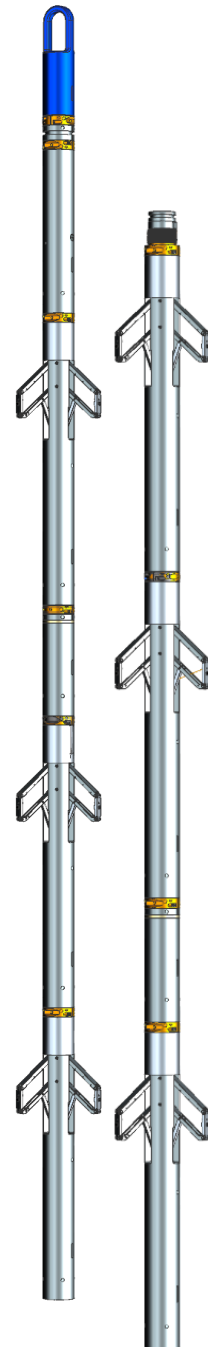


Thru-Casing Formation Resistivity Tool (TCRT) - New

ACCURATE • RELIABLE • STATE-OF-THE-ART RESISTIVITY LOG

FEATURES

- Original, innovative hydraulic drive technology ensuring the electrode tip through the casing corrosion layer, the contact resistance is less than 0.1Ω , guarantee a high-quality reliable and accurate measurements.
- The return electrode is connected to the adjacent well casing to make the current supply electrode's current flow perpendicular to the well casing under measuring for a deeper depth of measurement.
- The tool transmits current alternately through the upper and lower electrodes for compensating measurements. Multiple measurements can be made for each measuring point
- With a large formation resistivity dynamic measurement range up to 300ohmm.
- The vertical resolution is 0.5m, which is useful for thin bed analysis and the measurement has little influence by surrounding rocks.
- There is no need to run wrapper or wash the well before logging, reducing the well's non-productive-time and lowering the total operating cost.
- Unique control software with real-time monitoring measurement quality control during logging.



TECHNICAL SPECIFICATIONS

Measurement Specifications		
Model	TCRT-CB [11009180-AA]	TCRT-BA [11016900-AA]
Output	Formation resistivity	Formation resistivity
Logging Speed	Stationary: ~2.5 min/station Effective logging speed : 96 ft/hr [30 m/h] †	Stationary: ~2.5 min/station Effective logging speed : 96 ft/hr [30 m/h] †
Range of Measurement	1 to 200 ohm-m	1 to 200 ohm-m
Accuracy	(5+0.1*RT)%	(5+0.1*RT)%
Vertical Resolution	1.625 ft [0.5 m]	1.625 ft [0.5 m]
Depth of Investigation	Up to 26 ft [8m], depending on environment	Up to 26 ft [8m], depending on environment
Mud Type/Weight Limitations	None	None
Combinability	Gamma ray, CCL	Gamma ray, CCL
Special Applications	H ₂ S service, Need to be customized	H ₂ S service, Need to be customized

† Stations are recorded every 3.25ft [1.00m], Two formation resistivity measurements 1.625ft [0.50m] apart are made simultaneously at each station.

Mechanical Specifications		
	TCRT-CB [11009180-AA]	TCRT-BA [11016900-AA]
Temperature rating	177°C [350°F]	177°C [350°F]
Pressure rating	103 MPa [15,000 psi]	140 MPa [20,000 psi]
Casing Size (Min)	3-1/2in [88.90mm]	4-1/2in [114.30mm]
Casing Size (Max)	7-1/2in [190.5mm]	12in [304.80mm]
Outer Diameter	Φ54mm [2-1/8 in]	Φ86mm [3-3/8in]
Length	6514 mm [256.5 in]	6570 mm [258.7 in]
Weight	75 kg [165.3 lb]	183 kg [403.4 lb]
Tension	150 KN	350 KN
Compression	200 KN	400 KN

EQUIPMENT and ACCESSORIES

Item	Part No.	Model	Description
1	11009010-AA	CCLS-CA	Casing collar locator
	11013600-AA	CCLS-BA	
2	11010200-BA	TSGT-CB	Telemetry with Gamma Ray Unit
	11000820-AA	TSGT-BA	
3	11009020-AA	TCRC-CA	TCRT electronic Cartridge
	11016950-AA	TCRC-BA	
4	11009150-AA	TCSH-CA/TCSL-CA	Electrode Sonde and Hydraulic unit
	11016910-AA	TCSH-BA/TCSL-BA	
5	11009070-AA	TCRP-AA	TCRT Power control panel
6	11009080-AA	TCPS-AA	TCRT program-controlled DC Power Supply
7	11014790-AA	Geo-Express™ Lite/Pro with GeoScope	Surface System