



## Soil Moisture

Since its creation in 1983, the Environmental division of ELE International, has been manufacturing and supplying a wide range of field and laboratory instrumentation to environmental concerns world-wide. In addition to developing its own products, ELE has forged strong partnerships with a number of leading manufacturers. These partnerships have allowed ELE to expand its product range to include:

- ◆ Survey Equipment
- ◆ Soil Sampling & Analysis
- ◆ Water Quality & Monitoring
- ◆ Meteorological Instrumentation
- ◆ Crop Science
- ◆ Harvesting & Storage
- ◆ General Laboratory Equipment

One such Partnership is with Soilmoisture Equipment Corp. Soilmoisture has over 50 years experience in the manufacture and supply of cutting edge, soil moisture testing equipment and is a world leader in this field. As exclusive distributors for Soilmoisture in the UK, ELE International has taken an active role in developing a strong customer base for Soilmoisture products, particularly in education and research institutions.

We would like to highlight a selection of Soilmoisture products that are most popular with the UK's leading commercial and educational organisations.

## Time Domain Reflectometry (TDR)



**514-160 Trase System.** The Trase system uses TDR to measure the volumetric water content of soils. Based on the principle that there is a relationship between the dielectric properties of soils and their water content, the Trase can deliver accurate measurements in 15 seconds and allow data to be viewed instantly, or stored for later use. The System is fully portable and can be used manually or set up to carry out measurements automatically. The unit is supplied with a rechargeable battery pack. With a large selection of waveguides available, the user can take measurements from a large number of sites with one machine at the lowest possible cost per site.

**514-190 MiniTrase.** A logical development of Soilmoisture's Trase system, the new Minitrase retains all of the superior capabilities of the Trase unit, but now features a more compact, lightweight design, which is ideal for extended field operation. In common with the Trase, this unit provides the largest signal pulse of any standard commercial TDR instrument. With 1,200 point sampling resolution and 5,000 reading capacity, the MiniTrase is a market leader in high quality TDR equipment.



## Pressure Plate Extraction



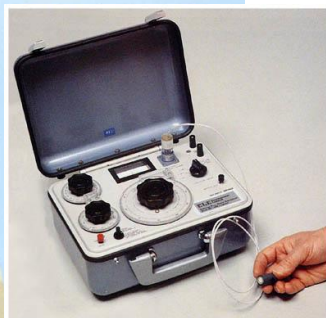
**Pressure Plate Extraction Systems.** Soilmoisture's pressure plate extraction equipment has been developed to determine soil water retention and suctions from 0.1 to 15 bar. Positive air pressure is used to drive water from the soil matrix to determine; available water capacity, water retentivity, hydraulic conductivity and field capacity. Systems can be assembled to suit the users individual needs.

## Hydraulic Conductivity

**25-0650 Guelph Permeameter.** This complete kit allows the user to obtain in-situ hydraulic conductivity, soil sorptivity and matrix flux potential measurements. The kit is portable and allows the user to obtain results in ½ to 2 hours depending on soil type.



## Soil Salinity Measurement



**513-135 Salinity Bridge measuring Instrument.** This instrument provides a method for accurate measurement of salinity in soil solutions without continuous disturbance to the soil profile. The sensor consists of a pair of electrodes embedded in a porous ceramic element. The water saturating the element remains in chemical equilibrium with the soil. The sensor is spring loaded to maintain hydraulic contact between the sensor and the soil.

## Soil Moisture Meter

**514-126 Soil Moisture Meter.** A rugged, hand-held instrument used to measure the electrical resistance in specially designed gypsum blocks. Applications for this inexpensive soil moisture measurement system include; profiling soil moisture flux through soil horizons and root zone moisture studies.



## Tensiometers



**514-010 Quickdraw soil moisture probe.** The world's only portable, fast reading tensiometer. The probe is supplied ready for immediate use and requires no adjustment or calibration.

**514-036 Jet fill tensiometer.** The most advanced, sensitive instrument for the field measurement of soil moisture. Patented Jet fill action releases water into the tensiometer body with no disturbance of surrounding soil. Designed for extended field deployment.



## Lysimeters



**450-060 Soil water sampler.** Instrument consists of a sample collection tube and porous ceramic cup, through which the soil water passes. The sampler is installed at the desired depth and a vacuum is created in the sample tube to enable the collection of soil water. Operation of the sampler requires the universal extraction kit (450-066).

## Porous Ceramics

Since 1955 Soilmoisture has manufactured porous ceramics for education, research and commercial institutions world-wide. Soilmoisture has continually developed ceramics technology and is now able to offer the most comprehensive range of porous ceramics in the world. Uses for these high specification ceramics are varied and include;

- ◆ Laboratory Soil Columns
- ◆ Moisture retention curves
- ◆ Solution extraction or tension measurements
- ◆ Pore water interface
- ◆ Filters/drains
- ◆ Aerators

What ever your requirement, we can provide a custom ceramic to match your application.



**532-104 Pressure Plate cell.** Designed for use in Soilmoisture's pressure plate extractor systems, these ceramic cells are constructed of open cell ceramic, allowing optimum movement of water through the cell whilst restricting air flow. A variety of sizes and pressure ratings are available.

**Custom Ceramics.** In addition to standard ceramics for their pressure plate extractors and water samplers, Soilmoisture are able to manufacture ceramics to suit individual customer needs.



If you would like further information on any of these products, please contact ELE International's Environmental Sales Team on 01525 249221/220 or visit our web-site and log on to the online shop:- [www.ele.org.uk](http://www.ele.org.uk)

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ELE International is exclusive UK distributor for Soilmoisture products