## Caged Fullbore Flowmeter (3-Arm CFBM)

Halliburton's Caged Fullbore Flowmeter (3-arm CFBM) accurately measures downhole flow rates with coverage over a large cross section of the casing. Run at the bottom of the production-logging tool string, the 3-arm CFBM centers the spinner and supports the tool weight in deviated wells. Using a large diameter impeller, it has the ability to detect very low fluid velocity, making it a valuable tool for operators in low flow-rate wells.

The tool has a 3-arm, spring-loaded cage that centers the spinner, which runs on precision bearings. The spinner's rotation is sensed by zero-drag Hall-effect detectors, allowing the measurement of low flow rates. Normal output is 10 pulses per revolution with directional indication. To prevent damaging the blades, the spinner and cage assembly collapse down to tool diameter when running through tubing restrictions.

## **Benefits**

 Provides accurate fluid velocity measurements, even of low flow rates

## **Features**

- Fullbore injection and production-flow profiling
- Measurement of low flow rates
- · Leak detection and cross-flow
- Interchangeable mechanical sections to match casing size from 4-1/2 to 9-5/8 in.
- Fully combinable with all Ultrawire™ production logging tools
- Connects to either a Flowmeter Electronics (CFBE) or a Capacitance/Temperature/Flow tool (CTF)
- Surface readout or memory-logging operations



Caged Fullbore Flowmeter (3-Arm CFBM)		
Temperature Rating	350°F (177°C)	
Pressure Rating	15,000 psi (12,000 psi for 1-1/2 in. tool)	103.4 MPa (82.7 MPa for 38 mm tool)
Tool OD	1-11/16 in. (43 mm), 1-3/8 in. (35 mm), 1-1/2 in. (38 mm)	
Tool Length	2.91 ft (0.89 m)	
Tool Weight (dependent on spinner and cage sizes)	10 lb (4.5 kg) for 1 11/16-in. (43-mm) tool with 7 in. cage	
Sensor Measure Point (from bottom of the tool)	13.5 in. (342.9 mm)	
Materials	Corrosion resistant throughout	
Output	10 pulses/revs (directional)	
Spinner Threshold	1.7 ft/min approx (0.01 m/s), 100 B/D (16 m³/d) through 7-in. casing	
Maximum Fluid Velocity	500 ft/min (2.54 m/s), 28,250 B/D (4,491 m³/d) through 7-in. casing	
Casing Range	4-1/2 in. to 9-5/8 in.	

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## For more information, contact your local Halliburton representative.

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