teams leverage existing operational data to refine modeling precision for optimal design and equipment selection to reduce failure rates.

FlexFusion is automation elevated, offering a comprehensive solution that addresses key challenges while delivering unmatched efficiency and consistency at scale. By fusing a suite of advanced drilling technologies and automating key sequences, FlexFusion sets a new standard for automated drilling platforms, empowering operators to achieve optimal results in even the most demanding drilling environments.



For more information on how Helmerich & Payne can help you achieve better drilling outcomes, contact an H&P sales representative today or contact us through our website at [helmerichpayne.com/contact](https://www.helmerichpayne.com/contact).

It's time to follow through on your drilling performance potential.

Past performance is not a guarantee of future results. Any statements regarding past performance are not guarantees of future performance and actual results may differ materially.

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