

Automatic Triaxial Testing System



System Accessories

- De-aired water supply
- Distribution panel
- Transducers (range to suit requirement)
- Sample preparation

Enhancements/Upgrades

- On-sample transducers
- Bender Elements
- Unsaturated soil testing
- Triaxial Permeability testing

Automatic Triaxial Testing System

The VJ Tech Triaxial System is capable of providing fully automatic Triaxial testing. The system incorporates a stiff loading frame, automatic pressure controllers for confining and back pressure control, and the user friendly software providing the necessary test configuration, control and data acquisition.

Our Triaxial systems offers capability for total and effective Triaxial testing including Quick Undrained, Consolidated Drained (CD), Consolidated Undrained (CU), Unconfined (UNC) and Stress Path tests.

Triaxial compression frame can be selected from 10kN up to the capacity of 250kN.

Triaxial cells are available for specimen from 38 mm up to 300mm with pressure capacity ranging from 1700kPa to 70MPa.

Range of Automatic Pressure Controllers is available from 3MPa up to 70MPa with volume capacity from 250cc up to 1000cc.

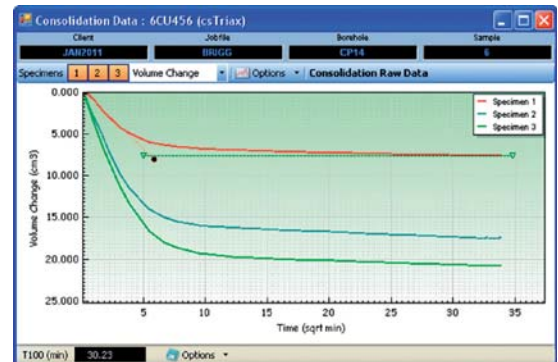
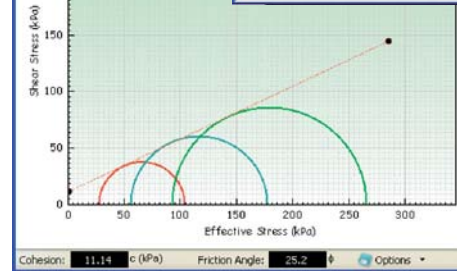
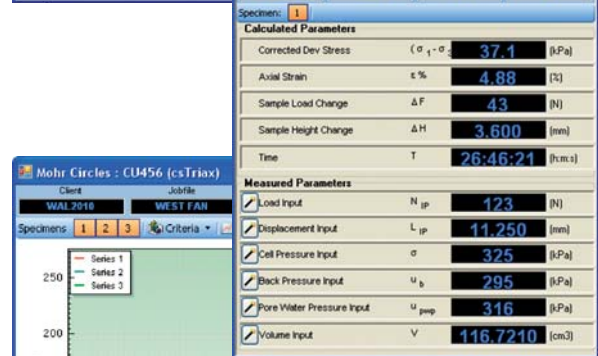
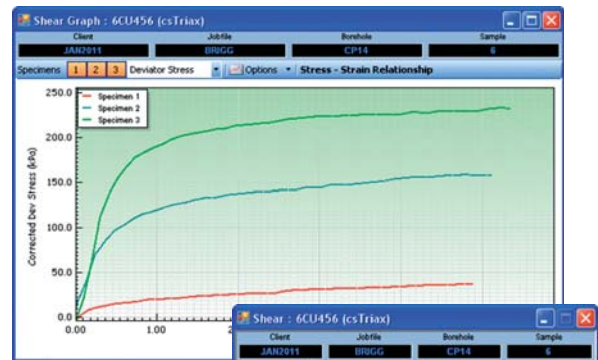
There are many options available for data acquisition ranging from a built-in data logger to an external data logger as the one shown on the picture.

All our instruments have built-in graphics display and key pad providing stand alone capability. The built-in RS232 interface allows the instruments to be networked and connected to the PC for system configuration and control.

Clisp Studio – csTRIAX Software

The csTRIAX is user friendly software designed specifically for Triaxial testing, providing test functionalities and automation.

- Test configuration is made easy using the built-in wizard
- Transducer configuration and calibration
- Live view of sensor readings and calculated parameters
- Live Graphs and Tabulated Data
- Live Test status
- Data export to Excel
- On screen measurement of T100, cohesion and angle of friction
- Data storage in SQL data base
- User configurable Views, Tables and Graphs
- Configurable test automation
- Email test status
- Optional customised reports available on request
- Automatic Saturation
- Step Method (at constant moisture content)
- Ramp Method (Ramped Cell/Back pressure with time)
- Isotropic Consolidation
- Shearing to failure in compression



Specimen	Axial Strain ϵ %	Corrected Dev Stress ($\sigma_1 - \sigma_3$) (kPa)	Minor Effective Stress σ_3 (kPa)	Major Effective Stress σ_1 (kPa)	Stress Ratio σ_3 / σ_1	Pore P Coefficient A	Stress Path σ_3 / σ_1	Stress Path σ_1 / σ_3
1	0.00	1.3	20.0	19.7	0.935	1.0	0.7	19.4
2	0.01	3.3	21.0	17.7	0.843	1.0	1.7	19.4
3	0.03	3.3	23.0	17.7	0.843	1.0	1.7	19.4
4	0.07	2.5	19.0	21.5	1.120	0.5	1.3	20.3
5	0.16	8.4	16.0	24.4	1.528	0.8	4.2	20.2
6	0.27	11.3	15.0	26.3	1.793	0.8	5.7	20.7
7	0.37	13.2	14.0	27.2	1.943	0.8	6.6	20.6
8	0.47	15.1	13.0	28.1	2.162	0.9	7.6	20.6
9	0.57	16.0	12.0	28.0	2.333	0.9	8.0	20.0
10	0.68	16.9	12.0	28.9	2.408	0.9	8.5	20.5