



# PDP200

## *Pulse Decay Permeameter*

High-Pressure Permeability Measurement for Tight Rocks



PRODUCT BROCHURE

FloXlab • Geotechnical & Rock Mechanics Testing Equipment

# Product Overview

*What the PDP200 does — and how it's built*

The PDP200 is a fully automated pulse decay permeameter for accurate, high-pressure permeability measurement of low-permeability rock cores. It combines a robust high-pressure coreholder, calibrated upstream/downstream gas reservoirs and a thermostatic enclosure in a single platform — all driven from a PC supervision station. Compliant with API RP 40.



## Key Features

**01**

### Pulse Decay Method

Transient analysis for ultra-low permeability.

**02**

### High Confining Pressure

Up to 10,000 psi ( $\approx$  70 MPa).

**03**

### Pore Pressure Control

Up to 3,000 psi ( $\approx$  21 MPa) with N<sub>2</sub>.

**04**

### Thermostatic Stability

Stable temperature inside enclosure.

**05**

### Automated Sequencing

Software-driven valves & pulses.

**06**

### Remote Supervision

Operate, monitor and acquire from PC.

## Technical Specifications

Parameter	Value
Standards	API RP 40 (Core Analysis)
Permeability range	0.1 $\mu$ D to 0.1 mD
Max confining pressure	10,000 psi ( $\approx$ 70 MPa)
Max pore pressure	3,000 psi ( $\approx$ 21 MPa) — N <sub>2</sub>
Specimen diameter	1" or 1.5"

Parameter	Value
Specimen length	Twice the diameter
Air supply	100 psi compressed air
Power supply	220 VAC $\pm$ 10%, 60 Hz, 500 W
Overall dimensions	90 × 150 × 60 cm
Weight	80 kg

# Principle, Software & Applications

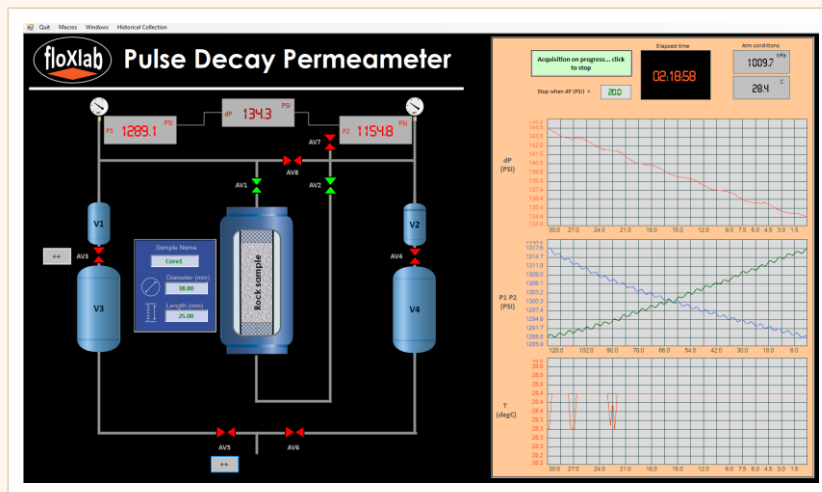
How it works — and where it delivers value

## Pulse Decay Principle

<p><b>1</b></p> <p><b>Pressurize</b></p> <p>Reservoirs and sample equilibrate at pore pressure.</p>	<p><b>2</b></p> <p><b>Apply Pulse</b></p> <p>Small <math>\Delta P</math> applied upstream across the sample.</p>	<p><b>3</b></p> <p><b>Decay</b></p> <p>Gas migrates — P1 drops, P2 rises.</p>	<p><b>4</b></p> <p><b>Compute</b></p> <p><math>\Delta P</math> decay rate is fitted to compute permeability.</p>
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$$k = f ( \Delta P \text{ decay rate, sample geometry, fluid properties } )$$

## Software & Measurement



### Applilab interface

- ◆ Real-time P1, P2 and  $\Delta P$
- ◆ Automated valve sequencing
- ◆ Live charts & temperature
- ◆ Configurable stop threshold
- ◆ Automatic permeability calc.
- ◆ Volume calibration routine
- ◆ Historical data archive
- ◆ Export & reporting

## Applications

<p><b>Oil &amp; Gas Reservoirs</b></p> <p>Tight gas, shale gas &amp; unconventional reservoirs.</p>	<p><b>Carbon Storage (CCS)</b></p> <p>Caprock integrity &amp; seal evaluation for CO<sub>2</sub>.</p>	<p><b>Geomechanical Studies</b></p> <p>Stress–permeability coupling, damage &amp; fractures.</p>
<p><b>Academic Research</b></p> <p>Petrophysical characterization in laboratories.</p>	<p><b>Nuclear Waste Repositories</b></p> <p>Host rock &amp; engineered barriers under stress.</p>	<p><b>Cement &amp; Concrete</b></p> <p>Gas permeability of low-porosity materials.</p>

# Get in Touch

*Floxlabs — 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.

## Contact information

### ADDRESS

Floxlabs  
23 rue du Port  
92000 Nanterre — France

### PHONE

+33 (0)1 81 93 12 85

### EMAIL

[contact@floxlabs.com](mailto:contact@floxlabs.com)

### WEB

[www.floxlabs.com](http://www.floxlabs.com)

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