floXlab

LP700

Liquid Permeameter

Steady-State Liquid Permeability Measurement on Core Samples

PRODUCT BROCHURE

Floxlab • Geotechnical & Rock Mechanics Testing Equipment

Product Overview

What the LP700 does — and how it's built

The LP700 is a steady-state liquid permeameter for accurate permeability measurement on core plug samples. It combines a high-pressure injection pump, a hydrostatic coreholder, dual differential-pressure transducers and a back-pressure regulator on a compact bench-top frame — all driven from a PC supervision station running the Applilab software.

Key Features

01

Steady-State Method

Direct application of Darcy's law on saturated cores.

02

Constant Flow Injection

Dual-cylinder pump up to 25 cc/min.

03

High-Pressure Capability

Confining, pore & back pressure up to 10,000 psi.

04

Dual ΔP Range

Two transducers: ±50 psi & ±500 psi for wide K range.

05

Back Pressure Regulator

Stable outlet pressure for clean measurement.

06

Software Acquisition

Applilab — real-time, automatic, Excel export.

Technical Specifications

Parameter	Value
Measurement type	Liquid steady-state (Darcy)
Confining pressure	0 – 10,000 psi
Pore pressure	0 – 10,000 psi
Back pressure	0 – 10,000 psi
Flow rate	0 – 25 cc/min (HPLC)

Parameter	Value
Pressure transducers	10,000 psi — 0.1% FS
Differential transducers	Validyne ±50 / ±500 psi
Specimen diameter	1" or 1.5"
Specimen length	Twice the diameter
Power supply	110/220 VAC, 50/60 Hz

Principle & Applications

How it works — and where it delivers value

Measurement Principle — Darcy's Law

$$K = (Q \cdot \mu \cdot L) / (\Delta P \cdot A)$$

K – permeability (mD) • Q – flow (cc/min) • μ – viscosity (cP) • L – length (mm) • ΔP – pressure drop (psi) • A – section (cm^2)

1 Saturate
Core fully saturated with the test liquid is mounted in the coreholder.

2 Confine
Confining pressure seals the sleeve against the rock specimen.

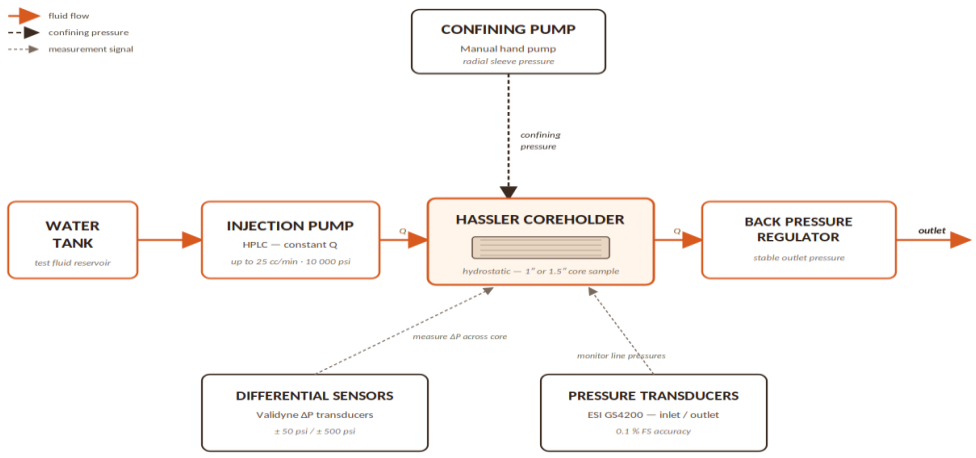
3 Inject
Injection pump delivers fluid at constant flow rate Q.

4 Regulate
Back-Pressure Regulator holds the outlet pressure constant.

5 Stabilize
Steady-state regime: ΔP across the core stabilizes.

6 Compute
K is computed directly from Darcy's law.

System Schematic



Applications

Conventional Reservoirs
Routine absolute K on sandstone & carbonate cores.

Enhanced Oil Recovery
Baseline K before/after EOR fluid injection studies.

Carbon Storage (CCS)
K of reservoir & seal layers for CO_2 injection.

Aquifer & Hydrogeology
K of aquifer rocks for groundwater modeling.

Academic Research
Petrophysical characterization of porous media.

Quality Control
Routine QC of preserved or restored core samples.

Get in Touch

Floxlab — your partner for rock testing solutions

We design and manufacture geotechnical and rock mechanics testing equipment for laboratories worldwide. Reach out to discuss your application or request a tailored quotation.

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