



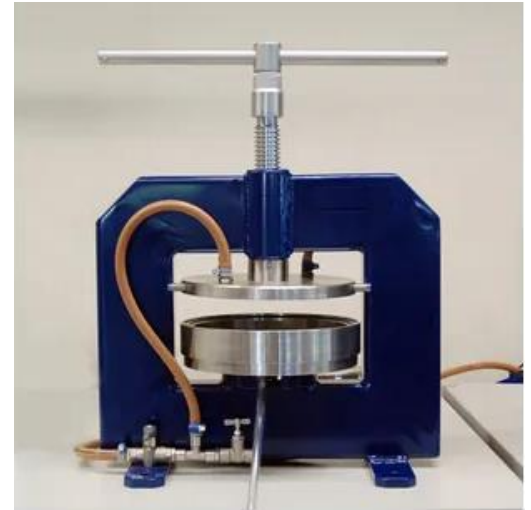
Pressure Membrane Apparatus for water retention studies

The characterization of soils according to their moisture holding capacities and moisture flow retention characteristics is essential for the development of effective irrigation and plant stress management for the commercial growing of food crops. This is the quintessential basic laboratory equipment needed for scientific determination of soil water release / retention curves. Knowing the stress / water relationships directly affects yield and quality of the crop.

Being able to predict and manage crop stresses, will determine vitality and vigor. All this comes from knowing when and how to irrigate to achieve optimum yields and crop grades, all this using minimal water and pump time.

The Equipment Comprises of the following units:

- Pressure Membranes
- Extractors
- Control systems/ Manifold
- Air supply/ Compressor
- Accessories



The Pressure Membrane Extractor incorporates disposable cellulose membranes in the extraction of water from soil samples over a pressure range of 0 to 15 bars. A compression diaphragm in the lid holds the samples in firm contact with the membrane, ensuring proper hydraulic contact needed for the extraction process.

A common problem in soils research is determining water retention curves for various soil types. The problem is that many soils around the world that provide excellent plant growth potentials are "shrink - swell" soils. This applies to non soil experiments where the material under study "curls" as it dries. The model. The cellulose membrane material is a pure cellulose and has a pore size of 24 angstrom. The cellulose membrane can withstand over 10,000 kPa bubbling pressure.

The Extractor can test up to 6, 2" diameter x 0.39 " (2.5 x 1 cm) high samples and operates in the 0 to 1500 kPa (0 to 15 bar) soil suction.

PRESSURE REGULATING SYSTEM (MANIFOLD) TO RUN MEMBRANE EXTRACTOR

Designed for use with the Pressure Membrane Extractor, output pressure can be regulated from 10 to 250 psi (0.7 to 16 bars). Double regulation is provided in the 5 to 150 psi (0.3 to 10 bars) range. Readout pressure gauge is of range from 0 to 300 psi (0 to 20 bars), in 2 psi and 0.2 bar intervals.

The 3 in 1 manifold combines the PPA Combi and Membrane extractor manifolds and allows operation of the Pressure Membrane Extractor, the 15 Bar Pressure Plate Extractor, and the 5 Bar Pressure Plate Extractor.

For information on the whole array of accessories available for these systems, do contact us.