



PowerCOR service for advanced sidewall coring

Improve high-quality core delivery

The Baker Hughes **PowerCOR™ service** is an advanced sidewall coring device that is computer-controlled and electrically powered. Capable of cutting and retrieving up to 60 sidewall core samples in a single run, it helps oil and gas producers improve reservoir evaluation and maximize their hydrocarbon recovery.

The PowerCOR service acquires uniformly sized sidewall cores under a wide range of formation conditions. It operates reliably in high-pressure/high-temperature (HP/HT) conditions up to 25,000 psi and 400°F (204°C). In addition, the service can be deployed to a variety of borehole sizes (from 5⁷/₈ to 17 in.), borehole orientations (from vertical to horizontal), and formation types (including soft and hard rocks, sand, shale, and carbonate). A graphical surface system continuously monitors and enables real-time control of the coring and sample storage operations. A scintillation detector is built into the tool, providing a gamma ray log for correlation and precise depth control of the coring points.

The PowerCOR service is engineered to provide more horsepower at the bit. A powerful direct-drive electric motor ensures maximum power transfer efficiency. Advances in electric power management keep the bit moving consistently with the variable power (torque) requirements encountered during the coring operation.

In addition, the bit design is optimized to make the most of the high rotational speed that is achieved with the electric-motor power system. The bit is designed to provide efficient removal of the cutting debris during the coring operation. As a result of these technological enhancements, higher-quality rotary sidewall core samples can be acquired using much less rig time with greater core recovery efficiency.

Applications

- Complex reservoirs with varied formations and borehole orientations
- Harsh reservoir conditions
- Operations requiring precise core measurements at specific depths
- Geochemistry
- Geomechanics
- Biostratigraphy
- Reservoir geology/petrology
- Routine and advanced rock properties
- Wireline rock calibration

Benefits

- Monitors and controls the operation in real-time using a graphical user interface
- Reduces rig time by retrieving up to 60 1-in. OD core samples per run
- Achieves high accuracy in HP/HT environments up to 25,000 psi and 400°F (204°C)
- Performs in small borehole sizes down to 5⁷/₈ in.
- Direct-drive electric motor maximizes power transfer

Specifications

Core diameter	1 in. (2.54 cm)
Core length	1.8 in. (4.57 cm)
Minimum tool OD	4.75 in. (12.07 cm)
Minimum borehole size	5.875 in. (14.92 cm)
Maximum borehole size	17 in. (43.18 cm)
Maximum temperature	400°F (204°C)
Maximum pressure	25,000 psi
Maximum capacity	60 cores
Positioning	High-resolution scintillation GR detector