

TECHNICAL SPECIFICATION SHEET

GC TRACER

Gas Chromatograph Tool for Real-time Analysis, Characterization and Evaluation of Reservoirs

Extraction of hydrocarbon and non-hydrocarbon gas compounds by way of a probe inserted directly into the drilling fluid, enables GC TRACER to accurately measure gas concentrations, percent by volume, in any drilling fluid. With none of the limitations and inaccuracies associated with agitator traps, the small probe also facilitates a number of placement options including flow, suction and diverter lines.



Extraction Principle

The probe houses a semi-permeable membrane that is immersed in the mudstream. Driven by the difference in partial pressures on either side of the membrane wall, free and dissolved gases entrained in the mud permeate the membrane. The probe is continually swept with carrier gas that carries the extracted gas sample to the chromatographic columns for analysis. The permeation characteristics of the membrane are described in the systems software, enabling temperature corrected chromatographic gas measurement in conventional drilling fluid types.

Features

- Probe extraction; no moving parts or headspace measurement
- Purged stainless steel enclosure housing chromatograph and computer system at the point of sampling.

- Heated hose ensuring passage of heavier and soluble hydrocarbon components
- Built in calibration gas cylinders and automated calibration procedure
- Active compressed air cooling
- Custom calibration and operational software
- Custom peak-integration algorithms

Unit Specifications

Dimensions	36" x 16" x 12"
Weight	Approx 80lbs
Power	85-265 VAC, 40-70Hz 100W standard; 300W lo-temp
Compressed Air	1 SCFM – 5 SCFM intermittent cooling mode
Output	Serial RS422 or TCP-IP WITS 0
Probe length	10"
Hose length	7' standard; 20' extended
Hazardous	Class 1 Div 1 or Zone 1

System Specifications

Detector	CP4900 Micro-GC TCD
Column Type	Custom with backflush
HC Compounds	C1-C8, Benzene, Toluene
Non HC	CO ₂ , N ₂
Sampling	Continuous
Cycle Time	C1-C8, B-T 70sec
Range	0-100% autoranging
Accuracy	Greater of +/-5% rdg or 10ppm
LOD	1ppm
LOQ	10ppm
Resolution	<1ppm
Carrier	Helium
Ambient temp	-10 to 40°C std; -30°C option
Max fluid temp	100°C

