

Designed to reduce costs by saving drilling hours and extending the life of drill bits, the Pason Electronic AutoDriller maintains a specified weight on bit (WOB) to maximize the rate of penetration (ROP) while drilling.

FUNCTION

Built for accuracy and control, the Pason Electronic AutoDriller maximizes ROP by monitoring and adjusting WOB with acute precision. The Pason Electronic AutoDriller actuates the drilling rig's drawworks brake handle using continuous feedback from hook load, drilling fluid pressure, drawworks drum rotation, and a target ring depth sensor. A target is entered for WOB and optionally "not to exceed" limits are entered for fluid pressure and rate of penetration (time drilling). Weight is added to the bit until the desired WOB, drilling fluid pressure, or ROP is attained. Using sensors already installed for the Pason Electronic AutoDriller is reliable and easy to install on a rig.

FEATURES

- A target limit is set for WOB and optionally "not to exceed" limits are set for drilling fluid pressure and ROP. Weight is added to the bit until the target limit is attained.
- Operates through all ROP ranges.
- Capable of very precise ROP control (time drilling).
- Maintains a consistent and stable WOB. Precise control of WOB provides increased ROP and less stress on the drill string, mud motor, and drill bit.
- Maintains a consistent and stable drilling fluid pressure.
- Shares existing sensors installed with the Pason EDR.
- Uses the rig's existing band brakes for operation and can be installed on almost all rigs without modifications.
- Uses a rotary encoder mounted on the drawworks drum shaft to achieve high resolution measurements of drawworks movement.
- Allows users to adjust and monitor Pason Electronic AutoDriller operations from the doghouse computer and from an optional Pason SideKick located on the rig floor.
- Includes two emergency kill switches.

COMPONENTS

AutoDriller Control Box:

Operates as the control centre of the Pason Electronic AutoDriller system. Installed in the doghouse, it continually monitors all drilling variables and parameters making adjustments to the brake handle position to achieve optimal control.



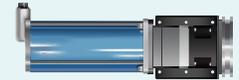
Kill Switches:

Starts and stops the system from the rig floor or from the doghouse.



Stepper Motor:

Pulls or releases a wire rope, which adjusts the rig's brake handle.



Drum Encoder:

Provides over 8000 ticks per revolution, giving precise sensing of drawworks movement information to the control box.



Doghouse Computer:

Works as an interface to allow the user to calibrate and set the WOB target, pressure limit, and ROP limit.

