

AMI Tens ltd. Hahadarim st. 48, Ashdod, Israel, P.O.B 12096 Tel. 972-8-8523236 Fax. 972-8-8523964 office@amitens.co.il • www.amitens.co.il The growing demand for food supply, on one hand, and depletion of usable water sources, on the other hand, emphasize the importance of efficient and water saving technologies in agriculture. The Tensiometer is the best tool for advanced, reliable monitoring in the field. The Mechanical tensiometer is a simple, yet, cost-effective among our products.

Mechanical Tensiometers

What is a Tensiometer?

A Tensiometer is a simple, but efficient, device designed for monitoring and evaluation of soil water availability for plants, by measuring water tension in the soil, meaning the adhesion power of water to soil particles. The data obtained helps the farmer to decide when and how much to irrigate.

Structure and operation principle:

The Tensiometer consists of a plastic tube, a porous ceramic tip (6 cm. long) attached at the bottom, and a vacuum gauge is attached to the top. The pipe is filled with water and when the ceramic tip is inserted into the active root zone of a plant the internal water is linked to the soil water solution and the vacuum sensor can measure the water tension. When the soil is wet this power is low and when it is dry, the vacuum power is high.

The user has to regularly, follow-up the readings (about once a day) and, according to the results, define the optimal timing and quantity of next irrigation cycle.



Allocation of tensiometers:

There are no absolute instructions for Tensiometers allocation but some basic principles are important to remember:

The selected installation points should be in a place to best represent most of the monitored field. Mostly we will prefer a few testing points according to professional considerations, and usually we select 2-3 depths in a point, to follow up water gradient in the soil layers.

Data Interpretation

Water tension in every soil type behaves differently. One should follow up and learn the behavior of water in his own field and find the right set-point for irrigation. Consult your agronomist about this subject.

Options:

Standard Tube's length: 20/30/40/60/90 cm. (selectable)

Configuration: A. Standard – straight tube,

B. Angular (90°) tube - for soilless media or shallow soil.

Vacuum Gauges:

Standard: Range 0-100 CB, back thread- G1/4".

Optional: Side threaded-G1/4"

Low vacuum gauges:

(for Soilless or very sandy media) 0-100/0-250 Mb

(adjustable).

