

Compact™ Two-Arm Caliper

Orients and centralizes tool strings to produce borehole-diameter logs

Applications

- Borehole volume calculations
- Tool orientation

Features and Benefits

- The dual (X-Y) caliper provides data for accurate analysis of the borehole shape and volume.
- The powered centralization enables short-axis orientation to provide more accurate measurements in a rugose hole.
- The small diameter of the tool facilitates deployment in wireline or memory mode to mitigate the risk of bridging events and to reduce nonproductive time.
- The tool is fully combinable with other Compact wireline technologies.

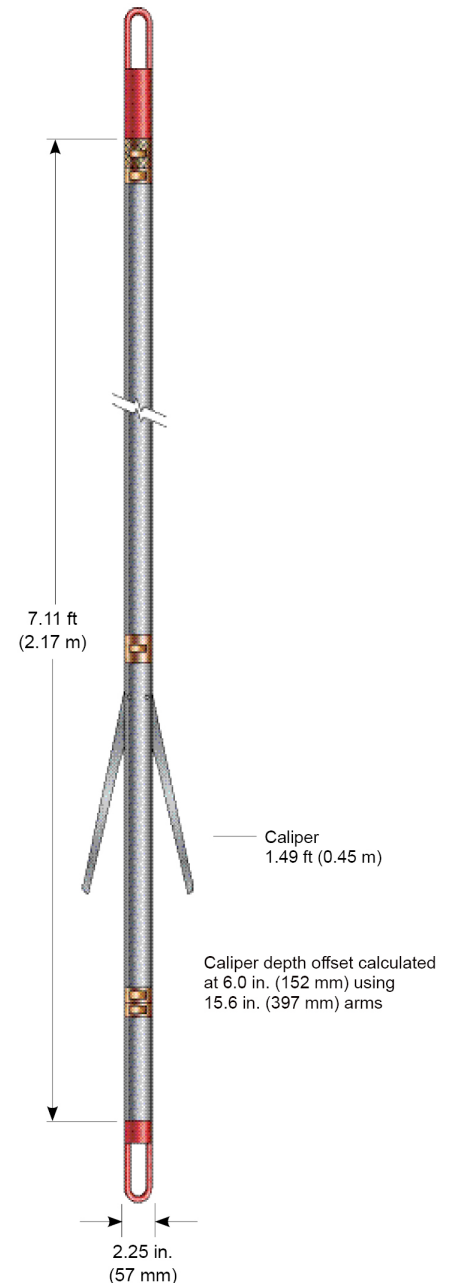
Tool Description

The Weatherford Compact two-arm caliper (MTC) orients and centralizes tool strings to produce borehole-diameter logs. It also provides powered centralization in situations where conventional centralizers cannot be used such as through-drillpipe logging.

When combined with the Compact photodensity tool (MPD), the lateral force from the MTC exceeds that of the MPD caliper. This forces the density shoe to run up the short axis of an oval hole. Because the axis is usually less rugose and closer to the bit size, the toolstring enables optimal density and P_e log responses. The X-Y caliper logs also provide more accurate hole-volume estimations.

By removing one of the two caliper arms, the MTC can be used as a powered centralizer. This enables construction of complex tool-string geometries using multiple MTCs, which can be configured at 60° or 90° in relation to one another.

To provide hole-size input for environmental corrections and hole-volume calculations, the MTC can be used in tool strings with no other caliper measurement.



The Compact two-arm caliper (MTC) can be used as a standalone sensor or as a tool-orientation device.



Compact™ Two-Arm Caliper

Specifications

Measurement

Data	Caliper
Logging speed	1,800 ft/hr (549 m/hr)
Measurement range	2.36 to 27.0 in. (60 to 690 mm)
Vertical resolution	6.0 in. (152.4 mm)
Accuracy	±0.1 in. (2.54 mm)
Depth of investigation	Borehole measurement
Borehole fluids	WBM, OBM, salt, air

Mechanical

Maximum outer diameter	2.25 in. (57 mm)
Length	7.11 ft (2.17 m)
Weight (air)	61.7 lb (28 kg)
Maximum temperature	320°F (160°C)
Maximum pressure	15,000 psi (103 MPa)
Maximum borehole diameter	27.1 in. (690 mm)
Minimum borehole diameter	2.8 in. (70 mm)

