

Soil Tension Meter (TEN series)

User Manual

1. Introduction

The soil tension meter is relatively simple soil moisture equipment. It can measure the soil moisture of arbitrary point in the soil. It is easy to operate and easy to keep, it is reliable equipment for irrigation management.

2. Components

The soil tension meter is made of two parts.

Tension meter exploring tube—it's made of polycarbonate tube, ventilate ceramic head and airproof rubber plug. Put the right amount of fluid in the tube and begin to use after place into the soil.

Meter—the accurate stainless steel pointer read results from exploring tube.

3. Characteristics

- Tube of low price. This means you can set up more observation point, easy to replace.
- Stainless steel needle direct reading instrument can be used to detect the tension meter readings, intuitive, quick and accurate.
- Using deep weathering polycarbonate tube, high intensity, long service life. Parts are removable, easy to replace the maintenance.
- The standard detection tube length: 15, 30, 45, 60, 90, 120cm (measuring depth), can satisfy the use requirement of most of the situation.
- Special length can accord to the user's requirements for processing.

4. Principle and operation

When the soil become dry, contact with the ceramic head of soil potential tend to be sucked out tube of water surface tension. And form a partial vacuum on the top of the tube. After the irrigation or rainfall, water is sucked back into the tube reduce vacuum.

High vacuum value represents dry soil. If low vacuum value, represent wet soil. In general, should place several monitoring points. Each monitoring point must have 2-3 sets of tension meter with different length. Then you can know each monitoring point of moisture content in different depth and moisture during irrigation period.

The tension meter system could be used for many years, reliable need only a small amount of maintenance. Instrument do not require calibration and zero.

Read and record data regularly in the field when using. For example, draw soil moisture motion graph 2-3 times in a week, learn different crops water requirements from department of agriculture. It can help irrigator to estimate water requirements in next irrigation interval and related preparation before irrigation.

