



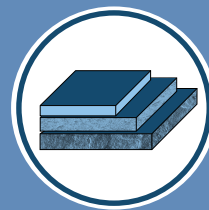
## AUTOMATED LABORATORY TESTING SYSTEMS FOR SOIL, ROCK, AND GEOSYNTHETIC TESTING



Construction/Infrastructure



Offshore Engineering



Roadways/Pavement



Slope Stability/Embankments



Mine Waste/Tailings



Earthquake Engineering

[geocomp.com](http://geocomp.com)





## Automated Geotechnical Laboratory Testing Systems

Geocomp's Products Division has delivered fully automated geotechnical testing systems for more than 35 years with the winning combination of technical sophistication, reliability, and ease-of-use. We have merged the latest technology in electronic and mechanical components with powerful software algorithms to create unique, highly accurate, fully automated equipment.

### What Do Geocomp Products Offer?

- **Unmatched automation from test start to finish** - 2 to 32 times faster results and labor time savings of 30% to 95% vs. manual testing
- **Flexible design** - perform additional testing on the same platform to save money and space in your lab
- **Full test control and remote monitoring allows you to take your testing on the go** - view real-time results, check test quality, and change parameters
- **Convenient reporting** - produce complete, compliant reports instantly or export data for desired manipulation
- **Designed for consistent and repeatable testing you can be confident in**

### Additional Benefits of Geocomp Automated Systems:

- Time-tested design for years of reliable and repeatable testing
- High accuracy and precision with low electronic "noise" - stable to one part in 65,000
- Common Windows® based user-interface across all test types for easy learning and operation
- Remote accessibility allows for convenient and interactive technical support
- Precise control of loading and displacement rates for both monotonic and cyclic loading
- Built-in smart protection systems to minimize damage to equipment
- Measure strain as low as  $10^{-7}$  and displacement as low as  $0.1\mu\text{M}$ , even at high sampling rates
- Detailed load or strain control for cyclic testing at rates up to 10 Hz
- Maintain precise control of cyclic deviator stress on 6 in. high specimens up to 5% peak-to-peak axial strain at 1 Hz
- Built-in data reduction and reporting saves considerable time and gets results out faster
- Raw data format and tabular export for research or advanced analysis
- Designed, manufactured, and supported by Geocomp's full-time staff of degreed and experienced professionals

### Standards Compatible

- Full reports of graphs and tables compatible with ASTM, AASHTO, ISO, and BS
- Quality assured systems to industry standards so you can rely on the results
- Labs using our systems are accredited and/or validated by government agencies and other accrediting bodies, including AASHTO, USACE, A2LA, and GAI-LAP



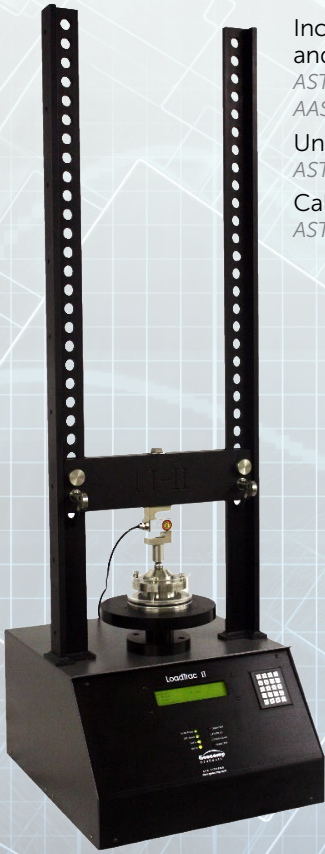
## Consolidation

Incremental Consolidation  
and Swell Testing

ASTM D2435, D4546  
AASHTO T 216

Unconfined Compression  
ASTM D2166, AASHTO T 208

California Bearing Ratio (CBR)  
ASTM D1883, AASHTO T 193



## Rowe Consolidation

Rowe Consolidation

ASTM D2435, D4186

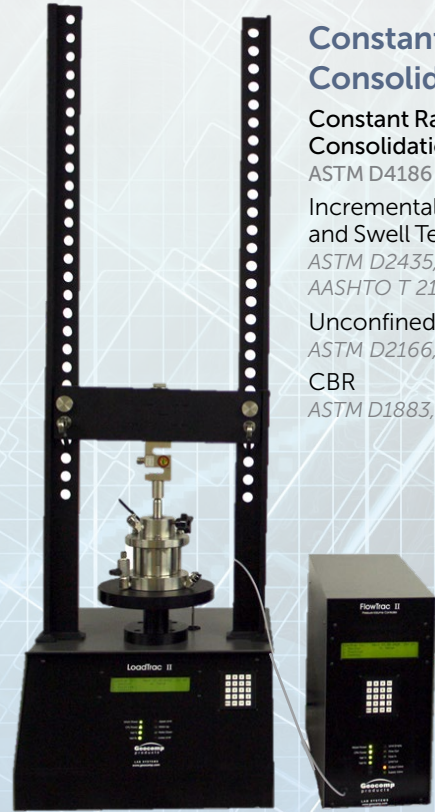
Permeability  
ASTM D5084

## Constant Rate Consolidation

Constant Rate of Strain Consolidation  
ASTM D4186

Incremental Consolidation  
and Swell Testing  
ASTM D2435, D4546  
AASHTO T 216

Unconfined Compression  
ASTM D2166, AASHTO T 208  
CBR  
ASTM D1883, AASHTO T 193

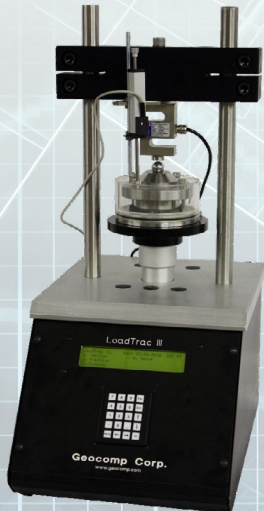


## Constant Rate Consolidation

Constant Rate of Strain Consolidation  
ASTM D4186

Incremental Consolidation  
and Swell Testing  
ASTM D2435, D4546, AASHTO T 216

Unconfined Compression  
ASTM D2166, AASHTO T 208

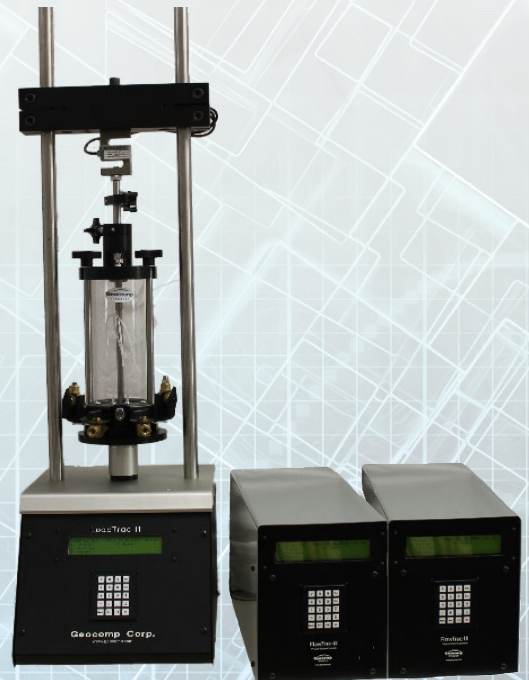
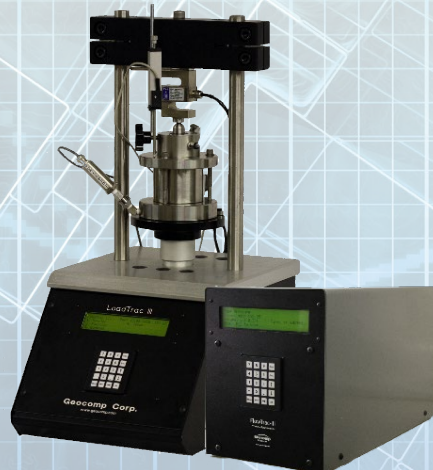


## Consolidation

Incremental Consolidation and  
Swell Testing

ASTM D2435, D4546, AASHTO T 216

Unconfined Compression  
ASTM D2166, AASHTO T 208



## Triaxial

Triaxial

ASTM D2850 (UU), D4767 (CU), D7181 (CD)  
AASHTO T 296, T 297

Constant Rate of Strain Consolidation  
ASTM D4186

Incremental Consolidation and Swell Testing  
ASTM D2435, D4546, AASHTO T 216

Unconfined Compression  
ASTM D2166, AASHTO T 208



## Triaxial & Stress Path

### Triaxial

ASTM D2850 (UU), D4767 (CU), D7181 (CD)  
AASHTO T 296, T 297

### Constant Rate of Strain Consolidation

ASTM D4186

### Incremental Consolidation and Swell Testing

ASTM D2435, D4546  
AASHTO T 216

### CBR

ASTM D1883, AASHTO T 193

### Rowe Consolidation

ASTM D2435, D4186

### Permeability (need 3 FTIs)

ASTM D5084



## Resistivity Measurement System

ASTM G187, AASHTO T 288



## Cyclic Triaxial

Cyclic Triaxial Stress and Strain Control

ASTM D3999, D5311

Post Cyclic Residual Strength

ASTM D4767, D7181, AASHTO T 297

Resilient Modulus

AASHTO T 294, T 307

Triaxial

ASTM D2850 (UU), D4767 (CU), D7181 (CD)

AASHTO T 296, T 297

## Direct Shear

Direct/Residual Shear

ASTM D3080, AASHTO T 236

Direct Simple Shear

ASTM D6528

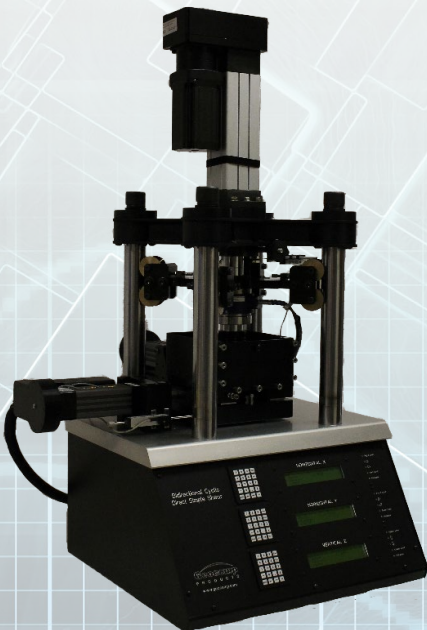
Incremental Consolidation  
and Swell Testing

ASTM D2435 / D4546

AASHTO T 216

Unconfined Compression

ASTM D2166, AASHTO T 208



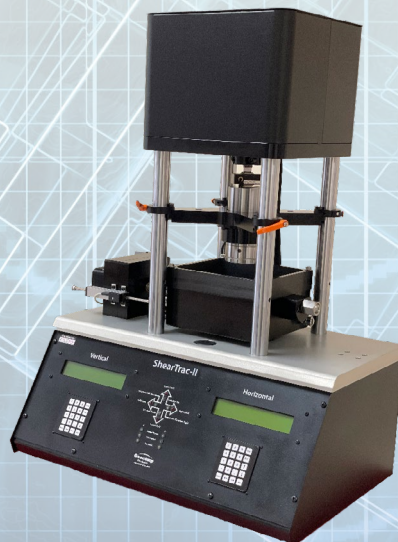
## Advanced or Bidirectional Cyclic Direct Simple Shear

Cyclic Direct Simple Shear

ASTM D8296

Direct Simple Shear

ASTM D6528



## Standard Cyclic Direct Simple Shear

Cyclic Direct Simple Shear

ASTM D8296

Post Cyclic Residual Strength

Direct Simple Shear

ASTM D6528

Direct/Residual Shear

ASTM D3080, AASHTO T 236

Incremental Consolidation and Swell Testing

ASTM D2435 / D4546, AASHTO T 216

Unconfined Compression

ASTM D2166, AASHTO T 208



## Resonant Column-Torsional Shear

Resonant Column

ASTM D4015

Post Cyclic Residual Strength

ASTM D4767 / D7181

AASHTO T 297, COE EM 1110

## Resilient Modulus

Resilient Modulus

AASHTO T 294, T 307

SHRP Protocol P46

NCHRP RPT 285

Incremental Consolidation  
and Swell Testing

ASTM D2435, D4546

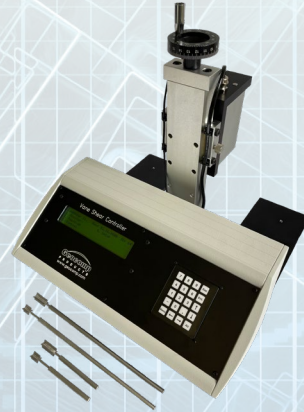
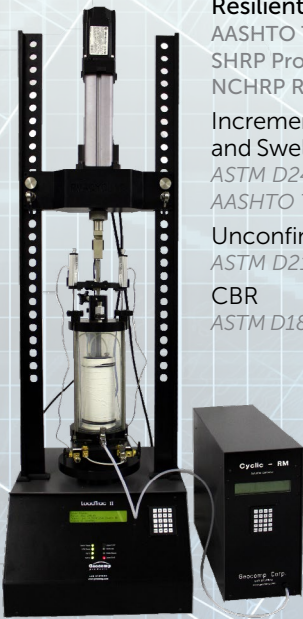
AASHTO T 216

Unconfined Compression

ASTM D2166, AASHTO T 208

CBR

ASTM D1883, AASHTO T 193



## Lab Vane Shear System

ASTM D4648



## Large Shear

Direct/Residual Shear

ASTM D3080, AASHTO T 236

Interface Shear

ASTM D5321, D6243

Rock Shear

ASTM D5607

**Geocomp**  
PRODUCTS



## Cyclic Large Shear

Cyclic Direct Simple Shear

ASTM D8296

Direct Simple Shear

ASTM D6528

Direct/Residual Shear

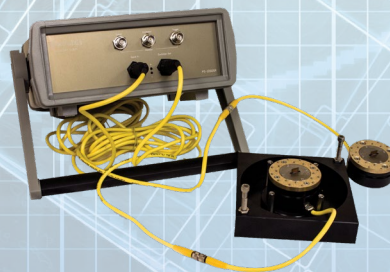
ASTM D3080, AASHTO T 236

Interface Shear

ASTM D5321, D6243

## P-and-S Wave Measurement

PC-based digital storage oscilloscope  
(DSO). USB-connected with built-in  
signal excitation



\*Systems also compliant with British, ISO/TS, and Australian standards



**Test Smart. Test with Confidence. Test for Success.**

**"I thoroughly researched the available market for triaxial and simple shear test equipment and I soon realized that Geocomp is far ahead of the competitors in terms of product and capabilities...I have also been impressed with their technical support and continued assistance."**

**- California State University, Los Angeles**

**"Thanks to Geocomp and its support team, we are recognized today for the quality of our services and for carrying out the most advanced tests in soil with great speed and efficiency."**

**- Pattrol Investigações Geotécnicas**

**"What really sets Geocomp apart from other geotechnical laboratory equipment suppliers, is the fast and knowledgeable technical support. It's exceedingly easy to get a hold of knowledgeable personnel who have a firm grasp of the equipment, the test procedures and challenges with various soil types and test conditions."**

**-Soil Engineering Testing**

**The equipment is highly versatile and reasonably priced which often is a key factor considering budget restrictions at public universities.**

**- University of Nevada Reno**

**"I would not hesitate to recommend Geocomp to other universities, governmental agencies and consulting firms for their geotechnical testing needs. Their equipment is highly reliable, simple to use and competitively priced...We have particularly found their technical assistance invaluable."**

**- University of New Hampshire**

## **GEOCOMP PRODUCTS**

We design and manufacture automated laboratory testing systems and remote monitoring devices. We focus on creating premium products and offering expert technical support to help our clients accomplish their goals efficiently and successfully, whether it be in teaching, research, commercial, or other applications. Our automated testing and remote monitoring systems are versatile, easy to use, and robust to work in varying environmental settings.

We serve numerous clients in more than 50 countries with a broad range of testing and monitoring needs. Join our many satisfied customers and make us your trusted source for automated laboratory testing systems and remote monitoring equipment.