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Standard Triaxial System with Built-in Digital Data Acquisition



Standard triaxial system with built-in data acquisition and pressure/volume controller

General description

Standard triaxial System with built-in data acquisition is the ideal compact solution for performing standard triaxial tests such as effective and total stress. .

A typical standard triaxial system with built-in acquisition measurement includes:

Load frame with four built-in channels:

- *TRIAx* specifically designed for triaxial applications and is ideal for commercial laboratories that need a versatile machine capable of performing a wide range of tests. (Max sample sizes: 70 mm)
- *TRITECH 50 kN or 100 kN* TRITECH original high-performance load frames for triaxial tests, ideal solution for advanced and research laboratories to perform high quality tests at .

Triaxial cell with accessories:

- Standard triaxial cell with dedicated accessories for performing and preparing sample from 35 mm to 100 mm diameter.
- Banded triaxial cell with dedicated accessories for performing and preparing sample from 38 to 150 mm diameter.

Digital measuring system: Data acquisition is included in the load frame; four channels are available for load, displacement, pore pressure and volume change. If Hydromatic standalone pressure unit is selected, a separate volume change device is not required.

Pressure system:

- Hydromatic standalone pressure/volume controller, water pressure source and volume change controller for cell and back pressure.
- Air/water interface with air compressor and air filter

Template for data processing and reporting: geotechnical Geo-Analysis-Templates suitable for real time data processing and printout of test certificates according to the most important international Standards.

More than 300 system configurations are available depending on type of test, sample size, pressure system. Please contact us for a complete offer.

Main features

- **On-board (via USB) automatic data acquisition** for all the sensors required (vertical displacement, axial force, cell pressure, back

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- pressure, pore pressure, volume change);
- User friendly **6" touch screen colour panel** for local control of load frame and monitoring of the four channels in real time;
- **PC not strictly required** for test management: tests can be easily managed from the 6" touch screen;
- Compact configuration with **small footprint**;
- **Additional control mode**, including machine and data acquisition via remote PC and software;
- Additional package for data processing and reporting, fully compliant with **ASTM and BS standards**

Additional features with Hydromatic Standalone solution:

- **Easier installation and saving space**: compressed air apparatus, control panels and ancillary air/water systems no longer required;
- **Closed loop automatic control** and management of **cell and back** pressure;
- User friendly **6" touch screen colour panel** for local control of pressure and measurement in real time of pressure and volume change;
- **Ergonomic and versatile support of the control panel** to be adjusted according the user's preferences.

Standards

- BS 1377:6
- BS 1377:7
- ASTM D2850
- ASTM D4767
- ASTM D5084
- BS 1377:8
- ASTM D7181
- EN 17892-8
- EN 17892-9

Specifications

Capacity: 50 kN and 100 kN

Speed range: 0.00001 – 99.99999 mm/min (TRITECH) or 0.00001 – 50.8 mm/min (TRIAX)

Working pressures: 3500 or 1700 kPa (HYDROMATIC) or 1000 kPa (AIR/WATER INTERFACE and TRIAXIAL PANEL)

Specimen range: 35,38,50,70,100 mm (STANDARD TRIAXIAL CELL) or 35,38,50,70,100,150 mm (BANDED TRIAXIAL CELL)

Load frame touch screen: resolution 640x480 pixel; 65K colours; Contrast ratio 250: 1

Pressure/volume controller touch screen: resolution 640x480 pixel; 65K colours; Contrast ratio 250: 1

Effective resolution: 131000 points

USB port

LAN communication

Sampling rate: 50 readings per second.

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Standard triaxial system with built-in data acquisition and air/water interface pressure system