

Geocomp's load frame does more than just Resilient Modulus testing.

With software and accessories, the following tests can also be done:

- California bearing ratio
- Compression testing of weak rocks and cement mixtures
- Constant rate of strain consolidation testing
- Cyclic triaxial testing
- Incremental consolidation
- Triaxial testing
- Unconfined compression

Our system generates data in a variety of formats, so users get the most use out of the data.

Options include:

- A complete final test report with all appropriate calculations on the data and constitutive relationships based on Publication No. FHWA-RD-97-083
- A text file of raw data and a text file of data in engineering units

Either can be easily loaded into a spreadsheet for further data analysis.

Geocomp's LoadTrac II Resilient Modulus unit fully automates resilient modulus tests on base/subbase/subgrade materials. The LoadTrac II meets or exceeds all specifications for *Resilient Modulus Testing of Base / Subbase / Subgrade Materials* by AASHTO T294 / T307, SHRP Protocol P46 and NCHRP Report 285. It minimizes man time during testing and offers a versatile platform for performing additional geotechnical tests. The LoadTrac II performs resilient modulus tests from beginning to end according to the latest AASHTO standards without human intervention.

Resilient modulus testing is a complicated test in which the stiffness of the sample changes with loading. Since the performance of cyclic loading systems depends on the stiffness of the sample, most systems fail to apply the correct load throughout the test. Our system uses real-time adjustment of a PID controller to adjust the system control parameters as the stiffness of the specimen changes. This feature permits our system to apply an accurate load from the beginning to the end of the test.

Training time is short, as most people are familiar with the Windows® operating environment. Users can configure a wide variety of graphical screens to display the test results including tabular and graphical display of channel values with time, graphical display of stresses, strains, displacements and resilient modulus values.



Resilient Modulus

Resilient Modulus LoadTrac II-RM

TECHNICAL SPECIFICATIONS

CELL PRESSURE

Automatically applied, maintained and incremented with electro-pneumatic air pressure regulator

TYPE OF CYCLIC LOADING

Haversine pulse

CYCLIC RATE

0.1 sec per pulse, 1 pulse per sec and any slower values given by user

CYCLIC LOADING

High performance custom linear actuator

2.8 kW peak, low inertia servo-drive system for fast response time

High resolution feedback system for precise and accurate control of load and speed

4.5 kN (1,000 lbf.) continuous load at speeds in excess of 200 mm (8 in.)/sec

Self-contained and maintenance free

Single phase 208 VAC/60 Hz (US) / 220 VAC/50 Hz (international)

OPTIONS TO END TEST

Maximum number of cycles

Maximum strain

REPORTING OPTIONS

Shear stress versus pulse number

Axial strain versus pulse number

Resilient modulus versus pulse number

Resilient modulus versus deviator stress

Resilient modulus versus confining stress

Automatic or user specified scaling on any of above plots

Plotting to monitor, printer, plotter, or file

TEST CELL

Modified triaxial cell with sample preparation accessories

UNIT SYSTEMS

U.S., English, metric and SI changeable at any time before, during, and after test

SAMPLE DIAMETER

70, 100, and 150 mm (2.8, 4 and 6 in.) custom sizes by special order

TRANSDUCERS

Force: 2.2, 4.5, 11 kN (500, 1000, 2500 lbf.)

Displacement: 0.5 in. range, +25.4 mm (+1.00 in.)

Cell pressure: 0 - 500 kPa (0 - 70 psi)

SYSTEM REQUIREMENTS

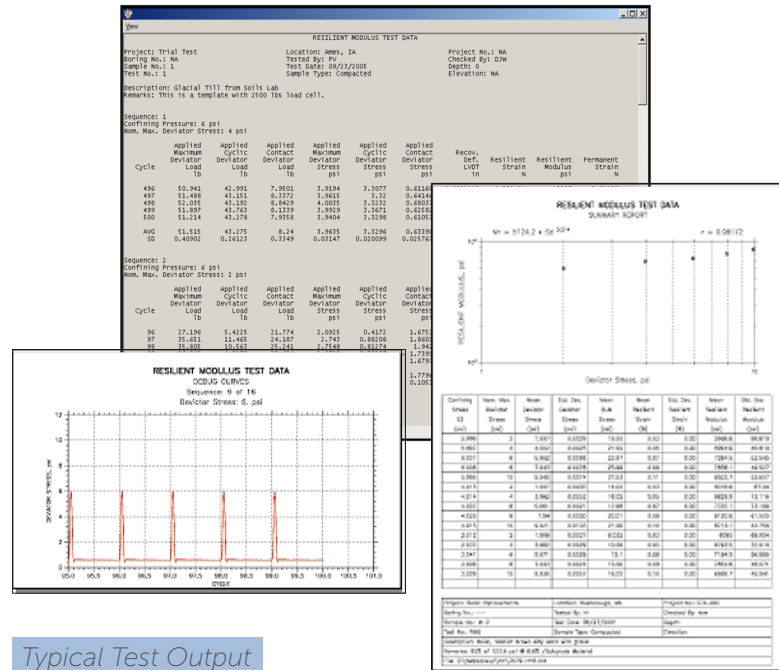
System is delivered complete to perform tests, store data, reduce data and report the test results.

System will be calibrated and ready to begin testing immediately after installation.

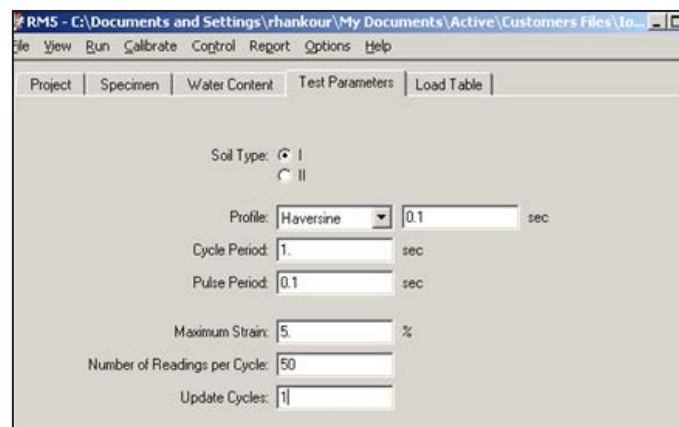
Full documentation and user's manuals are provided.

HELP screens are available at every point in all software.

Complete reporting software is included. This software creates reduced test results that are printed in tabular and graphical form instantly after testing. Results are available in any set of units, regardless of which set of units the test was run.



Typical Test Output



User-friendly Interface