
ANNOUNCING – THE AARDVARK PERMEAMETER KIT – 2840K

Our newest product is the Aardvark, a Constant Head Borehole Permeameter, and the very first automated permeameter.

The Aardvark sets up in minutes and automatically records reading for water consumption rate. In minutes it will automatically determine Steady State, calculate Steady State Water Consumption Rate and then give you the Saturated Hydraulic Conductivity (K value).

Unique Features:

- Highly accurate readings. The digital scale determines changes in the water level in the reservoir with a 0.2 g accuracy (equivalent to 0.2 ml) and can be corrected for temperature. No other permeameter will give you this precise of readings.
- Provides the user with a real time graph of readings (Water Consumption Rate) helping users determine Steady State.
- Able to measure a K_{sat} as small as 10^{-9} m/s using mere 5 minute intervals, well beyond the ability of other permeameters.
- Sets up and installs easily. All components connect to a single soft tube with quick connections. This provides great flexibility for above ground setup (not necessarily right above the borehole).
- Easy to use. Unlike other permeameters, water is not under tension (vacuum), making it easy to refill the reservoir during the measurement process. This is a very important advantage especially in soils with high permeability.
- Deep measurements? No problem! The Aardvark can take readings as far down as 15 m (50 ft.) when you add in the Regulator.
- Leave your notepad at home because your data will be automatically recorded for you; then print out your reports later back at the office. Readings, graphs and results can be exported to a Microsoft Excel spreadsheet.
- Anyone can make a measurement! So simple to understand, install and use. Minimum training required.
- While the Aardvark is capable of measuring K value in the shortest amount of time, the benefit of the automated feature is you can also take readings over an *extended* period of time. This provides researchers with a unique opportunity to perform studies that, until now, have not been possible.
- Does not require calibration.
- No maintenance required; simply rinse the unit with clean water and go!



*Aardvark and Regulator Modules
shown above*

SOILMOISTURE EQUIPMENT CORP.

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The Aardvark Permeameter is automated through the use of our new SimplyDATA Software Suite!

This software package was specifically designed to be a powerful and convenient tool for researchers, educators and engineers. Our SimplyData Software Suite also has several other applications, besides the Aardvark Application, that we created for different fields of soil science (*more on this in a separate email to follow!*)

For performing automated a measurement, connect SimplyDATA digital scale to USB port of your computer after setting up the Aardvark components, click Start button on Aardvark Application and open reservoir valve. Now sit back and relax. The program will record the readings and get back to you when K value is calculated.

The 2840K2PC, Aardvark Permeameter Kit, comes in two cases (as shown in photo to the left) that include the following items:



1. The Aardvark Module
2. Regulator Module – for measurements deeper than 10 ft.
3. Digital Scale
4. 8-Liter Reservoir
5. Adjustable Table
6. 50 ft. Connecting tubing
7. 50 ft. Measuring suspension tape
8. Tubing Clamp
9. Measuring tape holder
10. 60-minute Timer
11. Rite in the Rain Tablet and Pen for notes
12. Flash Drive with the SimplyDATA Software
13. Care Kit (Extra parts)
14. Operating Instructions

Recommended Options:

We highly recommend that the user also purchase the Field Auger Set (0237D10L10) which was specifically designed for use with the Aardvark. It includes everything to auger and prep a 4-inch (10 cm) diameter borehole down to 10 feet, all in a convenient carrying bag.

The Field Auger Set Includes one of each of the following:

- Sizing Auger, Bayonet Connection, 10 cm for borehole bottom preparation (0234HBPBD10)
- Dutch Auger, Loamy Soils, Bayonet Connection 10 cm (0234LOMBD10)
- 10 cm Auger Handle, Bayonet Connection, with detachable grip, 60 cm long (0234SHDLB)
- Auger Extension Rod, Bayonet Connection, 100 cm long (0234SHDLBXLE30)
- Well Prep Brush, Bayonet Connection, 10 cm (0234WPBBD10)
- Coupling Sleeve, Bayonet (0234SLB)
- Auger Carrying Bag (XBAG-0237)
- Operating Instructions (0898-0237)

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Shipping Dimensions:

2840K2PC Carton 1/2: 30x24x10, gross wt. 20 lbs.; Carton 2/2: 20x15x9, gross wt. 10 lbs.
0237D10L10 Carton 1/1: 10x10x38, gross wt. 30 lbs.

Other Aardvark Permeameter Options Available:

For Measurements down to 10 ft. (Regulator not included)

2840K1 Aardvark Permeameter Kit includes:

1. The Aardvark Module
2. 8-Liter Reservoir
3. Adjustable Table
4. 50 ft. Connecting tubing
5. 50 ft. Measuring suspension tape
6. Tubing Clamp
7. Measuring tape holder
8. 60-minute Timer
9. Rite in the Rain Tablet and Pen for notes
10. Flash Drive with the SimplyDATA Software
11. Care Kit (Extra parts)
12. Operating Instructions

2840K1PC Aardvark Permeameter Kit For the PC
Contains all the items of 2840K1 **plus** the 10Kg Digital Scale with USB output for autologging on a PC (Part No. 7201WPKG _10) - PC is not included.

2840K1RIF Includes all the items of 2840K1PC , **plus** the Record It in a Flash - USB Flash Datalogger (Part No. 7205RIFPKG) - PC not included.

For the Minimalist

2840BE Aardvark Bare Essential Kit, Module, Contains a Standard Aardvark, Reservoir and 10 ft. of tubing in a handy tote bag. 10 ft. Does NOT include the SimplyDATA Software.

For Measurements down to 50 Ft.+ (includes Regulator)

2840K2 Aardvark Permeameter Kit with Regulator (includes all items shown on Page 2)

2840K2PC Contains all the items of 2840K2 plus the 10Kg Digital Scale with USB output for autologging on a PC (Part No. 7201WPKG _10) - PC is not included.

2840K2RIF Includes all the items of 2840K1PC , **plus** the Record It in a Flash - USB Flash Datalogger (Part No. 7205RIFPKG) - PC not included.



The SimplyDATA Record it in a Flash (left in above photo) is a standalone battery-operated, programmable, logger/recorder for USB devices. When used with the Aardvark and the Digital Scale, it can record and save your data without the use of a PC.

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How is the Aardvark different from the Guelph Permeameter?

Here is a quick comparison of the Aardvark and the Guelph:

	Aardvark	Guelph
Borehole permeameter	X	X
Constant head method	X	X
Needs supervision?	Little	High
Has automatic reading mode?	X	
Has manual reading mode?	X	X
Logs data automatically?	X	
Has software for calculations?	X	X (available on web!)
Computer required?	Yes (for automated mode)	
Reading accuracy	0.2 ml	From 2 to 35 ml
Easy to Setup?	high	low
Has electronic components?	X	
Reading interval time is...	Shorter	Longer
Easy to refill reservoir?	Very	No
Max nominal measurement depth	15 m = 50 ft	75 cm = 2.5 ft
Measurement range (Ksat)	10^{-4} to 10^{-9} m/s	10^{-4} to 10^{-7} m/s
Min borehole diameter	10 cm (4 in.)	6 cm (2-3/8 in.)
Head Height Precision	lower	higher
Min head height	10 cm	5 cm
Sensitivity to wind in the field?	X	X
Can perform shallow measurements?	X	X
Can perform deep measurements?	X	
Water consumption to perform readings?	low	low

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