GaugePro Echo On-Command Digital Reamer
Eliminate the unknowns—Control and confirm reamer operations in real time

Baker Hughes GaugePro Echo™ on-command digital reamers advance reaming capability for better economics by putting real-time downhole tool control in the hands of the operator. Through proprietary technology, unknowns are known, limitations are removed, and nonproductive time (NPT) is reduced as flexibility, controlled operation, hole enlargement, and rathole drilling work together.

Gain control and confidence with real-time communication.
The wired capabilities of the GaugePro Echo reamer enables operators to use real-time commands to deliver unlimited blade activation and deactivation, and receive information on blade status and position, oil pressure, oil temperature, and vibration. This rapid response saves a trip by confirming tool functionality, provides operational insights into downhole conditions, and allows for fast adjustment of drilling parameters so that runs can be extended even further.

Work smarter, not harder.
The GaugePro Echo digital reamer aids intelligence to eliminate the extra steps and constraints typical of other reamers. It operates independently of drilling parameters and pump flow rates, can be placed multiple times anywhere within the bottomhole assembly (BHA), and drills and reams in one run—all the way to the last 15 feet (4.6 meters) of the rathole.

Mitigate NPT and risks.
In high cost-per-foot applications, every minute saved impacts the bottom line. The GaugePro Echo digital reamer dramatically reduces expensive NPT incurred with other mechanical and hybrid digital reamers that limit drilling parameters, stop operations, force drillers to pull out of hole prematurely, and require a second rathole trip.

Applications
- Deepwater drilling
- Remaining rathole drilling
- High cost-per-foot drilling applications
- Salt and unconsolidated formations drilling

Features and benefits
- Digital down-link and up-link
  - Provides limitless activation and deactivation cycles
  - Communicates real-time reamer status, blade position, hole diameter, oil pressure, oil temperature, and vibration information
  - Reduces activation time to fewer than four minutes
  - Operates independently of pump flow rates
- Modular integration with the BHA
  - Eliminate a separate rathole trip when run as a near-bit reamer
  - Independently open/close up to three reamers in the BHA
  - Fully compatible with wired pipe technology
- Triple-redundancy failsafe functionality
  - Provides assurance that the reamer blades will always deactivate
Drilling and reaming the rathole in one run reduces pipe handling and rig floor time, along with associated health, safety, and environmental (HSE) risks. Additionally, triple-redundancy failsafe measures ensure that the reamer always trips out of hole, so that operators can stay on schedule.

When run with Baker Hughes drill bits, the GaugePro Echo reamer makes for even smoother, energy-focused reaming that creates less vibration, protects tools, and drills faster. The premium cutters used on the GaugePro Echo reamer increase ROP and provide durability to smooth out longer runs, and up-drill cutters eliminate swelling sections when tripping out of hole. And with an integral stabilizer, steerability is improved when used with rotary steerable systems.

For more information on how the GaugePro Echo digital reamer can help you eliminate the unknowns and work smart in reaming operations, contact a Baker Hughes representative today.