

# TH<sub>2</sub>O Portable Soil Moisture



The TH<sub>2</sub>O is the new way to measure volumetric soil moisture content. TH<sub>2</sub>O combines ease of use, accuracy, and low cost. Growers, turf specialists, and scientists receive immediate precise soil moisture data.

## How does it work?

The sensor sends a microwave signal and analyzes the reflection to measure the dielectric constant (theta) of the soil. The dielectric reading is then converted to volumetric water content ( $\pm 1\%$  accuracy). The battery powered hand held readout provides instantaneous readings for mineral or organic soils.

## How do you use it?

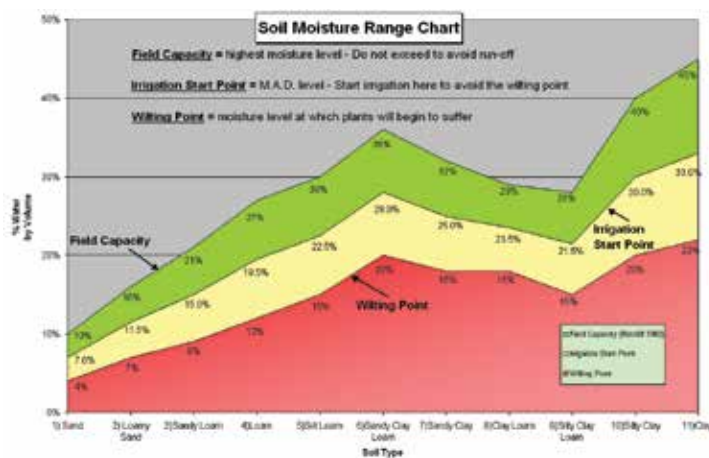
The TH<sub>2</sub>O takes accurate soil moisture samples with minimal disturbance. By simply inserting the probe into the ground, actual soil moisture percentage readings are given. Watering needs can be quickly determined making it easy to remove the guesswork and errors.

If you already know your soil type, you may set irrigation targets right away. Otherwise measure the soil holding capacity 24 hours after a heavy rain or thorough irrigation. The holding capacity chart on the previous page shows the correct irrigation start point (ISP) and classifies your soil type. This ISP target is a good beginning level for plants to take out 50% of the available water.



## Features

- Saves water, fertilizer, and money
- Unaffected by salinity or temp
- Ideal tool for irrigation audits
- Trouble shoot sprinkler systems
- Inserts with minimal disturbance - (4) 1/8" prongs
- Operates in the range of 0-60% water content
- Displays in volumetric water content and deficit
- Stores up to 1100 time-stamped readings, accessed by PC
- Readings include sample number, plot identification number, and a sensor number





# Specifications

TH <sub>2</sub> O Specifications	
Overall height	36.5" (927 mm)
Weight	5 lbs. (2.26 lbs.)
HH2 Specifications	
Display	16 character x 2 row LCD
Soil moisture range	Zero to saturation 0-1.5 V on voltage range
Accuracy	±(0.13% of mV reading +1.0 mV)
Resolution	1 mV, 0.1% moisture
Battery	9 V alkaline cell, included
Size / weight / packaging	5.9 x 3.2 x 1.6"/ 1 lb (150 x 80 x 40 mm / 450 g) nylon holster supplied
Memory	1150 soil moisture readings, or 650 with mv output
PC Communications	Windows PC retrieval software supplied with RS232 cable
ML3 ThetaProbe Specifications	
Accuracy	±0.01 m <sup>3</sup> .m <sup>-3</sup>
Range	0 to 0.5 m <sup>3</sup> .m <sup>-3</sup>
Salinity range	< 0.035 m <sup>3</sup> .m <sup>-3</sup> 50 to 500 m <sup>5</sup> .m <sup>-1</sup>
Power Input	5 to 14 V, 18 mA for 1 s
Rod Dimensions	2.375" (60 mm)
Overall length	8" including pins

## Ordering Information

### **TH<sub>2</sub>O**

Theta soil moisture meter with ML3 ThetaProbe & HH2 readout unit with extension handle

### **HH2**

Hand held readout with integral 25-pin D-connector for sensor connection or PC connection. Including connector cap, battery, user manual, PC software, and RS-232 cable assembly

### **ML3**

Theta Probe Soil Moisture & Temperature Probe. No cable

### **MLRK3**

Replacement rods for new ML3 (2 pack)

### **ML-INK1**

ML3 insertion kit for hard soils