IN SITU HYDRAULIC CONDUCTIVITY TESTS

P1.60

09.11 Ksat constant head permeameter

The Ksat constant head permeameter is an instrument that provides the means to collect data for determining in situ saturated hydraulic conductivity of the vadose (unsaturated) zone easily and conveniently. The measuring procedure is known as constant head well permeameter technique, shallow well pump-in method or borehole infiltration test. Before the equipment is used a hole is augered (the bottom of the hole must be plane (use the Riverside auger).

The main unit is used for measuring hydraulic conductivity to a depth of 2 m. The depth of measurement can be easily increased to 4 m by attaching a set of constant head tubes to the main unit. To measure below 4 m depths, a special flow measuring reservoir and a pressure transducer (available as optionals) are required.

The standard set (for a depth of 2 m) contains: the compact constant head permeameter and augers for installation.

Advantages

❑ Compact, portable and versatile.

❑ No field assembly is required.

❑ 5 Liter useful water capacity allows measurement of hydraulic conductivity in most soils.

❑ Large opening for quick filling and refilling of the reservoirs.

❑ Can be used on any landscape position without an external support.

❑ Can be easily transported as a back pack for measurement in remote locations.

❑ Constructed of durable PVC and polycarbonate to withstand field use.

Applications

❑ In situ permeability tests for drainage and/or irrigation.

❑ Determination of hydraulic conductivity of the unsaturated zone for septic system design, landfill design, and retention pond construction.

By using an extension kit hydraulic conductivity can be measured below 4 m.
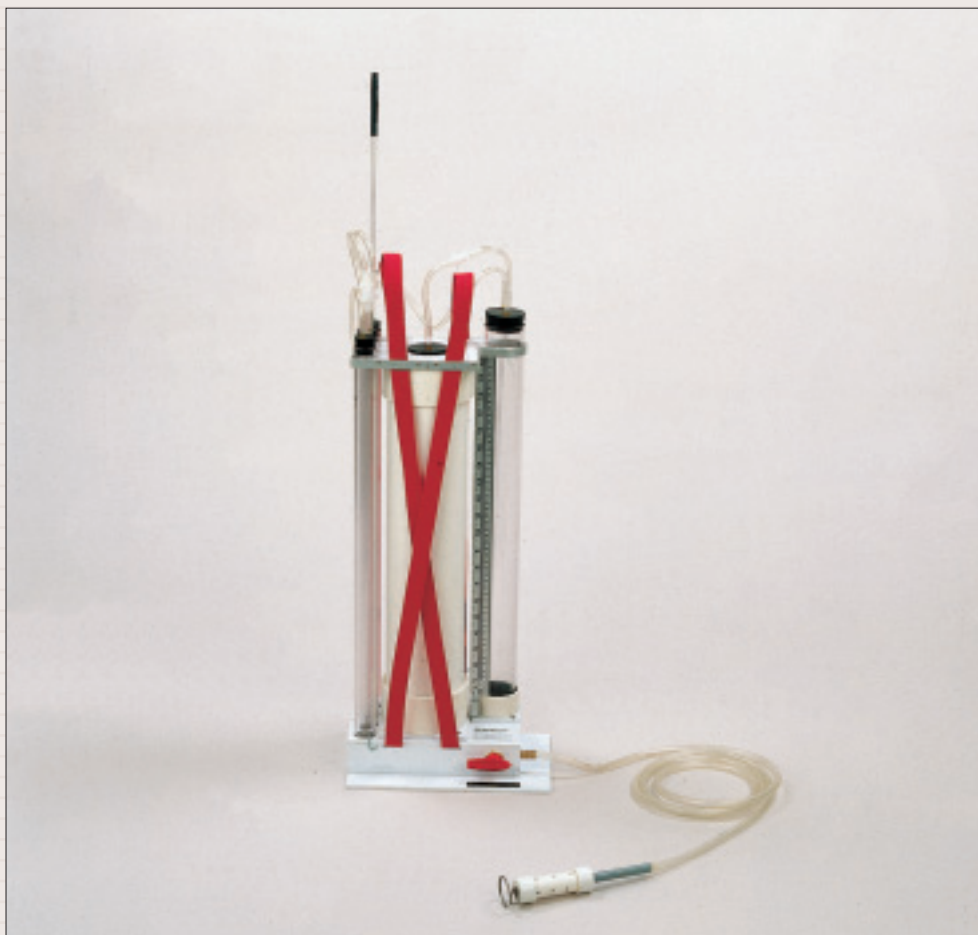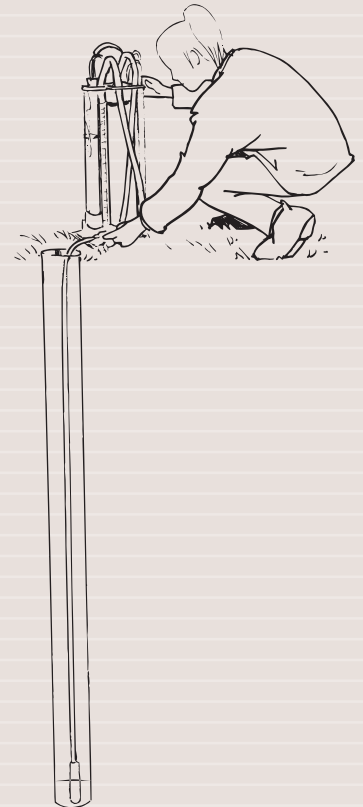
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BENEFITS
09.11 Ksat permeameter

- Determines permeability in any layer < 2 m
- Meant for above the groundwater table
- Stable compact and versatile instrument
- Steady state principle for optimum accuracy

Eijkelkamp
Agrisearch Equipment