## **Transient Release and Imbibition Method (TRIM) System**

<u>Description</u>: The TRIM System is a simple-to-use laboratory device for measuring the soil-water retention curve (SWRC) and hydraulic conductivity function (HCF) of unsaturated soils in significantly less time than other approaches. The SWRC and HCF may be measured along either wetting or drying paths in as little as 5-7 days using either disturbed or undisturbed samples. The system may be operated in either steady-state mode or transient mode and is applicable for all major soil types, including sand, silts, and clays.



## Features:

- Precision flow cell with integrated high-air-entry base (300 kPa)
- Capability to extrapolate suction range to several thousand kPa
- Visual bubble trap system to account for diffused air volume
- Control panel for dual-range air-pressure (< or > 15 kPa) control
- Vacuum control (option) for in-situ sample and HAE disk saturation
- Integrated pore-fluid reservoir
- Electronic balance for automated monitoring of pore fluid volume
- Control computer (option) and graphical user interface for data acquisition and post-processing
- Manufactured with high-quality components and stainless steel fittings
- Undisturbed or remolded specimen for dimensions of 5-14 cm (diameter) x 5-10 cm (height)
- Completion of both wetting and drying SWCC and HCF shown above in one week
- Post processing software (HYDRUS-1D TRIM) for easy data reduction and parameter analysis.

## Technical Reference:

"A transient water release and imbibition method for rapidly measuring wetting and drying soil water retention and hydraulic conductivity functions," Geotechnical Testing Journal, ASTM, Vol. 35(1), 2011, A. Wayllace and N. Lu (<u>http://inside.mines.edu/~ninglu/Lu%20sub%20pages/Lu%20publications.html</u>).

Contact:

Soil Water Retention, LLC 2025 Chadbourne Ave. Madison, WI, 53706, USA



