



Sigma-1™

Automated Load Test System

The Sigma-1™ Automated Load Test System is a computer controlled load frame that automates load testing. It is a complete system incorporating a digital DC servo motor, four channels of 22 bit analog data acquisition, and all necessary sensors.



It is capable of closed loop control of deformation, load, or pressure. Specimens can be loaded in a variety of modes, including constant rate of deformation, constant rate of loading, or a series of step loads. Available with load capacities of 10 to 45 kN and speed range of 20 mm to 0.00002mm/min, the Sigma-1™ system can meet most geotechnical testing needs.

System software includes Sigma-1™ Triaxial and Sigma-1™ Consol. Both are Windows based, true 32-bit programs with user-friendly graphical interfaces. A 'status panel' occupies the left portion of the computer screen. It includes a graphical representation of the machine along with LED's and display boxes showing sensor readings. This enables an operator to assess the system status with a quick glance. The operator interacts with the programs through tab panels on the right portion of the screen. These panels guide an operator through testing with prompts and instruction boxes. However, the system is not restricted to standard testing. A manual option allows independent control of the load frame for performing non-standard testing. The right side of the screen is also used for viewing plots of real-time data. These enable an operator to make critical decisions concerning the course of testing before it is too late.

Affordable, reliable, easy to use, a Sigma-1™ system is a great way to introduce data acquisition and control to any geotechnical testing laboratory.

