



## Core Flooding System



| Specifications           |  |
|--------------------------|--|
| Max. Confining Pressure  | 700 bar (10 000 psi)                                   |
| Max Pore Pressure        | 700 bar (10 000 psi)                                   |
| Max. Working Temperature | 200°C  |
| Core Length              | Adjustable   |
| Core Diameter            | Adjustable   |
| Optional                 | Automatic Fraction Collector<br>Steam Injection System |

### General Features

The Core Flooding is a common test to determine rock permeability and how will interact a core sample in various fluids.

First of all, a core sample is removed from the oil reservoir. Then, this sample is placed in a rock core holder with dimensions upon request. Once the core installed the outer surface is pressurized to simulate the same pressure as it was in the oil reservoir.



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Of these loads or stresses, some are caused by the weight of the material above the core, which is known as the "overburdened" pressure. Loads in the rock will affect the core's permeability to fluids, so it is important to duplicate them during testing.

A test fluid is then pumped through the core, and the flow rates and pressure drops across the core are measured. From this data, the resistance to flow is evaluated.

The base system is configured to perform the following:

- Unsteady state liquid/liquid relative permeability as well as single phase permeability
- EOR tests (secondary and tertiary water flooding, polymer injection)
- a gasmeter for unsteady state gas/liquid relative permeability measurement and miscible gas flooding
- a fluid separator to measure and monitor the produced fluids at reservoir conditions during two phase unsteady state relative permeability test

### Composition

This equipment is composed of following items:

- Core Holder
- Climatic Air Bath
- Hastelloy and/or Stainless Steel Accumulators
- Circulating, Confining and Collecting Pumps
- Back Pressure Regulator
- HP Separator with liquid interface Infra-red Detector
- Wet Rotary gasmeter
- Vacuum Pump
- Measurement System

Accumulators



Double Pump



HP Separator

