

Gas Holdup Tool (GHT)

Provides a reliable full bore measurement of gas volume fraction

Application

- Multi-phase flow profiling
- Fluid identification
- Bubble point determination
- Gas entry detection

Features

- Combinable with other Baker Hughes **Ultrawire™ production logging tools**
- Surface readout or memory operation

The Baker Hughes **Gas Holdup Tool** provides a reliable full bore measurement of gas volume fraction, independent of flow regime or well deviation. The tool response is representative of the entire cross-section of the wellbore within the casing and is almost completely independent of salinity, water holdup, oil/water densities and material outside the casing.

The GHT emits low energy gamma rays from a small 3 milliCurie Cobalt-57 source inside the tool, the gamma rays undergo a variety of interactions with wellbore fluids surrounding the tool; these include back scattering, photo- electron absorption and Compton Scattering. A sodium-iodide scintillation detector

in the tool is positioned a short distance away from the source such that it will detect back scattered gamma rays. Less dense fluids, such as gas, produce less back scatter, hence detailed count rate is low in gas and high in liquids.

The short source-detector spacing reduces statistical errors associated with gamma ray detection as a result of Compton Scattering or photo-electron absorption. Calibration checks are carried out in air and water to ensure the tool is reading correctly before running in hole.

The tool is supplied with a shielded carrying case that alleviates the need for source insertion/removal.



Specifications

Temperature rating	350°F (177°C)
Pressure rating	15,000 psi (103 MPa)
Tool diameter	1 1/16 in. (43 mm)
Tool length	23.5 in. (597 mm)
Tool weight	8.1 lb (3.7 kg)
Toolbus	Ultrawire production logging tool
Current consumption	24 mA
Sensor measure point (from the bottom of the tool)	4 in. (102 mm)
Accuracy	+/- 3%
Resolution	1%
Range	0 to 100% gas holdup within 2.9 to 9.9 in. pipe internal diameter
Vertical resolution	2.5 in. (64 mm)
Source (not supplied with GHT)	GSR005: Cobalt 57, 3 mCi (111 MBq)
Materials	Corrosion resistant throughout