

## 3-ft to 5-ft Cement Bond Tool

Titan Division | Instruments

### Features

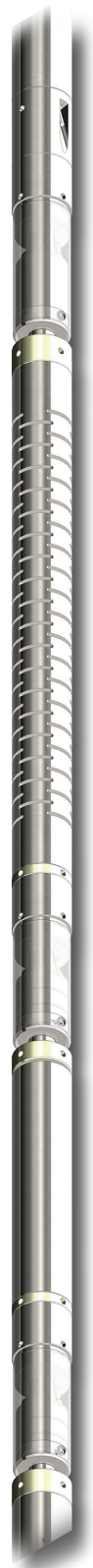
- Piezoelectric crystals used in transmitters and receivers
- Wellbore temperature sensor
- 450°F (204°C) flaked versions available
- Compatible with Hunting Compensated Neutron, GR-Neutron and CCL
- Can accommodate casings sizes ranging from 2-3/8 in. (60 mm) to 14 in. (356 mm)
- 16- to 20-kHz signal
- Canister architecture
- Digital or analog communications available

### Benefits

- Optimal casing signal and data transmission
- Efficiently and easily maintained
- Real-time tool quality control
- Helps confirm isolation integrity between zones
- Avoids production problems
- Accurately assesses cement bond quality and hydraulic isolation
- Identifies top of cement

The accurate evaluation of the cement bonding to a wells casing and to the formation is necessary to confirm the integrity of isolation between zones and avoid production problems.

The standard single transmitter Cement Bond Log (CBL) tool accurately determines casing bond by measuring the amplitude of the first arrival at the 3-ft receiver. A deeper investigating 5-ft receiver confirms the interpretation and also shows formation bond by a full Variable Density Log (VDL) wave display.



## Specifications

Part Number	1-11/16 in. (43 mm)	2-3/4 in. (70 mm)	3-1/4 in. (83 mm)
Standard	8110-1686NPE150-015-00	8110-2756NPE237-022-00	8110-3256NPE300-03-00
High Temperature	8110-1689NPE150-015-00	8110-2759NPE237-022-00	8110-3259NPE300-03-00
<b>Measurements</b>			
Vertical Resolution	3 ft CBL and 5 ft VDL	3 ft CBL and 5 ft VDL	3 ft CBL and 5 ft VDL
Borehole Temperature Accuracy** (°F)[°C]	+/-1% from 75 - 400 [24 - 204]		
Internal Tool Temperature Accuracy** (°F)[°C]			
Cable Head Voltage, VDC	As Measured at Cable Head	As Measured at Cable Head	As Measured at Cable Head
Rec Logging Speed (ft/min)[m/min]	60 [18.3]	60 [18.3]	60 [18.3]
Mud Type • Weight - All Tools	Must be Liquid • No Limitations		
Offset from Bottom Shoulder (in.)(cm)			
Temperature • Transmitter	78.0 [198.1] • 71.0 [180.3]	77.0 [195.6] • 70.0 [177.8]	77.0 [195.6] • 70.0 [177.8]
3-ft Crystal • 5-ft Crystal	53.0 [134.6] • 41.0 [104.1]	52.0 [132.1] • 40.0 [101.6]	52.0 [132.1] • 40.0 [101.6]
<b>Environmental</b>			
Temperature Rating Standard (°F)[°C]	-25 to 375 [-32 to 190.6]	-25 to 375 [-32 to 190.6]	-25 to 375 [-32 to 190.6]
High Temperature (°F)[°C]	-25 to 450 [-32 to 232]	-25 to 450 [-32 to 232]	-25 to 450 [-32 to 232]
Pressure Rating (psi)[MPa]	20,000 [138]	20,000 [138]	20,000 [138]
Material - All Tools	H <sub>2</sub> S-Resistant Construction		
<b>Mechanical</b>			
Outside Diameter (in.)(mm)	1.69 [42.9]	2.75 [69.9]	3.25 [82.6]
Length (ft)[m] {Hi Temp}	9.75 [2.97] {10.29 [3.14]}	9.13 [2.78] {10.50 [3.20]}	9.13 [2.78] {10.50 [3.20]}
Weight (lbs.)(kg) {Hi Temp}	52 [24] {75 [34]}	102 lbs. [46 kg] {120 lbs. [54 kg]}	122 lbs. (55 kg) {140 lbs. [64 kg]}
Max. Tension (lbf)[kN]	12,000 [54]	60,000 [267]	60,000 [267]
Min. • Max. Casing Size (in.)(mm)	2.38 [60] • 7.00 [178]	4.50 [114] • 9.63 [244]	5.50 [140] • 12.75 [324]
Top/Bottom Connection	1-3/16 in. GO Box/Pin	1-3/16 in. GO Box/Pin	1-3/16 in. GO Box/Pin
<b>Electrical</b>			
Operating Voltage & Current	120 VDC @ 40±5 mA	120 VDC @ 55±5 mA	120 VDC @ 55±5 mA
Auxiliary Tool Input	Single or Bi-Level Pulse		
HT Telemetry -All Tools	HT Telemetry		
Analog Bi-Level Pulse (pulse height & width)	±12V max • 1µs min, 30 µs max		
Sonic Transmitter Frequency	20 kHz	18 kHz	16 kHz
Cable Type - All Tools	Single or Multi-Conductor		
High Capacitance Lines - All Tools	7/32 in. 500°F (260°C)		
Crystal Type - All Tools	Piezoelectric		
Pressure Compensation - All Tools	Sliding Cans		

\*New Part Number will be Released in 2016

\*\*Temperature Reading is Less Accurate Below 75°F [24°C] and Above 400°F [204°C]

### About Hunting's Titan Division

For successful cased hole logging and perforating services, tool reliability, availability, and time line of delivery are essential. Hunting supplies customers worldwide with the right tools to get the job done. Our product lines include state of the art, high quality wireline and tubing conveyed perforating (TCP) gun systems, hardware and accessories, shaped charges, and electronic logging tools.