Fully automatic Wille Geotechnikal GmbH static triaxial testing

2.1 Fully automatic Wille Geotechnikal GmbH static triaxial testing equipment for saturated and unsaturated test with 50mm and 100mm size samples.

- axial load ≥60kN;
- cell pressure ≥ 2.5 MPa (accuracy 0.1%);
- strain rates from 0.00001 ÷ 50 mm/min;

For back, cell and pore water pressure control is used adequate pressure/volume controllers (screw pump style).

Special transducers for data interface:

Submersible load cell kit:

- for tests with soft soil (accuracy minimum of 2N or than 0.1%);
- for tests with hard soil (accuracy minimum of 32N or than 0.1%);
- ≥50mm linear strain transducer (accuracy 0.1%);
- 2.0MPa pore pressure transducer, (accuracy 0.1%).

Equipment equipped with bender element system (BES) and with local axial – radial strain measurement.

2.2. Fully automatic dynamic triaxial testing equipment for saturated and unsaturated test with 150mm size samples.

- axial load 10kN/10Hz (hydraulic or electro-mechanical systems);
- cell pressure ≥ 2MPa (accuracy not less than 0.1%);
- amplitude peak 2.5mm at 10Hz;
- data reading rate 5000 Hz;
- digital control 16bit.

For back, cell and pore pressure control is used adequate pressure/volume controllers (screw pump style).

Special transducers for data interface:

- submersible load cell kit (accuracy not less than 10N or 0.1%);
- ≥50mm linear strain transducer (accuracy not less than 0.1%);
- ≥2.0 MPa pore pressure transducer (accuracy not less than 0.1%).

Equipment have possibility to use bender element system (BES) and possibility to use local axial – radial strain measurement.

2.3. Fully automatic consolidation testing equipment on saturated and unsaturated soil specimens by controlling the pore water and pore air pressure (sample size diam ≥70mm).

Max pressure ≥ 2.5 MPa (accuracy not less than 0.1%).

For pressure control is used adequate pressure/volume controllers.

(screw pump style).

Special transducers for data interface:

- ≥10mm linear strain transducer (accuracy not less than 0.1%);
- 2.0 MPa pore pressure transducer (accuracy not less than 0.1%).

2.4. Fully automatic direct shear testing equipment (sample size 100x100mm).

- normal force ≥10kN;
- shear force ≥5kN (step-by-step loading possibility);
- strain rates from 0.00001 ÷ 10 mm/min;
- data reading rate not less than 500 Hz.

For back pressure control is used adequate pressure/volume controller (screw pump style).

Special transducers for data interface:

submersible load cell kits:

- axial force (accuracy for normal force not less 10N or than 0.1%);
- shear force (accuracy for shear force not less than 5N or than 0.1%);
- ≥50mm linear strain transducer (accuracy not less than 0.1%);
- 2.0 MPa pore pressure transducer (accuracy not less than 0.1%).

2.5. Fully automatic simple shear testing equipment (sample size diam ≥70mm).

- normal force ≥10kN;
- shear force ≥5kN;
- data reading rate 500 Hz.

Special transducers for data interface:

- load cell kit;
- normal force (minimum of 5N or than 0.1%);
- shear force (minimum of 5N or than 0.1%);
- ≥50mm linear strain transducer (accuracy 0.1%).

Supplements:

Soil Lathes for samples preparation.

DeAerator (chamber capacity 8 ltr).