Technical Specification Sheet

iQ™ Magnetic Properties Tool - 3 1/2 in.

The 4-segment receiver of the iQ™ Magnetic Properties Tool measures the casing in 90° sections (quadrants). The tool produces a magnetic field that opposes the primary field casing attenuation and phase shift. The magnitude of the measured phase shift is a function of the electrical conductivity, magnetic permeability and metal thickness of the field being measured. Multiple coil spacing and frequencies control the depth of investigation and measure the electromagnetic properties of the casing, that yield a quantitative casing thickness and internal diameter measurements.

Ratings & Dimensions

Max Temperature	350°F (177°C)
Maximum Pressure	20,000 psi (138 MPa)
Outer Diameter	2.75 in (69.85 mm)
Length	68.4 in (1737.36 mm)
Weight	130.0 lb (177.0 kg)
Csg/Tbg OD	Min: 4.5 in (114.3 mm) Max: 9.625 in (244.46 mm)
Tensile Strength	**Tension:** 15,000 lb **Compression:** 15,000 lb
Measure Points	**Thickness:** 32.66 in (829.6 mm) **Caliper:** 25.62 in (650.8 mm)

Borehole Conditions

Tool Positioning	Centralized
Logging Speed	**Recommended:** 30 ft (9.1 m) /min **Max:** 60ft (318.2 m) /min

Hardware Characteristics

Source Type:	Single and multi frequency AC coils
Sensor Type	Azimuthal thickness gauge with quadrant sensitivity Multi-frequency caliper and casing properties 3-axis accelerometer for tool orientation
Connections	E-Line 'GO' Type
Combinability	GR, CCL, MAC, Radii Bond Tool

Electrical Specification

Current	+ 45 mA @ 130V

Measurements

	Casing Thickness	**Casing Caliper**
Principle	Remote-field EC	Near-field EC
Range	0 to 1.50 in	4.5 to 9.625 in
Azimuthal Resolution	4 sectors	NA
Vertical Resolution	1.56 in	1.00 in
Sensitivity	1% (2 inch through-hole)	1%
Accuracy	±1%	
Primary Curves	Casing & differential thickness	Casing ID
Secondary Curves	3-axis accelerometer, internal temperature, casing electrical properties	

Calibration

Primary & Wellsite	Sections of API casing in different weights

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