

# UltraWire Radial Bond Tool

## Detailed, qualitative analysis of the zonal isolation achieved by cementing services

### Application

- Identify the top of lead and tail cement
- Evaluate the cement bond quality to the casing
- Evaluate cement bond quality to the formation (VDL)
- Identify channels in cement
- Identify micro-annulus with subsequent pressure pass
- Identify the cement squeeze interval in case of a bad cement job
- Determine the depth to cut and pull casing

### Features

- Single transmitter, 3 ft (near) and 5 ft (far) receivers, segmented radial receiver array for radial cement imaging
- Variable sampling rates to maximize data acquisition
- Interchangeable telemetry cartridge
- Slotted sleeve design for improved rigidity, strength, and acoustic isolation
- Can be deployed through small completions and tubing restrictions to log the liner below (minimum clearance +0.25 inches above tool diameter)
- Fully combinable with other UltraWire and UltraMemory™ tools

The **UltraWire™ Radial Bond Tool (RBT)** facilitates a detailed, qualitative analysis of the zonal isolation achieved by cementing services. Effective hydraulic isolation from water-bearing formations is crucial to maximize the productivity of hydrocarbon-bearing reservoirs. Poor cementing allows unwanted fluid transfers between zones, resulting in the potential for lost or unwanted production.

The RBT allows the detection of poor cement conditions before perforating, enabling

proactive measures to be taken. Additionally, its small size, rigid isolator, and powerful transmitter allow through-tubing operations after the completion string is in place. In addition to the traditional 3 ft amplitude and 5 ft VDL, the RBT has a radially segmented, calibrated amplitude measurement. This focuses the transmitted sonic pulse circumferentially, allowing the differentiation of small axial channels as opposed to poor or contaminated cement.

### Specifications

<b>Tool diameter</b>	1 <sup>11</sup> / <sub>16</sub> in. (43 mm)	3 <sup>1</sup> / <sub>8</sub> in. (79.4 mm)
<b>Temperature rating</b>	350°F (177°C)	
<b>Pressure rating</b>	15,000 psi (103 MPa)	20,000 psi (138 MPa)
<b>Tool length (makeup)</b>	9.93 ft (3.03 m)	9.48 ft (2.89 m)
<b>Tool length (transport)</b>	10.27 ft (3.13 m)	10.09 ft (3.08 m)
<b>Tool weight</b>	40 lb (18.1 kg)	140 lb (63.5 kg)
<b>Supply voltage</b>	18V DC	
<b>Power/current</b>	50 mA	
<b>Receiver type</b>	Piezoelectric crystal	
<b>Segmented receivers</b>	6	8
<b>Signal output</b>	3 ft amplitude, 5 ft variable density log (VDL)	
<b>Measure point 3 ft amp</b>	60.6 in. (153.9 cm)	61.6 in. (156.5 cm)
<b>Measure point 5 ft VDL</b>	48.6 in. (123.4 cm)	49.6 in. (120.6 cm)
<b>Logging speed at 50 Kbps</b>	70 ft/min (21 m/min)	
<b>Logging speed at 100 Kbps</b>	100 ft/min (30 m/min)	
<b>Borehole environment</b>	Fluid media (i.e., brine, oil, freshwater, drilling mud)	
<b>Maximum casing/tubing ID</b>	7.5 in. (19 cm)	13.4 in. (34 cm)

