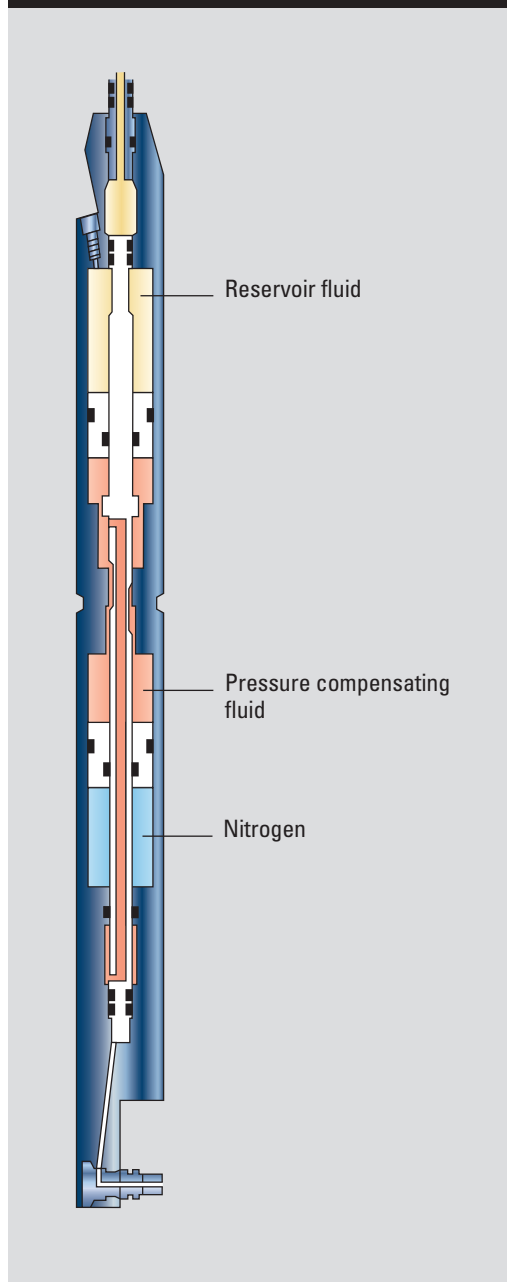


Single-Phase Multisample Chamber

Pressure-compensating openhole sampling tool

Single-phase multisample chamber.



The Oilphase-DBR* Single-Phase Multisample Chamber (SPMC) is a unique sampling system, used with the MDT* Modular Formation Dynamics Tester, which recovers high-quality, pressure-compensated fluid samples during openhole logging operations. Up to six SPMC tools can be run with each MDT multisample module.

The SPMC sampler operates mercury free and eliminates sample flashing by using controlled displacement sampling while collecting reservoir fluid. The SPMC is used to acquire truly representative fluid samples for applications where the measurements require unaltered reservoir fluids. There is no dead volume, which ensures accurate results, including consistent GOR and saturation pressure data. Proper design of the sampling program can, in some cases, control draw-down to a few psi, allowing for representative samples to be collected from near-saturated reservoirs.

The pressure compensation feature provides sample recovery at pressures equal to or greater than reservoir pressure. Because the sample is retrieved to the surface in single-phase, it does not require lengthy recombination at the wellsite.

Samples acquired with the SPMC can provide critical parameters needed for optimal completion and production design.

Oilphase-DBR SPMC Technical Specifications

Length, m [in]	0.914 [36]
Weight, kg [lbm]	9 [20]
Max. OD, cm [in]	5 [2]
Sample capacity, cm ³ [in ³]	250 [15.25]
Test pressure, MPa [psi]	207 [30,000]
Max. working pressure, MPa [psi]	138 [20,000]
Max. working temperature, degC [degF]	179 [354]
Service	Sour
Design code	API 6A
Certifying authority	Bureau Veritas

Applications

- Fluid sampling for advanced or routine PVT studies
- Wax and asphaltene analysis
- Heavy crude sampling, where successful recombination is very difficult to achieve
- Water sampling for scale, corrosion, salinity, and pH studies
- Sampling near-saturated reservoirs using minimum drawdown

Benefits

- Sample retrieval without phase change
- Fast sample validation, analysis, or transfer
- Accurate and consistent GOR values
- Transfer and service completed in the field
- Provides critical parameters needed for optimal completion and production design

Features

- No sample flashing
- Fully compatible with MDT sampling
- Downhole closure
- Single-phase sample
- Eliminates need for time consuming sample recombination at the wellsite
- 36 SPMC samples can be run to collect up to 9 L of single-phase reservoir fluid
- Mercury-free operation