

STANDARD: ASTM D4767, ASTM D2850, ASTM D2166/D2166M

The Fully Automatic Triaxial Testing System Apparatus model is adopting the most advanced technology. It is integrated the technology of mechanic, electronic, fully-automated control and sensor automated checking.

The device consists of Triaxial Loading Frame, Advanced Pressure Volume Controller (APVC), Triaxial Cell, various sensors, temperature control devices and AdvancedGeoLAB® software. The range of Triaxial Loading Frame has been designed to be used as part of computer controlled triaxial system or as a stand alone unit. The Triaxial Loading Frame and Advanced Pressure Volume Controller both are equipped with the LCD graphical display and panel keypad.

TEST-CONTROL MODULES

- ⊙ Data Acquisition Module
- ⊙ Back Pressure Saturation Test;
- ⊙ Consolidation in same direction and consolidation in different direction (pre contact) test;
- ⊙ Unconsolidated – undrained test (U-U test);
- ⊙ Consolidation – undrained test (C-U test);
- ⊙ Consolidation – drainage test (C-D test);



TRIAxIAL LOAD FRAME

Triaxial Loading Frame has good rigidity, durability, low noise and smooth operation, adopts the stepper motor coupled with worn gear drive system to supply the power source. It is equipped with upper and lower limit device; the axial deformation is measured and collected by high-precision displacement sensor. Axial load is measure by force sensors. With overload protection device, when the axial force loaded is larger than the measuring range of the sensor, the machine will stops working automatically.



Model	TSZ-5T
Maximum Axial Force (Load Sensor)	50 kN
Chamber	Ø 38mm x76mm (H) & Ø 50mm x100mm (H)
Testing Speed Rate	0.00001 - 9.99999 mm/min
Precision	+/- 0.1% F.S.
Displacement Sensor Measuring Range	25mm with accuracy 0.01mm
Maximum Vertical Clearance	500mm
Horizontal Clearance	300mm
Platen Diameter	148mm
Power	110-240V, 50Hz
Dimension (mm)	580mm (L) x 380mm (W) x1140mm (H)
Weight(kg)	105

ADVANCE PRESSURE VOLUME CONTROLLER

The Advanced Pressure Volume Controllers is very easy to use and an ideal solution for the most modern laboratories. When used with Triaxial Loading Frame, data loggers and software, they can be controlled from a computer to form part of a complete automated triaxial testing system. They may also be used as stand alone units which are fully functioning with or without computer control. All the devices have their own computer interface. The devices come complete with internal volume and pressure transducers. Both channels are pre-calibrated, it can generate pressures up to 2MPa and provides a maximum volume measurement of 60ml which is readable to 0.001ml.



Model	TPS-PVC-1
Channel	2 Channel
Maximum Pressure	2MPa
Resolution	1kPa
Maximum Volume	60ml
Resolution	0.001 ml
Precision	+/- 0.1 % F.S.
Confining Pressure	Measuring Range: 0 ~ 2 MPa, Resolution: 1 kPa, Accuracy: +/- 1 kPa
Back Pressure	Measuring Range: 0 ~ 2 MPa, Resolution: 1 kPa, Accuracy: +/- 1 kPa
Power supply	110V or 240V, 50Hz
Dimensions	870×530×320 (mm)
weight	38Kg



TRIAXIAL CELL

It is mainly composed of base, middle ring, upper cover, side wall and loading rod, etc. It is connected by quick clamp rod, which is easy to disassemble. There are 3 drainage ports at the bottom for connecting hole pressure, confining pressure and back pressure.

Model	TPS-YLS50
Sample Size	Ø 38mm(D.) x 76mm (H.) and Ø 50mm(D.) x 100mm (H.)
Maximum Cell Pressure	2000 kPa
Dimension	Ø 180 mm
Weight	12kg

SOFTWARE ADVANCEDGEOLAB®

Software AdvancedGeoLAB® is a breakthrough in geotechnical laboratory control software. It enables the selection of specific test modules for any international standard requirement. The flexibility of hardware configuration means that test quality will depend on additional hardware, not software.

FEATURES

- Multiple test sites can be established on one computer
- A batch (series) of tests can be completed
- Able to dynamically change the graphic display content during the test
- The experimental data displayed in real time can be dynamically changed during the test
- Multiple standard options available

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OPTIONAL MODULES

- k0 consolidation test
- Stress path triaxial test
- Triaxial creep test (grading loading and separate loading)
- Triaxial Penetration Test
- Frozen soil triaxial test (-30-100 °C)
- Temperature controlled triaxial test (5-100 °C)
- Temperature-chemical-penetration-stress coupling test
- Low frequency cycle test module
- Unsaturated soil test module
- Bending element
- Post-processing module (test summary table, issue corresponding report)