

Piston Type Sample Cylinder PDC



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



Fluid Sampling

The Piston Type Sample Cylinder PDC is a shipping bottle designed for transportation and storage of pressurized samples, especially hydrocarbon PVT samples.

The Piston Type Sample Cylinder

The Piston Type Sample Cylinder PDC is a shipping bottle designed for transportation and storage of pressurized hydrocarbon samples. Those samples might have been obtained through bottom hole or surface PVT sampling.

To separate the sample fluid from a secondary driving fluid, the bottles are equipped with a floating piston. The piston has a single o-ring seal and a slider ring and is designed to minimize friction and reduce pressure load.

The bottles are designed with a minimum of dead volume. A mixing ball is incorporated within the sample chamber.

The two end plugs are sealed with double O-ring seals and back-up rings. Both end plugs are held in place by strong circlips.

Right angle needle valves with 1/4" NPT female port connections are fitted to the 10,000 psi cylinders. A special valve is fit into the sample side which allows evacuation of the cylinder.

Protection cages on both ends aid as carrying mandrels the valves during handling and transportation. For shipment the cylinders are stored in an aluminum transportation box.

Due to the German engineering all Leutert sample cylinders have the same outer dimensions. As fluid sample cylinders are part of a system, standardized dimensions make it easy to use supplementary equipment such as stands, heaters and transfer benches, without the need for modification.

Technical Specifications

Capacity (nominal)	: 600 cm ³ standard, other capacities available
Volume	: 700 cm ³
Operating pressure	: 10,000 psi (690 bar)
Operating temperature	: -4 °F to 300 °F (-20 °C to 150 °C)
Weight	: 37.9 lbs (17.2 kg)
Material	: stainless steel, resistant to H ₂ S and CO ₂ ANSI / NACE MR0175 / ISO 15156-1 (second edition 2009-10-15)
Certificates	: TPED & Hydrostatic

Design

