

TinyPerm II

Portable Permeameter

NER's *TinyPerm II* is a portable hand-held air permeameter used for measurement of rock matrix permeability or effective fracture apertures on outcrops and at the core scale.

The operator presses a rubber nozzle against the specimen and withdraws air from it with a single stroke of a syringe. As air is pulled from the sample, a micro-controller unit simultaneously monitors the syringe volume and the transient vacuum pulse created at the sample surface. Using signal processing algorithms, the micro-controller computes the response function of the sample/instrument system. Key characteristics of this response are displayed on the liquid crystal display (LCD).

Theory shows how the response function is related to permeability and either matrix permeability or effective fracture flow aperture can be determined from the calibration charts and tables provided.

For intact rock, the permeability measurement range is from approximately 10 millidarcys to 10 darcys. Similarly, fracture apertures from approximately 10 microns to 2 millimeters can be determined.



Key Features

Physical size

- syringe unit - 38cm x 12.5cm x 5cm
- microcontroller unit - 16.5cm x 11.5cm x 5cm
- interface cable - 3 meters

Microcontroller unit

- Microcontroller and electronics enclosed in a sturdy weatherproof case with LCD display. Operates continuously for several hours on a single 9 volt alkaline battery.

Total weight

- 1.2 kg

Packaging

- Weather and dust resistant and comes in a rugged case for transportation and shipping.

