

## INCREMENTAL CONSOLIDATION & SWELL

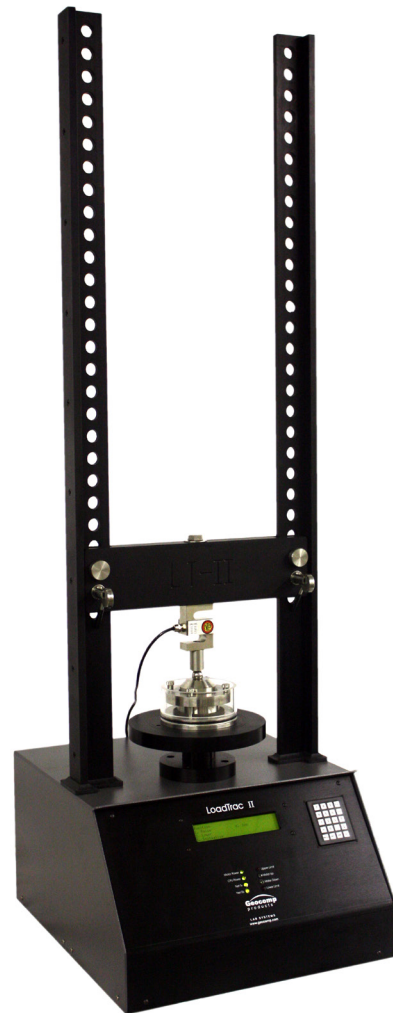
### LOADTRAC II

The LoadTrac II system for incremental consolidation and swell testing fully automates an entire consolidation test. Constant load and constant volume swell tests can be run automatically. Once a sample is placed into the load frame, the test conditions programmed, and the test started, the LoadTrac II system performs the complete test without intervention by the user. The computer automatically increments to the next stress by using conditions specified by the user. A test can be completed in 24 to 48 hours on most materials.

- Built in safety features
- Smart and sophisticated technologies to simplify testing
- Repeatable, reliable, and accurate results you can trust
- Real-time and remote test parameter changes for quality control
- Convenient reporting and data export
- Faster, smarter, better: designed with full automation and manual control options
- Easy upgrade to perform additional test types
- Designed and manufactured in the USA

#### Applicable Test Standards

- ASTM D2435, D4546
- AASHTO T216
- BS 1377-5
- ISO/TS 17892-5
- AS 1289.6.6.1



Standard Incremental Consolidation & Swell System

# INCREMENTAL CONSOLIDATION & SWELL

## LOADTRAC II



### TECHNICAL SPECIFICATIONS

#### LOAD CAPACITY

45 (10 klbf) or 90 kN (20 klbf)

#### MOTOR

Micro-stepper system with built-in controls

#### RATE OF DISPLACEMENT

0.00003 to 25 mm per minute  
(0.000001 to 1.0 in per minute)

#### TRAVEL

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

#### POWER

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

#### DIMENSIONS

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

#### WEIGHT

55 kg (120 lbs)

#### INCLUDED

- GeoNet-U USB 2.0 network adapter and cable to link to PC/laptop
- ICONP software module to automatically run and report tests

#### ACCESSORIES

- Fixed ring consolidometer (stainless steel) includes sample cutting ring, porous stones, and loading ball
- Consolidation cell with back pressure capabilities
- Standard size 2.5 in (63.5 mm); other sizes available upon request

#### WARRANTY

12 month warranty; extended warranties available

### User Friendly Interface

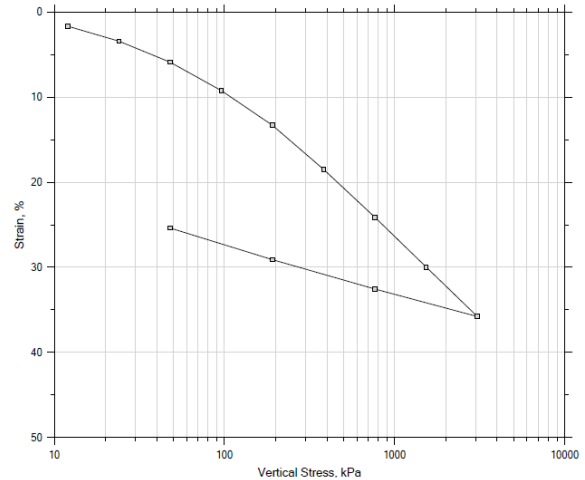
The screenshot shows the 'Test Parameters' tab of the ICONP software. Key settings include:

- Test Standard: ASTM D2435 - Method B
- Machine Correction:  Enable
- Calculate Results at:  End of Increment
- Rate of Displacement: 0.2167 min
- Final Height: 19.05 mm
- Current Vertical Effective Stress: 39.740618390959 kPa
- Preconsolidation Stress: 67.0323683702923 kPa
- Compression Ratio: 0.5

### Typical Test Output (example)

#### One-Dimensional Consolidation by ASTM D2435 - Method A

Summary Report



				Before Test	After Test	
Current Vertical Effective Stress: 39.74 kPa				Water Content, %	64.52	39.79
Preconsolidation Stress: 67.03 kPa				Dry Unit Weight, N/m <sup>3</sup>	9942.8	13337
Compression Ratio: 0.5				Saturation, %	99.43	100.00
Diameter: 63.5 mm				Void Ratio	1.92	1.18
Height: 25.55 mm						
LL: ---	PL: ---	PI: ---	GS: 2.96			

Project: ABC456	Location: Acorn, MA	Project No.: ICON123
Boring No.: ABC	Tested By: GR	Checked By: NB
Sample No.: 2A	Test Date: 02/17/2018	Depth: 10 ft
Test No.: C-1	Sample Type: Tube	Elevation: Not Recorded
Description: Moist, brown varved clay		
Remarks: measured post test height: 19.05 mm		
Displacement at End of Increment		

### Typical Test Output (example)

#### One-Dimensional Consolidation by ASTM D2435 - Method A

Log of Time Coefficients

Step	Applied Stress kPa	Final Displacement mm	Void Ratio	Strain at End %	Log T50 min	Cv cm <sup>2</sup> /s	Mv 1/kPa	k cm/s	Ca %
1	12.0	0.4246	1.87	1.66	10.438	5.05e-04	1.39e-03	6.87e-08	0.00e+00
2	23.9	0.8753	1.82	3.43	9.699	5.25e-04	1.47e-03	7.58e-08	0.00e+00
3	47.9	1.504	1.75	5.89	6.414	7.60e-04	1.03e-03	7.66e-08	0.00e+00
4	95.8	2.360	1.65	9.23	6.665	6.87e-04	6.99e-04	4.71e-08	0.00e+00
5	192	3.401	1.53	13.3	4.963	8.50e-04	4.26e-04	3.55e-08	0.00e+00
6	383	4.729	1.38	18.5	3.957	9.58e-04	2.71e-04	2.55e-08	0.00e+00
7	766	6.165	1.22	24.1	3.415	9.72e-04	1.47e-04	1.40e-08	0.00e+00
8	1.53e+03	7.657	1.05	30.0	2.283	1.25e-03	7.62e-05	9.34e-09	0.00e+00
9	3.06e+03	9.143	0.877	35.8	2.189	1.10e-03	3.80e-05	4.11e-09	0.00e+00
10	766	8.318	0.971	32.6	0.000	0.00e+00	1.41e-05	0.00e+00	0.00e+00
11	192	7.435	1.07	29.1	3.907	6.56e-04	6.01e-05	3.87e-09	0.00e+00
12	47.9	6.485	1.18	25.4	9.583	2.96e-04	2.59e-04	7.52e-09	0.00e+00

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