

TRIAXIAL & STRESS PATH LOADTRAC II / FLOWTRAC II OR III

Our range of systems for triaxial testing fully automate Unconsolidated Undrained (UU), Consolidated Undrained (CU), Consolidated Drained (CD) and/or any possible stress path tests on soil and soft rock. The systems automate the initialization, saturation, consolidation (isotropic, anisotropic, or K_0) and shear phases along any stress path (drained, undrained, or mixed) of a test. Once a soil sample is in place, and the test conditions selected, the system will run the entire triaxial test from start to finish. There are multiple configurations available to suit a variety of technical requirements and budgets. The combination of ease of use, flexibility in test parameters and versatility to perform an array of tests is unmatched in the industry.

- **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 and 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**

Applicable Test Standards

- ASTM D2850, D4767, D7181
- AASHTO T296, T297
- BS 1377-6, BS 1377-7, BS 1377-8
- ISO/TS 17892-8, ISO/TS 17892-9
- AS 1289.6.4.1, AS 1289.6.4.2



Standard Triaxial & Stress Path System

TRIAXIAL & STRESS PATH LOADTRAC II / FLOWTRAC II OR III

TECHNICAL SPECIFICATIONS

LOAD CAPACITY

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

MOTORS

Micro-stepper system with built-in controls

RATE OF DISPLACEMENT

0.00003 to 25 mm per minute; (0.00001 to 1.0 in per minute)

PRESSURE/VOLUME CAPACITY

150 psi (1035 kPa), 200 psi (1400 kPa), 500 psi (3500 kPa)

200 cc (6.7 fl oz), 250 cc (8.5 fl oz), 280 cc (9.5 fl oz), 750 cc (25.4 fl oz)

FLOW RATE

Min Speed 0.0003 cc/min 0.00001 fl oz/min
Max Speed 1054 cc/min 36 fl oz/min

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

| | | |
|---|---|---|
| LoadTrac II 464 x 546 x 1206 mm (18 x 21.5 x 47.5 in) | FlowTrac II 203 x 406 x 470 mm (8 x 16 x 18.5 in) | FlowTrac III 203 x 457 x 260 mm (8 x 18 x 10.25 in) |
|---|---|---|

WEIGHT

| | | |
|--------------------------------|-------------------------------|--------------------------------|
| LoadTrac II 55 kg (120 lbs) | FlowTrac II 14 kg (30 lbs) | FlowTrac III 11 kg (25 lbs) |
|--------------------------------|-------------------------------|--------------------------------|

INCLUDED

- Geo-NET network card and cable to link to PC
- UU, CU, CD, SP software modules to automatically run and report tests

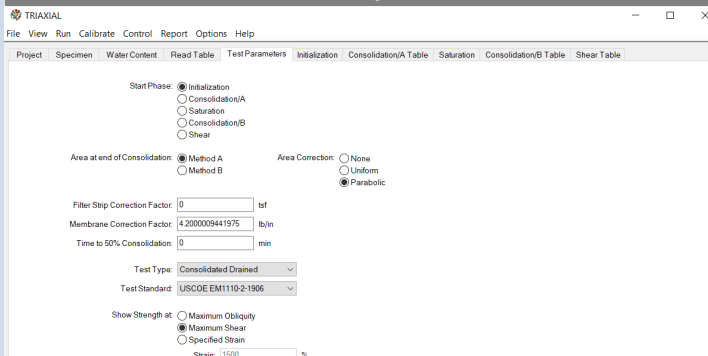
ACCESSORIES

- Triaxial cells up to 152 mm (6 in) diameter
- Membranes, porous stones, and sample preparation accessories upon request
- TRIAXIAL.REPORT: editing/reporting software for multiple tests

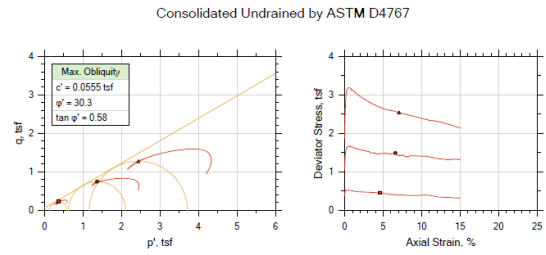
WARRANTY

- 12 month warranty; extended warranties available

User Friendly Interface



Typical Test Output (example)

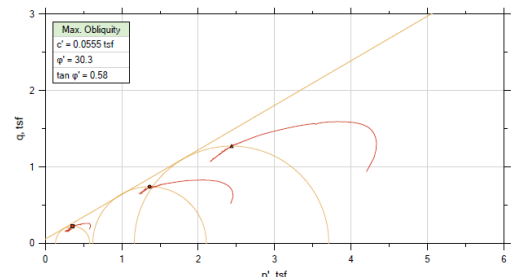
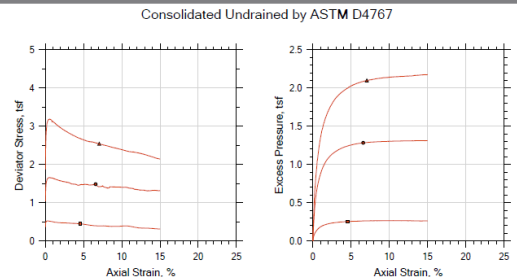


| Symbol | ■ | ● | ▲ |
|--|----------|----------|----------|
| Sample ID | U-1 | U-2 | U-3 |
| Depth | 10-12 ft | 24-26 ft | 50-52 ft |
| Test Number | CKU-1 | CKU-2 | CKU-3 |
| Height, in | 4.250 | 4.100 | 4.200 |
| Diameter, in | 2.010 | 2.020 | 2.010 |
| Moisture Content (from Cuttings), % | 31.4 | 32.0 | 32.8 |
| Dry Density, pcf | 93.1 | 92.0 | 93.9 |
| Saturation (Wet Method), % | 93.6 | 99.6 | 99.5 |
| Void Ratio | 0.939 | 0.899 | 0.904 |
| Moisture Content, % | 29.3 | 25.2 | 22.6 |
| Dry Density, pcf | 96.0 | 103 | 107 |
| Cross-Sectional Area (Method A), in ² | 3.073 | 3.189 | 3.147 |
| Saturation, % | 100.0 | 100.0 | 100.0 |
| Void Ratio | 0.821 | 0.705 | 0.633 |
| Back Pressure, tsf | 9.692 | 9.992 | 10.87 |
| Vertical Effective Consolidation Stress, tsf | 0.7395 | 2.882 | 3.039 |
| Horizontal Effective Consolidation Stress, tsf | 0.3922 | 1.904 | 3.263 |
| Vertical Strain after Consolidation, % | 1.572 | 9.954 | 14.10 |
| Volumetric Strain after Consolidation, % | 1.422 | 9.938 | 14.19 |
| Time to 50% Consolidation, min | 0.0000 | 0.0000 | 0.0000 |
| Shear Strength, tsf | 0.2242 | 0.7425 | 1.272 |
| Strain at Failure, % | 4.55 | 6.58 | 7.05 |
| Strain Rate, %/min | 0.01600 | 0.01600 | 0.01600 |
| Deviator Stress at Failure, tsf | 0.4485 | 1.485 | 2.544 |
| Effective Minor Principal Stress at Failure, tsf | 0.1331 | 0.6208 | 1.163 |
| Effective Major Principal Stress at Failure, tsf | 0.5816 | 2.106 | 3.708 |
| B-Value | 0.95 | 0.95 | 0.96 |

Notes:
- Uniform Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2016.
- Shear Limits determined by ASTM D4131.
- Deviator Stress includes membrane correction.
- Values for c' and ϕ' determined from best fit straight line for the specific test conditions.
- Actual strength parameters may vary and should be determined by an engineer for site conditions.

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|-------------------------------|-------------------------|----------------------------|
| Project Name: ABC Project | Location: Anywhere, USA | Project Number: TRIAX-1234 |
| Boring Number: B-1 | Tester: vwx | Checker: yz |
| Sample Number: U-3 | Test Date: 02/18/2018 | Depth: 10-12 ft |
| Test Number: CKU-1 | Preparation: tube | Elevation: Not Recorded |
| Description: Moist, gray clay | | |
| Remarks: | | |

Typical Test Output (example)



| Sample No. | Test No. | Depth | Tested By | Test Date | Checked By | Check Date | Test File |
|------------|----------|-------|-----------|------------|------------|------------|-----------|
| ■ | U-3 | CKU-1 | vwx | 02/18/2018 | yz | 02/18/2018 | CKU-1.dat |
| ● | U-3 | CKU-2 | vwx | 02/18/2018 | yz | 02/18/2018 | CKU-2.dat |
| ▲ | U-3 | CKU-3 | vwx | 02/18/2018 | yz | 02/18/2018 | CKU-3.dat |

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| Test Number: CKU-1 | Preparation: tube | Elevation: Not Recorded |
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| Remarks: | | |