



Raven Downhole Services Inc.



Multi Finger Calipers

The Multi Finger Caliper Tool was designed to provide accurate pipe measurements. The high quality of the data allows for 3 dimensional imaging of pipe anomalies, as well as corrosion and scale buildup. A built in relative bearing sensor allows for caliper alignment corrections. The wireline telemetry cartridge is connected to the MCT to allow for real time data communications to surface. Memory acquisition is also available. Models available are 24 arm, 40 arm, and 60 arm.

Specifications

Fingers	24	40	60
Wireline Requirement	Mono-conductor cable		
Maximum Temperature	175°C(350°F)		
Maximum Pressure	15000psi(103Mpa)		
Tool Diameter	43mm (1.38")	73mm (2.88")	102mm (4.02")
Shipping Length	1430mm (56.3")	1574mm(61.9")	1632mm (64.3")
Make-up Length	1335mm(52.56")	1479mm(58.2")	1537mm (60.5")
Tool Weight	8.5kg (18.89 lbs.)	21.5kg (47.78 lbs.)	31kg (68.89 lbs.)
Measuring Point	650mm (25.59")	539mm (21.22")	540.6mm (21.28")
Working Voltage	18VDC		
Working Current	25mA	30mA	30mA
Motoring Current	<300mA		
Pipe Range	44.45mm - 177.8mm	73.6mm – 190.5mm	102.1mm – 254 mm
Accuracy	± 0.732 mm		
Vertical Resolution	2.08 mm	2.79mm	4.24mm
Radial Resolution	0.0762mm	0.127mm	0.1178mm
Pad Force(Min.)	0.75lbs		
Pad Force(Max.)	1.25lbs		
Inclinometer	± ±4.5°		
Signal Output	Digital		
Logging Speed	10m/min (30ft/min)		
Rotation Accuracy	±5°(5° – 60°)		
Deviation Accuracy	Max 177.8mm (7")	Max 190.5mm (7.5")	Max 254mm (10")
	Finger spacing 23.1mm	Finger spacing 14.9mm	Finger spacing 13.3mm
	Min 44.45mm (1.75")	Min 73mm (2.9")	Min 102mm (4.02")
	Finger spacing 5.84mm	Finger spacing 5.7mm	Finger spacing 5.3mm
Temperature Drift (compensated)	Calibrator REF 125mm	Calibrator REF 125mm 175°C drift	Calibrator REF 125mm 175°C drift 0.76mm
	175°C drift 1.27mm (0.5h)	0.76mm (0.5h)	(0.5h)
	150°C drift 0.76mm (1h)	150°C drift 0.76mm (1h)	150°C drift 0.76mm (1h)



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Applications and Benefits

- Pipe damage and anomaly detection
- Corrosion Assessment
- Perforation Mapping
- Quantification of scale buildup and corrosion
- Accurate location of holes or anomalies
- Orientation sensor built in for arm corrections
- H2S resistant

