

# HSR-20

## 2-3/4" High Speed Radial Cement Bond Logging Tool

### Description

The High Speed Radial (HSR) presents the next generation of cement bond tools. It evaluates the cement bond quality and integrity to both casing and formation by providing a 360° cement map with a dedicated 8-segment Radial receiver located 2-ft from the transmitter. It also provides standard cement bond amplitude (CBL) through Near receiver (3-ft), and Variable Density Log (VDL) through Far receiver (5-ft). All sonic data is captured and stored digitally. A built-in advanced telemetry system ensures high speed logging without compromise in Sonic quality. A Gamma Ray, Casing Collar Locator and Temperature sensors are included in the tool.

### Applications

- 360° cement map.
- Evaluation of cement bond quality and integrity.
- Location of free-pipe and cement-top.

### Features

- Rated for High-temperature and high-pressure environments.
- Gamma ray detector, CCL detector, and temperature sensor are built in.
- (Optional): Tension/Compression force Sensor, and Top side locator Sensor (relative bearing).
- Compatible with most surface systems.
- Runs on all standard wirelines.
- Combines with two standard pulse tools on the bottom
- All receivers are built in a slotted housing to provide rigidity, strength, and noise isolation.
- Rigid design ideal for horizontal logging
- Electronic design verified for 1 hour operation at 415°F to ensure reliability.
- Proudly designed and manufactured in Canada

### Specifications

<b>Tool Operating Voltage</b>	<b>100 to 150 VDC</b>	<b>Tool Length</b>	<b>Under 4.0 m (13 feet)</b>
<b>Tool Operating Current</b>	<b>80 to 90 mA</b>	<b>Tool Weight</b>	<b>68.0 Kg (150 Lb)</b>
<b>Tool Time Cycle</b>	<b>3 X 50ms = 150ms</b>	<b>Tool Positioning</b>	<b>Must be centralized</b>
<b>Max. Temperature</b>	<b>204°C (400°F)</b>	<b>Max Logging Speed</b>	<b>Up to 30m/min (100 ft/min)</b>
<b>Max. Pressure</b>	<b>172.4 Mpa (25,000 PSI)</b>	<b>Borehole Fluids</b>	<b>Oil - Fresh Water - Brine</b>
<b>Receivers</b>	<b>Near &amp; Far = 2" Omni Radial = 8 Segments</b>	<b>Measurements</b>	<b>Near @ 3 ft, Far @ 5 ft Radial @ 2 ft</b>
<b>Transmitter</b>	<b>2" Dia Omni</b>	<b>Recommended Max. Casing ID</b>	<b>264 mm (10.75 in)</b>
<b>Tool Diameter - OD</b>	<b>68.8 mm(2-3/4 in)</b>	<b>Recommended Min. Casing ID</b>	<b>89 mm(3.5 in)</b>



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