

CSL Consolidation LoadTrac II / FlowTrac II

Benefits and Features

- Choose capacity to fit user needs from 45 and 90 kN (10,000 and 20,000 lbs.) models
- Total automation of data collection and reporting of test results
- Prepare tables and plots of report quality within minutes of completing a test
- Generate columns of data for easy reduction using your own spreadsheet software
- Ability to access and control the unit over a computer network using Geo-Net option

Applicable Test Standards

- ASTM D4186 One-Dimensional Consolidation Properties of Soils Using Controlled-Strain Loading

The LoadTrac II / FlowTrac II system fully automates the performance of a Controlled Strain Loading Consolidation (CSL) test. Once a soil sample is in place, and the test conditions selected, this system will run the entire CRCS test from start to finish. The LoadTrac II / FlowTrac II system consolidates the sample through a loading path specified by the user using constant rate of strain loading. To avoid running the test too fast (excess pore pressures become too large for the transducer) or too slow (the test takes too long), LoadTrac II / FlowTrac II uses Excess Pore Pressure Ratio Limits. If the measured excess pore pressure divided by the current total vertical stress exceeds the Upper Pore Pressure Ratio Limit, the current strain rate is automatically decreased by a factor of 2. If the measured excess pore pressure divided by the current total vertical stress falls below the Lower Pore Pressure Ratio Limit, the current strain rate is increased by a factor of 2. These limits give the user a great deal of control over how a constant strain rate test is run.

The FlowTrac II is used during back pressure saturation as well as maintaining a constant cell pressure during the consolidation phase of the test.

A typical consolidation test can be completed in 24 to 36 hours on most materials.



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TECHNICAL SPECIFICATIONS

MOTOR

Stepper motor with built-in controls

TRAVEL

Built-in displacement transducer with 76 mm (3 in.) range and 0.0013 mm (0.00005 in.) resolution

DISPLACEMENT

Control from 0.00003 to 15 mm per minute (0.000001 to 0.6 in. per minute)

POWER

110/220 V, 50/60 Hz, 1 phase

DIMENSIONS

LoadTracII

464 x 546 x 1206 mm
(18 x 21.5 x 47.5 inches)

FlowTracII

203 x 406 x 470 mm
(8 x 16 x 18.5 inches)

WEIGHT

LoadTracII

55 kg (120 lbs.)

FlowTracII

14 kg (30 lbs.)

MODELS

LoadTracII Models: Frame Capacity

LTII-10,000: 45 kN (10,000 lbs.)
LTII-20,000: 90 kN (20,000 lbs.)

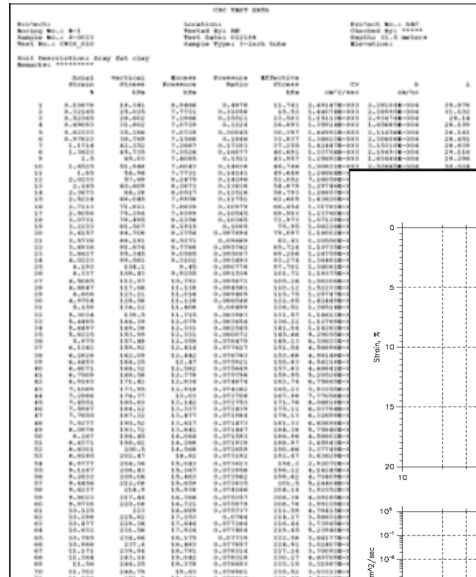
FlowTracII Models: Frame Capacity

FTII-250-nn: 250 cc capacity
FTII-750-nn: 750 cc capacity
nn: Maximum pressure range for system:
700, 1000, 2000, and 3500 kPa (150, 300, and 500 psi) available (resolution of pressure will be 0.00005 times the range)

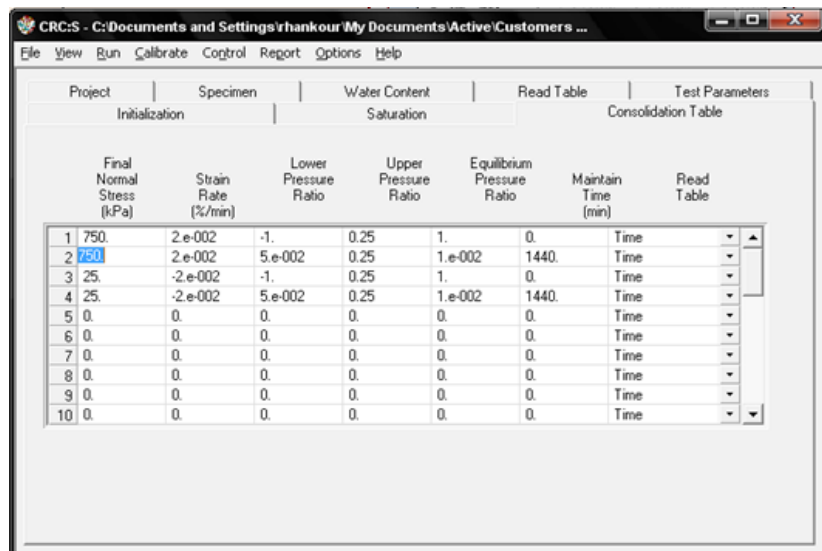
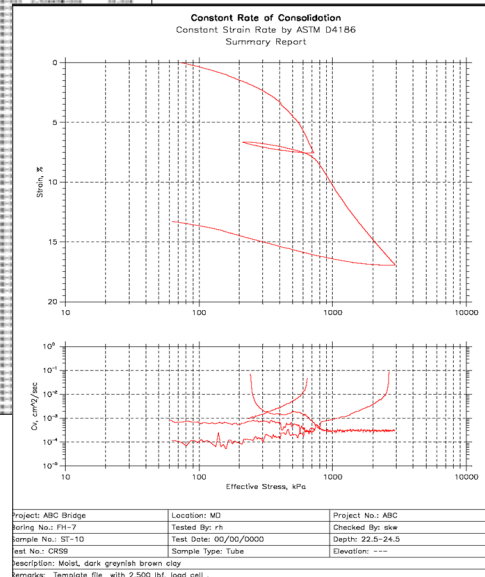
ACCESSORIES

1230: All stainless steel consolidation cell with backpressure saturation capability, 62.5 mm (2.5 in.) sample diameter standard.

External stainless steel pressure sensor.
Other sample sizes are available upon request



Typical Test Output



User-friendly Interface