

EDUCATIONAL PHASE BEHAVIOR SYSTEM FOR PVT STUDIES



FLUID EVAL
EDUCATIONAL



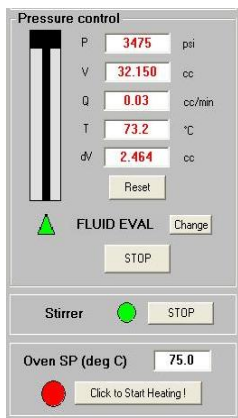
Benefits:

Versatile and Cost Effective System Designed for Educational and Research Establishments to be used for:

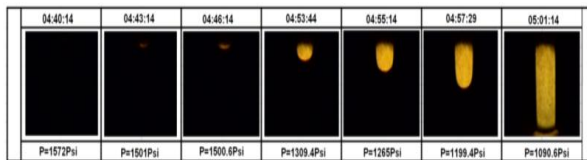
- Vapour Liquid Equilibrium (VLE) and Phase Behaviour Measurement
- Black Oil, Gas and Gas Condensates PVT Studies
- Mercury Free Operation
- Visual PVT Cell with Accurate Phase Detection Digital Picture

Features:

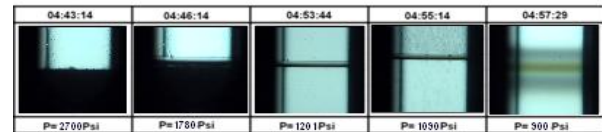
- Pressure up to 10,000 Psia (70MPa)
- PVT Cell Capacity of 100cc, Built-in Volume measurement system with Accuracy of 0.01cc
- Temperature up to 175°C
- PVT Cell made of Stainless Steel
- Efficient Magnetic Stirrer
- Rocking System Window which, in the upper position, is used for oil studies. When the cell is inverted, the Window is now in the lower position which is then used for Gas and Gas Condensates System Studies
- Test Sequencer programmed to perform PVT Test Steps Automatically
- Automated Digital Video Camera System for the Detection of Saturation Pressure (P_{sat}) and Measurement of Gas Volume for Oil systems, and Retrograde Liquid Volume Measurements for Gas Condensate Systems.
- Full Digital Video Images System and Data Recording Capabilities to Export Test Data in Excel Files for Further Retrieval and Report Generation Purposes.



This instrument is a compact PVT system designed for the study of PVT, thermodynamic properties and phase behaviour of black oil samples, gas and gas condensates systems requiring a small volume of fluid sample, in a cost effective manner. The PVT cell is composed of a stainless steel high pressure high temperature vessel enclosed at one end by a piston and at the other end by a dedicated Head equipped with a high pressure two sight glass PVT cell. The Head also incorporates a sampling valve situated at the top of the cell. The windows along with a digital camera with a light permit observation of fluids which enter and leave through the outlet sampling valve. During Differential Vaporization and Flash test, the removal of the gas phase at constant pressure from the cell is facilitated by the full visibility of the gas/oil interface through the window of the cell. This system permits the complete removal of the gas phase without danger of the equilibrium liquid changes. The cell is provided with an electric heating mantle for homogeneous temperature control along the cell. See examples of output below:



Recording bubble point from black oil



Recording dew point and retrograde liquid deposit from gas condensates

