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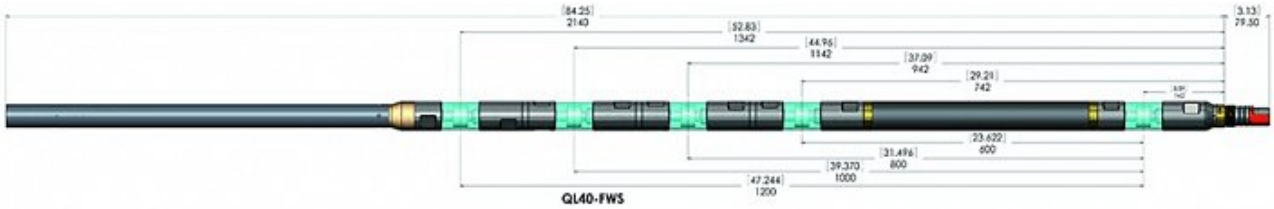
QL40-FWSM Data Sheet

The **QL40-FWS** Full Waveform Sonic tool is an advanced and versatile instrument designed to meet the demanding needs of the water, mining, and geotechnical industries. With its robust capabilities, it excels in both cased-hole and open-hole applications, making it an essential tool for a wide range of geological investigations. The tool is particularly valuable for identifying fractures within the borehole, a key factor in assessing the structural integrity and permeability of the surrounding rock formations.

Sonic logging is a widely accepted technique in borehole analysis, and the QL40-FWS tool takes this to the next level by providing detailed insights into porosity, permeability, and geomechanical properties of rocks. By detecting compressional (P) waves, shear (S) waves, Stoneley waves, and tube waves, it offers a comprehensive view of subsurface conditions.

Designed to be highly adaptable, the QL40-FWS is not limited by the type of casing used in the borehole, allowing for greater flexibility in various logging scenarios. However, to achieve optimal performance, it requires the borehole to be filled with fluid, ensuring accurate and reliable measurements. This tool is indispensable for professionals looking to gain in-depth knowledge of rock formation properties and fracture analysis, aiding in more informed decision-making for environmental, geotechnical, and resource management projects.



QL40-FWS Full Waveform Sonic tool schematic diagram. Image courtesy of Mt Sopris Instruments.

Applications

Cased-hole

- Cement bond logging (CBL)

Open-hole

- Porosity evaluation:
- Permeability analysis:
- Lithology identification:
- Rock strength variation:
- Rock mechanical properties calculation:
- Fracture identification and hydraulic characterization:

Operating Conditions

W - Water ?
M - Mud ?
D- Dry

S - Steel ?
P - PVC Borehole ?

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UC- Uncased ?

*This tool is centralized

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	214cm x 5cm x 5cm	18kg

Technical Specifications

Standard configuration:	Can choose between a 3rx or 4rx receiver
Tx-Rx1 spacing:	60cm.
Rx-Rx spacing:	20cm.
Max temp:	70°C.
Max pressure:	200 bar.
Transducer:	Ceramic piezoelectric
Sonic wave sampling rate:	Normal mode - 4 ?sec. Extended mode - 20 ?sec.
Sonic wave recording time:	Normal mode - 4ms. Extended mode - 16 ms.
Sonic wave dynamic range:	16 bits.

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