

Coil-Link™

Real-Time Downhole Data Solution

As the global industry drills deeper wells and longer laterals, the associated complexities, costs and risks increase. In a longer lateral, the friction increases and the string weight on-surface becomes an unreliable measurement of weight on the mill. In addition, surface pressure readings can no longer reliably predict the differential pressure across the bottomhole assembly when nitrogen is introduced into the completion fluid. Coil-Link™ for Milling is a real-time downhole sensor package used to supply accurate information about downhole conditions during coiled-tubing operations.

Kobold's Coil-Link™ communicates with the surface using a mono-conductor E-line, so you know exactly what is happening at the mill. Operators have the ability to make decisions quickly and with certainty before a problem occurs.

Coil-Link™ provides precise real-time data that significantly reduces non-productive time by:

- » Avoiding unnecessary bit trips with real-time downhole motor and bit diagnostics
- » Avoiding or recovering from stalls in seconds, even with nitrogen-rich drilling fluid
- » Reducing stuck pipe events by controlling debris size and monitoring bottomhole pressure

Recording Specifications

- » Circulation and wellbore pressure
- » Axial force
- » Inclination
- » Torque
- » Temperature
- » Vibration

Features & Benefits

- » Compatible with monoconductor wire-line or TEC inside coiled-tubing (E-Coil)
- » Standard termination components are available for 9/32" and 5/16" wireline and 4mm TEC. Other sizes are available upon request.
- » 73 mm (2.87 in) tool diameter can pass a 22 mm (0.87 in) ball drop
- » Nitrified flow compatible, unlike mud-pulse communication
- » Event detection of 10 readings per second from all sensors
- » Real-time, logged, configurable output (WITS, WITSML, 4-20 mA, etc.)



Technical Specifications

Mechanical Service and Environment

Maximum Tensile	80,000 lb	36,000 daN
Maximum Torque	2,500 ft-lb	0-3,400 Nm
Maximum Pressure	12,000 psi	830 bar
Operating Temperature	-13°F - 300°F	-25°C - 150°C

Tool Dimensions

Diameter	2.88 in	73 mm
Minimum Ball Path	0.94 in	23.8 mm
Length	36 - 42 in	1 m
Weight	74 lb	33.6 kg

Circulation and Wellbore Pressure Measurement

Range	0 - 10,000 psi	0 - 690 bar
Peak	15,000 psi	1,000 bar
Accuracy	±0.1% FS	±0.1% FS
Resolution	1 psi	0.07 bar

Vibration Measurement

Axial Range	50 g _n -RMS (0 - 6 kHz)
Lateral Range	70 g _n -RMS (0 - 6 kHz)
Shock Range	85 g _n -RMS (0 - 6 kHz)
Weight	0.2 g _n

Weight on Bit Measurement

Range	±20,000 lb	±9,000 daN
Accuracy	±1.5% FS	±1.5% FS
Resolution	5 lb	2.2 daN

Torque Measurement

Range	0 - 2,500 ft-lb	0 - 3,400 Nm
Accuracy	±1.5% FS	±1.5% FS
Resolution	5 ft-lb	6.8 Nm

Temperature Measurement

Range	-13°F - 300°F	-40°C - 150°C
Accuracy	±3.2°F	±2°C
Resolution	1.8°F	1°C

