



**METER**

## **SATURO SATURATED HYDRAULIC CONDUCTIVITY OF SOIL IN FIELD**



### **Get more out of every field visit**

Saturated hydraulic conductivity is a pain to measure in the field. And the infiltrometer field measurement is only the beginning. When you get back to the office, you need to convert the raw data into hydraulic conductivity and infiltration rates. We think you should spend less time on complex measurement processes and more time being productive. That's why we automated almost everything in the new SATURO.

### **Set it up, and leave**

The SATURO dual head infiltrometer does almost everything for you. It's fully automated and doesn't require post-processing of data. Install the ring, connect the hoses, and push start. It's that simple. The infiltrometer automatically measures infiltration rates, and the control unit calculates field saturated hydraulic conductivity ( $K_{fs}$ ) on the fly. That means if you need a value right away, it's there. If you want to dig deeper, you can always download the raw data.

### **One person can do everything**

Unlike double ring systems, the SATURO infiltrometer is designed for one person to carry and set up. Plus, it requires less water, saving you a lot of time and effort. The SATURO ponds water on top of the soil and uses air pressure to create two different pressure heads. It uses a pump to automatically maintain the correct water levels. No more constant measuring and adjusting. It operates unattended, which means you can get other field work done instead of having to babysit the instrument. And, you can run multiple instruments simultaneously, allowing you to further maximize the efficiency of your time in the field.

### **Eliminate guessing**

Single and double ring infiltrometers require you to know - or guess - the "alpha factor" (soil macroscopic capillary length) to manually correct for three-dimensional flow. The SATURO infiltrometer changes everything. It automates the well-established dual head method, which measures infiltration at two different pressure heads, avoiding the need for the alpha factor and allowing you to determine field saturated hydraulic conductivity without making any dubious assumptions. And the best part is, it does all the calculations for you, saving you hours of tedium.



**BILMAR BİLİMSEL ARAŞTIRMA VE MÜHENDİSLİK ANONİM ŞİRKETİ**

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### A simple, precise solution

The SATURO infiltrometer combines automation and simplified data analysis together in one system. It even computes infiltration rates and field saturated hydraulic conductivity on the fly. The SATURO makes life a little easier for those who need a faster, more accurate way to measure  $K_{fs}$  in the field.

### Features

- Fully automated infiltrometer
- Capable of unattended measurement
- $K_{fs}$  values calculated and graphed in real time, no data post-processing is necessary
- Portable
- Includes self-contained water reservoir



### Specifications

Infiltration rate range	0.0038 cm/hr to 115 cm/hr
Infiltration rate resolution	0.0038 cm/hr
Infiltration rate accuracy	±5% of reading
$K_{fs}$	The range of $K_{fs}$ values that can be effectively measured by the SATURO infiltrometer are limited by the minimum and maximum infiltration rates listed above. These depend on the pressure heads applied to the water during infiltration and to the three dimensional flow characteristics of the soil, so the measurement range of $K_{fs}$ cannot be specified explicitly. SATURO will generally be able to make measurements on poorly to moderately structured soils as coarse as medium sand, but the maximum infiltration rate can be exceeded by soils with excessive structure and especially by soils with significant macro pores.
Water level	Maintained at 5 cm
Pressure head ranges	0 to 40 cm
Operating temperature	0 to 50°C
Charging adapter	18 V 2.2 Amps; Range 18 to 24 V DC Output: USB