



CASED HOLE LOGGING Multi-Finger Caliper

Spartek Systems specializes in providing the oil and gas industry with high quality data to monitor well performance and diagnose potential problems. Founded in 1994, Spartek Systems leads the industry in providing cost effective solutions for acquiring reliable well integrity data.



Product Overview

The Multi-Finger Caliper (MFC) has 24 to 60 high resolution calipers which measures the internal radii of the wellbore tubing and casing. Accurate measurements can be made in tubular sizes from 1.75 inches to 9.63 inches in diameter. The MFC uses a series of “contactless” displacement sensors and a corresponding number of measurement fingers. When moving along the inner casing wall, the radial displacement will be changed into an axial displacement of the sensor, which is then processed, coded, and transferred to surface system where the image of the casing will be obtained.

The MFC can be used to detect casing deformation, bending, fractures, holes, scale deposition, paraffin build-up, and inner wall corrosion with high accuracy.

- ▶ 24/40/60 Arms
- ▶ Max, Min, and Average borehole diameter curves
- ▶ Tool Deviation
- ▶ Relative azimuth
- ▶ Real-time chamber temperature
- ▶ Real time interpretations

Features and Applications

- ▶ Internal tubing and casing inspection
- ▶ 3D visualization tools aids interpretation of the data:
 - ◆ Verifying well construction
 - ◆ Mapping perforations
 - ◆ Identifying casing drilling damage
- ▶ Easy assembly and disassembly for preventive maintenance and repair
- ▶ Hardened finger tip for long service life
- ▶ Combinable with Memory Controller or SRO Telemetry for memory or E-Line operations.
- ▶ Compatible with the “Spartek” or “Warrior” logging systems.

SPARTEK SYSTEMS

Providing Our Customers With “Best In Class” Technology

Email: sales@sparteksystems.com

<http://www.sparteksystems.com>

Specifications:

	MFC24C	MFC40C	MFC60C
Pressure (maximum)	15,000 psi (103 MPa)	15,000 psi (103 MPa)	15,000 psi (103 MPa)
Temperature (maximum for 2 hrs)	347° F (175° C)	347° F (175° C)	347° F (175° C)
Diameter	1.689 in (43 mm)	2.875 in (73 mm)	4.00 in (102 mm)
Length	5.76 ft (1.755 m)	6.04 ft (1.840 m)	5.36 ft (1.632 m)
Make Up Length	5.38 ft (1.640m)	5.66 ft (1.725 m)	5.04 ft (1.537m)
Measure Point Caliper (from bottom) Finger Closed Finger Open Extended Finger Closed Extended Finger Open	2.59 ft (0.7900 m) 2.63 ft (0.8019 m) 2.40 ft (0.7316 m) 2.46 ft (0.7509 m)	2.27 ft (0.6930 m) 2.33 ft (0.7116 m)	1.74 ft (0.5316 m) 1.80 ft (0.5496 m)
Weight	22.5 lbs (10.2 kg)	51.14 lbs (23.2 kg)	68.89 lbs (31.2 kg)
Caliper Measurement Number of arms Measurement Range (Diameter) Minimum Maximum Maximum (Extended Finger) Radial Accuracy Radial Resolution Finger Extended Finger	24 1.77 in (45 mm) 4.49 in (114 mm) 7.00 in (178 mm) ±0.03 in (0.76 mm) ±0.003 in (0.076 mm) ±0.005 in (0.127 mm)	40 2.90 in (73 mm) 7.50 in (190.5 mm) ±0.03 in (0.76 mm) ±0.005 in (0.127 mm)	60 4.50 in (114.3 mm) 9.63 in (244.6 mm) ±0.03 in (0.76 mm) ±0.007 in (0.178 mm)
Deviation Measurement Measurement Range Accuracy Resolution	5° to 60° ±5.0° ±0.1°	5° to 60° ±5.0° ±0.1°	5° to 60° ±5.0° ±0.1°
Relative Bearing Measurement Measurement Range Accuracy Resolution	5° to 100° ±5.0° ±0.1°	5° to 100° ±5.0° ±0.1°	5° to 100° ±5.0° ±0.1°
Data Acquisition Logging Speed	30 ft/min (10 m/min)	30 ft/min (10 m/min)	30 ft/min (10 m/min)
Power Requirements Voltage (DC) Current Motor Working Current	12 Volts (±10%) < 96 mA < 450 mA	12 Volts (±10%) < 90 mA < 600 mA	12 Volts (±10%) <90 mA <600 mA

Specifications subject to change without notice

For More Information, Pricing, and Technical Support Contact:


 #1 Thevenaz Industrial Trail
 Sylvan Lake, Alberta
 Canada, T4S 2J6

 Tel: (403) 887-2443
 Fax: (403) 887-4050

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 Email: sales@sparteksystems.com
<http://www.sparteksystems.com>