

# Pressure Plate Extractor

**Abzar Tosse'eh sahand.co**

**Designer and manufacturer of laboratory equipment**

**soil science, irrigation and environment**

**[www.atsahand.com](http://www.atsahand.com)**



## Pressure Plate Extrctors

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  
(Tank or compressor)

## Components of pressure plate extractors system:

- 15 BAR PRESSURE PLATE EXTRACTOR
- 5 BAR PRESSURE PLATE EXTRACTOR
- Pressure regulation& control unit
- Pressure source
- Ceramic plates



## 15 BAR PRESSURE PLATE EXTRACTOR

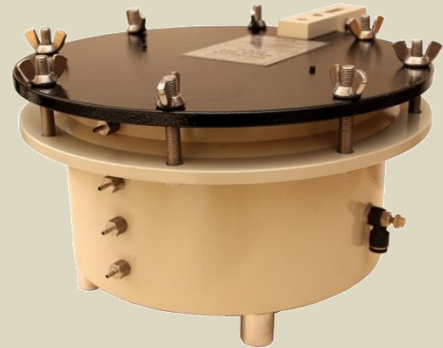
15 Bar Extractor is used to analyze the water-holding characteristics of soil samples throughout the pressure range of interest in most agricultural applications.

The pressure vessel is 7" (18 cm) deep and has an inside diameter of 11.5" (29 cm).

Up to 4 ceramic plates can be accommodated at one time, allowing approximately 48 (2-1/4") samples to be analyzed simultaneously.

This extractor consists of a pressure vessel and lid, clamping bolts, O-ring seals, and outflow tube assemblies.

The extractor can also be ordered with four 15-bar ceramic plates and right angle outflow tubes included.



15 bar pressure plate extractor				
Capacity (cell)	Diameter (cm)	Deep (cm)	Weight (kg)	Tested Pressure (bar)
4	29	18	48	75

## 5 BAR PRESSURE PLATE EXTRACTOR

5bar Extractor allows analysis of the water-holding characteristics of soil samples in the 0 to 5 bar pressure range. The pressure vessel is 7.8" (20 cm) deep and has an inside diameter of 11.5" (29 cm).

Up to 4 ceramic plates can be accommodated at one time, allowing approximately 48 each 2-1/4" (5.7 cm) diameter samples to be analyzed simultaneously.

This extractor consists of a pressure vessel and lid, clamping bolts, O-ring seals, and outflow tube assemblies. The extractor can also be ordered with 4 one bar ceramic plates.



15 bar pressure plate extractor				
Capacity (cell)	Diameter (cm)	Deep (cm)	Weight (kg)	Tested Pressure (bar)
4	29	20	30	40

## Pressure regulation& control unit

This control unit has special capability to regulate pressure in 3 various range simultaneously.

These various pressure range is 0 – 1, 1 – 5, 5 – 15 can be determined simultaneously with installing one 15 bar and two 5 bar pressure chambers.

Iron fans in front of unit can create maximum safety for operator. Pressure regulator for 0-1bar rang is very sensitive and has 0.02 bar adjustment accuracy.



control unit Specifications			
Operating Range (bar)	Regulator Range (bar)	Barometer Range (bar)	Barometer Resolution (bar)
$5 \leq \leq 15$	0 – 17.5	0 – 16	0.5
$1 \leq \leq 5$	0 - 8	0 – 6	0.1
$0 < \leq 1$	0 – 1	0 - 1	0.02

## Pressure source

- Air tank (40 kg up to 120bar)
- Compresor(20bar)

## Ceramic plates

- 0.5 bar standard ceramic plate
- 1.0 bar standard ceramic plate
- 2.0 bar standard ceramic plate
- 3.0 bar standard ceramic plate
- 5.0 bar standard ceramic plate
- 15 bar standard ceramic plate





## **Other products :**

- Pressure membrane apparatus
- Sand kaolin box
- Sandbox
- Manual & Full automatic lab permeameters (constant head & falling head)
- Ceramic plates (0.5, 1, 2, 3, 5, 15 bar)
- Double ring infiltrometer
- Laser base soil surface roughness meter
- Electronic Wet front detectors

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