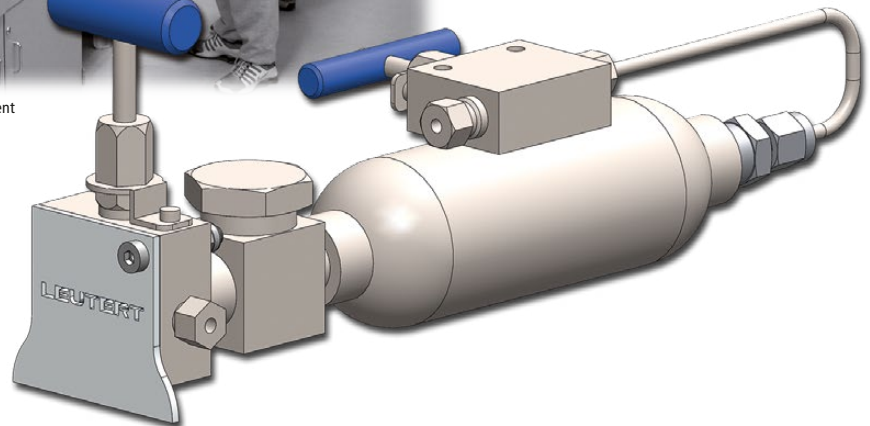


Sample Flash Pycnometer



Picture Courtesy of the Petroleum Engineering Department
at the Colorado School of Mines, Golden, CO USA



PVT Instrumentation

The Leutert Sample Flash Pycnometer is used to determine the gas/oil ratio (GOR) of a hydrocarbon fluid.

Description

An oil sample flash pycnometer is used to determine the gas/oil ratio (GOR) of a hydrocarbon fluid. It consists of a flow through cylinder sealed with two needle valves and a rupture disc.

To perform a pycnometer flash the pycnometer is evacuated and weighted. It is then connected to a hydrocarbon sampling cylinder like the one phase™ or piston type sample cylinder. A portion of the oil sample is transferred from the cylinder into the pycnometer using the positive displacement pump. The pycnometer is removed from the sampling cylinder and connected to an evacuated gasometer via a liquid trap.

The actual flash begins by slowly opening the pycnometer valve so that the sample flows through the liquid trap at a rate that allows the vapor portion to enter the gasometer only. When the system is depressurized the vapor collected within gasometer is re-circulated through the liquid in order to reach equilibrium. The unique U-shape of the sample flash pycnometer prevents liquid from leaking into the system. Once the re-circulation is completed, the vapor volume is recorded from the gasometer and the liquid mass is determined by weighting the pycnometer and the liquid trap. The measurements are converted to standard conditions (1 bar and 15.5°C) and the GOR is calculated.

Technical Specification

Volume	:	75 cm ³
Max. operating pressure	:	1,800 psi
Max. operating temperature	:	Ambient
Material	:	Stainless steel
Dimensions	:	242 mm x 95 mm x 71 mm

