Extractor 15 BAR Ceramic Plates

Pressure Extractors are used in determining the water-holding characteristics of soil samples. Wetted soil samples are placed in the extractor, and a known pressure is applied, which forces the removal of any water held to the soil at a lower pressure. By analyzing the sample at several different pressures, the characteristic pressure versus water content relationship can be determined for the soil.

A variety of extractors are available for analyzing different sizes and quantities of samples, and for analyzing samples in different pressure ranges. All Pressure Extractors require a source of regulated pressure for operation.

1500F 15 Bar Pressure Plate Extractor

The Model 1500F 15 Bar Pressure Plate Extractor is used to analyze the water-holding characteristics of soil samples throughout the pressure range of interest in most agricultural applications. The pressure vessel is 10 cm deep and has an inside diameter of 30 cm. Up to 4 ceramic plates can be accommodated at one time, allowing approximately 36 5.7 cm samples to be analysed simultaneously.

1500F2 15 Bar Extractor with Water Plus

Soilmoisture Equipment Corp. is proud to release a new 1500F2 Extractor with improved, hardier "Water Plus" protective coating! This new process promises to extend the operational lifetime of the pressure vessel, as well as protect it from the destruction of oxidation and rust over an extended lifetime of use. "Water Plus" adds a protective zinc phosphate undercoat for harsh conditions, and a zinc rich powder primer for improved corrosion protection. These upgrades to our 15 Bar Pressure Plate Extractor allow for use in very harsh conditions, particularly exposure to chemical and saline solutions, and damage by denting, scratching or abrasive wear. Starting in November 2014, all of Soilmosture's 1500F Extractors will be sold with "Water Plus" coating ensuring users that their 1500F2 extractor features strong protection against adverse conditions.

For customers who are currently using the 1500F1 Extractor, Soilmoisture would be happy to upgrade your equipment to include our new "Water Plus" protective coating!

1500F1/F2 15 Bar Pressure Plate Extractor Features

Each Pressure Plate Cell consists of a 15 Bar ceramic plate approximately 10-1/4" in diameter that is sealed on one side by a thin Butyl diaphragm. An internal screen keeps the diaphragm from close contact with the plate and provides a passage for flow of water. An outlet stem running through the ceramic plate connects this passageway to the outflow tube assembly.

The 15 Bar ceramic is quite strong. However, to avoid damage to the Pressure Plate Cells, do not load them mechanically and/or subject them to sharp blows.

Applications:

The Model 1500F 15 Bar Pressure Plate Extractor is used in determining the permeability of undisturbed soil cores, and in studies of the hysteresis effect in soils. Soil solution may be extracted in increments at known suction values for chemical analysis. The versatile Pressure Extractors also find application in the calibration of various moisture-measuring equipment and in ultra filtration work, such as the separation of heavy protein molecules from dilute solutions

Extractor 15 BAR Ceramic Plates

ABOUT THE 1500F1/F2 15 Bar Pressure Plate Extractor

Water relationships are among the most important physical phenomena that affect the use of soils for agricultural or engineering purposes. In the laboratory study of these many physical relationships, as well as the extraction of soil solution for chemical analysis, the Pressure Membrane and Pressure Plate Extractors have become eminently successful research tools.

Many methods, such as compaction, centrifugation, displacement, molecular absorption, and suction have been used to investigate the physical properties of soils as well as to remove soil solution for chemical analysis. In each of these methods the range of application is quite limited. In many instances the methods are cumbersome. In some cases the soil structure is destroyed in the process of making an extraction.

By contrast the Pressure Membrane Extractor and the Pressure Plate Extractors provide a convenient, reliable means of removing soil moisture, under controlled conditions, from soil samples throughout the whole plant growth range, without disturbing the soil structure. The method may be used on disturbed samples or undisturbed soil cores.

Through the application of the Pressure Membrane and Pressure Plate Extractors the characteristic moisture retention curve may be developed for each soil type. The curves relate the soil suction, at which moisture is held by the soil to its moisture content. This relationship is important in studies of soil moisture movement and of quantity and availability of soil moisture for plant growth.

Extractor 15 BAR Ceramic Plates

Specifications

DIMENSIONS : Height: 10 cm Diameter: 30 cm Weight: 36.10 kg