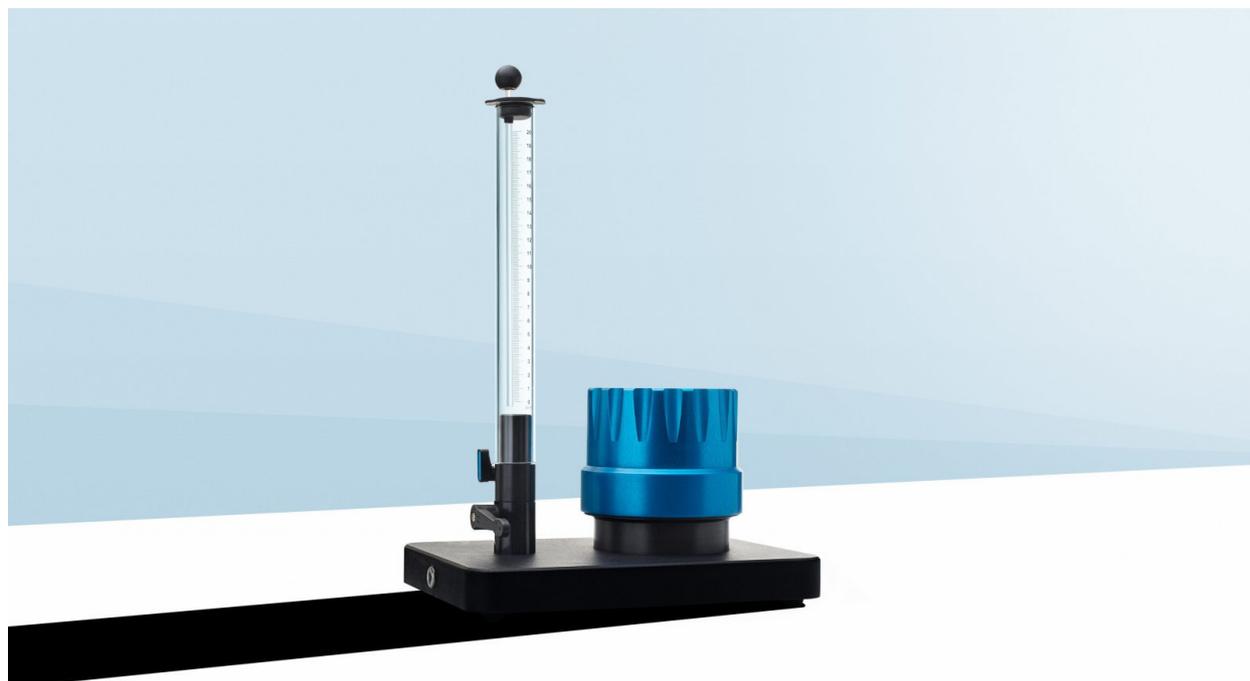


# Saturated hydraulic conductivity in the lab

[metergroup.com/environment/products/ksat-saturated-hydraulic-conductivity/](https://metergroup.com/environment/products/ksat-saturated-hydraulic-conductivity/)



## The benchmark of benchtops

### KSAT

#### A recurring core issue

Saturated hydraulic conductivity isn't an easy measurement to make, mostly because of the lack of a simple-to-use tool. Many soil scientists and engineers resort to cobbling together their own contraptions that are either complicated and finicky, or simple and crude. Neither have proved to be effective setups in terms of accuracy or convenience.

#### Saturated hydraulic conductivity solved

The KSAT is the only automated setup for taking saturated hydraulic conductivity measurements in the lab. In its simplest form, it's an instrument that uses both the falling and constant head methods on a soil core. Best of all, it's completely integrated, so you're also assured of software-controlled engineering that's fully tested.

#### Integration: the key to convenience

Unlike typical contraptions, the KSAT comes with everything you need to make a measurement, meaning you can set it up right out of the box. This type of integration also allows the KSAT to take up minimal bench space. But perhaps its biggest benefit is how it complements the [HYPROP](#). Both the HYPROP and the KSAT can use the same soil core because they share compatible sampling rings. This allows you to take saturated and

unsaturated hydraulic conductivity measurements and generate a soil moisture characteristic curve to get a complete picture of a sample's properties, simplifying both processes.

### **Automatic ease**

As the only automated instrument on the market, the KSAT makes measurements a lot more convenient. The easy-to-use software performs all calculations, including temperature corrections based on the viscosity of water. You can also look forward to eliminating the need to time outflow, weigh beakers and make judgement calls, which collectively add up to significant time savings.

### **A higher degree of accuracy**

The KSAT boasts a wide range of measurement conductivities from 5,000 – 0.01 cm/d. Plus it reads and stores data automatically on your computer via USB, so human error is reduced. And because temperature is corrected before a measurement is made, data quality is also dramatically improved for results you can truly rely on.

### **Superior saturated hydraulic conductivity measurements**

Full integration. Simple automation. Improved accuracy. The KSAT finally checks off all the boxes you care about when it comes to measuring saturated hydraulic conductivity in a compact instrument that saves you time, hassle, and worry.

[Get pricing](#)

[Features](#) [Specifications](#) [Accessories](#) [Support / Downloads](#)

### Features

- Accurate
- Removes human error
- Directly calculates Ksat
- Temperature corrections
- Completely integrated package
- Small footprint
- Automated
- Uses both Constant and Falling Head methods
- Easy-to-use software
- Compatible with [HYPROP](#)
- Wide range
- Complies with DIN 19683-9 and DIN 18130-1

### Specifications

Measureable Ksat values (min.)	0.01 cm/d (0.004 in/d)
Measureable Ksat values (max.)	10000 cm/d (3937 in/d)
Hydraulic conductivity (Ks) of the porous plate	Ks = 20000 cm/d (10000 in/d)

Typical statistical inaccuracy at constant environmental parameter and constant flow resistance of the soils	approx. 2% (in practice 10%)
Pressure sensor accuracy	1 Pa (0.01 cm WC or 0.0001 psi)
Temperature sensor accuracy	0.2 C (0.4 F)
Sampling ring (also fits with HYPROP)	Volume: 250 ml (0.066 gal) Height: 50 mm (2 in) Inside diameter: 80 mm (3.15 in) With separate adapter: 100 ml sampling rings possible
Software requirements	Windows 7 or later, Microsoft Framework 3.5

## Accessories

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## Adapter Set

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### Support

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Have a question or problem? Our support team can help.

We manufacture, test, calibrate, and repair every instrument in house. Our scientists and technicians use the instruments every day in our product testing lab. No matter what your question is, we have someone who can help you answer it.

Email: [support.environment@metergroup.com](mailto:support.environment@metergroup.com)

Phone US: +1 509-332-5600

Phone Europe: +49 89 12 66 52 0

## Downloads

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[KSAT & HYPROP 2" Adapter Manual PDF / 1.12 MB](#)

[KSAT Manual PDF / 3.60 MB](#)

[KSAT Software ZIP / 66.75 MB](#)

## Related Products

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### HYPROP 2\*

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The improved version of the evaporation method in the lab to determine the pF curve and the unsaturated conductivity of soils sets a new benchmark. HYPROP makes highly precise, simultaneous measurements of hydraulic characteristics during the natural desiccation of the soil. Thus, HYPROP delivers data with high resolution in a minimal period of time under natural conditions.

[Learn more](#)

[Get pricing](#)



## SATURO

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Saturated hydraulic conductivity is a pain to measure in the field. It involves hours of labor, bulky equipment, and thousands of liters of water. And the 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.

[Learn more](#)

[Get pricing](#)

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