

## DATA SHEET

# All-in-one fully automatic Triaxial testing system - AUTOTRIAXQube



All-in-one Triaxial Testing System AUTOTRIAXQube 29-WF40Q02

## General description

Revolutionary, all-in-one automatic triaxial testing system integrating the many components of triaxial testing into one, single compact system. Designed to make triaxial testing easier than ever before, the AUTOTRIAXQube will fit neatly in any laboratory and compliment your existing testing capability.

### Secure Triaxial Cell Lifting System

The new lifting mechanism allows the operator to raise the cell to its highest position and rotate it through 90 degrees, until it's safely held in place with a magnetic latch. This removes the need to lift the total weight of the cell while freeing space on the work bench for sample preparation tools.

### Built-in Ingenious Hydraulic System

Speeds up the time required to set-up the system correctly (water circuit saturation, pressure system and triaxial cell ) avoiding any possible damage to the sample already positioned in the triaxial cell.

### User-friendly Software

The user-friendly software and desktop PC\* allow the operator to control all phases of testing over a fast Ethernet connection. The AUTOTRIAXQube can also connect using Wi-Fi which is useful for remote training and support. If you already use our flexible and renowned AUTOTRIAX software as part of your existing system, there is no need to invest in any additional software as the AUTOTRIAXQube can easily be integrated and controlled as an independent system by your existing PC and software:

- Effective/total stress: (CU/CAU\*\*, CD/CAD\*\*, UU) (Included in the machine)
- Stress path (to be ordered separately)
- $k_0$  test (to be ordered separately)

\* To be ordered separately. Please note that an optional all-in-one PC model is also available. ; \*\* Anisotropic consolidation according to EN 17892:9 is available. For anisotropic consolidation, a vacuum top cap is required.

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### Universal Accessories Compatibility

All existing accessories already in use with the 70 mm banded triaxial cell (28-WF4070) are compatible with the AUTOTRIAXQube. See Triaxial Cell Accessories Selector.

### Additional Testing with Optional Upgrades

- Permeability test (*Please refer to accessories*)
- Unconfined test (*Please refer to accessories*)
- Bender elements (*Please refer to related products*)
- On Sample (*Please refer to accessories*)

## Main features

- **Space saving:** less than one square meter.
- **Easy to install:** No need for external panels, tank or hydraulic connection – simply connect the AUTOTRIAXQube to water and power supply and start testing.
- **Fast water de-airing:** The built-in vacuum pump, tank, control valves and cavitation system will de-air the water quickly and efficiently down to levels of dissolved air acceptable for triaxial test methods.
- **User-friendly triaxial cell:** Integrated lifting system with three internal columns frame makes the triaxial cell easy to handle.
- **Integrated vacuum system:** for a streamlined and time saving sample preparation process.
- **Reliable and accurate:** Standardized test procedures reduce inconsistencies from operator variables, or other unpredictable external factors.
- **Efficient and repeatable:** Complete the whole test, from saturation to failure, in full automatic mode without any interruption – saving time, minimizing operator intervention while increasing accuracy.
- **Versatile and expandable:** Start performing permeability testing by adding a third pressure line and advanced measurements such as Bender Element or local strain sensors.

## Standards

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

## Specifications

**Maximum load capacity:** 25 kN.

**Maximum sample size:** 70 mm diameter x 140 mm height.

**Maximum confining pressure:** 3,500 kPa.

**Maximum back pressure:** 3,500 kPa.

**Pressure resolution:** 0.1 kPa.

**Maximum volume capacity:** 250 cc.

**Volume resolution:** 0.001 cc.

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**Piston travel:** 100 mm.

**Integrated de-airing tank:** 20 liters.

**Sensors:** Submersible load cell (25 kN), displacement transducer (50 mm), Pressure transducers (3500 kPa).

**Units:** SI or US Customary.

**110, 220V 50-60 Hz, 1 pH.**



Detail of triaxial cell with lifting system and internal load frame



Detail of internal load frame with sample and pivoting crosshead



Multi-function control panel and de-airing block panel

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Soil sample fitted with On sample transducers for local strain measurement

### Products

#### **29-WF40Q02**

AUTOTRIAXQube – All-in one fully automatic triaxial testing system. 110-220V, 50-60Hz, 1ph

### Accessories and consumables

#### **29-WFD1A2/SW2**

Activation code for Stress path software with manual and automatic performance steps.

#### **29-WFD1A2/SW3**

Activation code for Ko software

#### **29-WFD1A2/SW5**

Activation code for soil triaxial Permeability test software including manual and automatic mode test.

#### **29-WF40Q02/PM**

AUTOTRIAXQube – upgrade kit for performing permeability test. 110-220V, 50-60Hz, 1ph

#### **29-WF40Q02/PC**

AUTOTRIAXQube – All-in one PC Assembly 110-220V, 50-60Hz, 1ph

#### **29-WF40Q02/AR**

AUTOTRIAXQube - Access ring with six port for using bender elements or on sample transducers.