

TH₂O Soil Moisture Meter



The TH₂O 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.

Overall Benefits

- Know you have the correct moisture amount for the crop
- Prevents leaching and reduces polluted runoff
- Saves water, fertilizer, and money
- Anyone can use the TH₂O
- Identify over-watered spots, and minimize runoff
- Ideal tool for irrigation audits
- Trouble shoot sprinkler systems

The TH₂O is the new way to measure volumetric soil moisture content. TH₂O combines ease of use, accuracy, and low cost. Growers, turf specialists, and scientists receive immediate precise soil moisture data.

Features

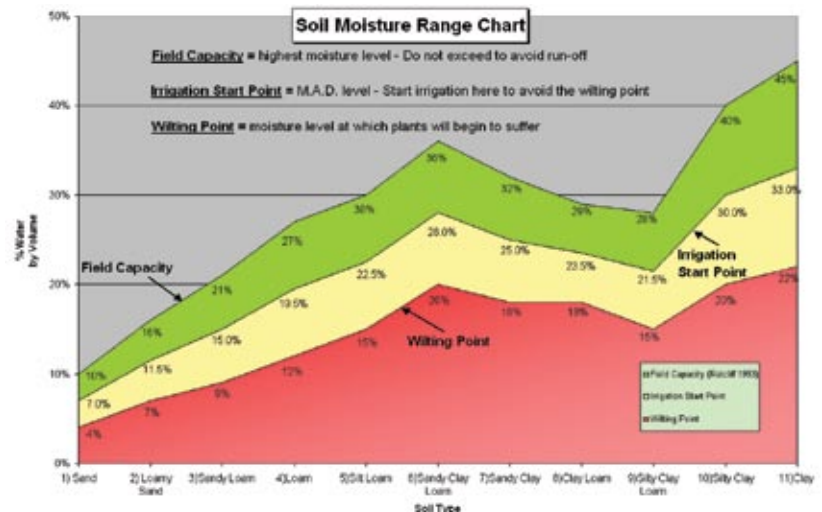
- Sealed, waterproof probe, factory calibrated
- Unaffected by salinity or temperature
- Inserts with minimal disturbance - (4) 1/8" prongs
- Operates in the range of 0-60% water content
- Displays in volumetric water content and deficit
- Stores up to 1100 time-stamped readings, accessed by PC
- Readings include sample number, plot identification number, and a sensor number

Crop Applications

- Adjust the irrigation schedule when it is too dry
- Cut back the irrigation when it is too wet
- Record the refill point % to adjust the volume and time between irrigations to suit
- Establish the ideal water application to get to the root zone and then stop wasting water

Sports Turf Applications

- Determine the ideal moisture level for best play and looks
- After saturation, determine the holding capacity of fairways, greens and tees
- Spot check the greens and fields on hot days for syringing or for uneven irrigation application.
- After cutting a cup, check the perched water table or root zone



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Sensor Technical Specifications

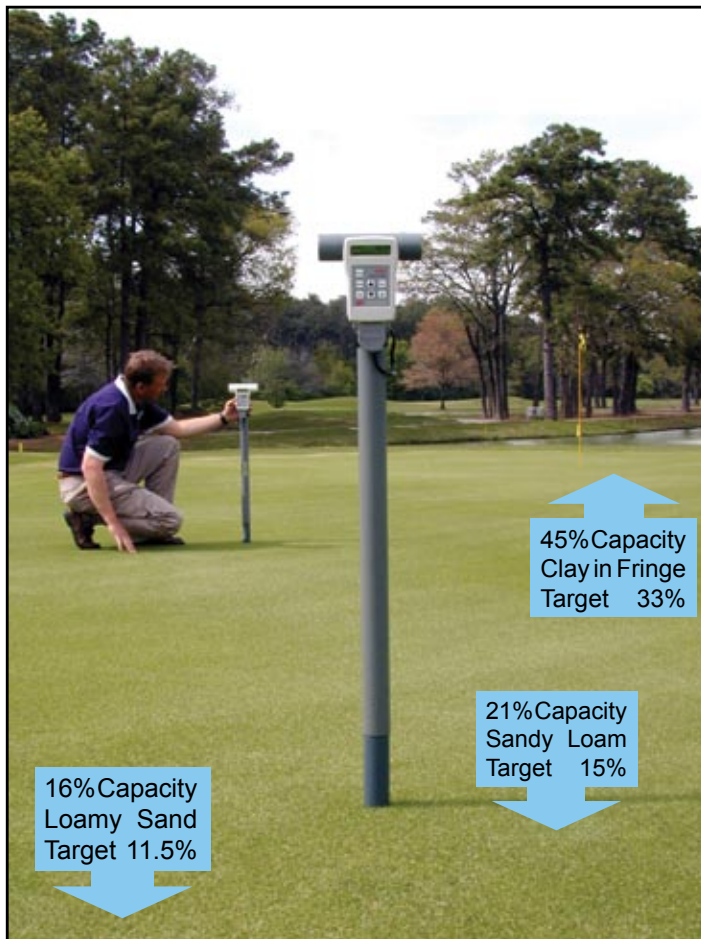
How does it work?

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 TH₂O probe is inserted into the soil. Drill a 2" diameter hole or insert an access tube into the root system to take moisture readings down to 2.5 ft. Then press the "read" button. The LCD shows the soil water content as a decimal value, % volumetric or mm deficit. The HH2 then asks if you wish to store the reading.

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.



TH₂O Specifications and Ordering

Overall height: 36-1/2 inches (927mm)
Shipping Weight: 5 lbs

HH2 Specifications

Display: 16 character x 2 row LCD
Soil moisture range: Zero to saturation
0-1.5V on voltage range
Accuracy: $\pm(0.13\%$ of mV reading +1.0 mV)
Resolution: 1 mV, 0.1% moisture
Battery: 9V alkaline cell, included
Size / weight / packaging: 5.9 x 3.2 x 1.6"/
1lb (150 x 80 x 40mm / 450g) nylon holster
supplied
Memory: 1150 soil moisture readings, or 650
with mv output
PC Communications: Windows PC retrieval
software supplied with RS232 cable

ML2x ThetaProbe Specifications

Accuracy/Range: ± 0.05 m³/m³ (5%): 0-70° C,
using "general" soil calibrations supplied.
 ± 0.01 m³/m³ (1%): 0-40° C, after calibration to
a specific soil type.
Calibration: Not necessary for normal
operation. Each sensor is factory calibrated for
either organic or mineral soils.
Response Time Electrical: <0.5s to 99% of
change
Environmental: Operates over -10 to +70° C
without damage Burable up to 15 ft. (5m) deep
in soil or water
Input/Output: Requires 5-15V d.c. at 15 mA.
(typical). Output range: 0-1V d.c. for 0-0.5 m³/
m³ moisture.
Dimensions: Rods 2.4 x .125" (60 x 3mm)
diameter. Overall length 8-1/8" (207 mm),
diameter 1-9/16" (40mm).