










❖ Soil Lab

No	Device name	Device photo	Description of the Equipment
1	Direct Shear Test Apparatus		<p>The Direct Shear Test is an experimental procedure conducted in geotechnical engineering practice and research that aims to determine the shear strength of soil materials. Shear strength is defined as the maximum resistance that a material can withstand when subjected to shearing.</p>
2	Consolidation Test		<p>This test determines the rate and magnitude of consolidation of a soil specimen restrained laterally and subjected to a number of successive increments of vertical loads.</p> <p>The oedometer consists of a rigid aluminium alloy frame to avoid any distortion under load. The lever arm assembly is supported in precision self-aligning bearings and has three hanger positions for 9:1, 10:1 and 11:1 ratio. The oedometers fit with linear potentiometric transducers, can be connected to Data acquisition unit.</p> <p>The consolidation test can also be automatically performed with the Automatic Computerized oEdometer. Consolidation cells, dial gauge/displacement transducer, weight sets and bench are not included and have to be ordered separately. See accessories.</p>
3	Digital Point Load Testing System.		<p>Originally developed at Imperial College, London, the apparatus comprises a two-column fixed crosshead frame and a hand operated hydraulic jack. Pressure applied by the jack extends the piston carrying the lower conical point. The upper point is fixed to the crosshead with a scale mounted on the frame to provide specimen diameter information for use in point-load strength index calculations. Pressure is indicated directly on the digital readout unit. Loads up to 55 kN can be applied to specimens as large as 101.6 mm in diameter.</p>



No	Device name	Device photo	Description of the Equipment
4	Digital laboratory oven		<p>The units are fitted with a microprocessor control system with dual display of set point and actual temperature and provide excellent temperature control. The units can be built up to meet individual requirements or come in standard sizes.</p>
5	Electromechanical triple motion sieve shaker for sieves		<p>This shaker features a unique combination of jarring and orbital action allowing the most positive sieving and grading. Upper and lower crosshead are adjustable to receive and firmly lock the different sizes of sieves. Includes a 30 minutes timer and a continuous-stop-timer operation switch. It can be completed with Noise reduction cabinet and Wet sieving accessories.</p>
6	Speedy moisture tester		<p>The Series Speedy® moisture tester is a portable system for measuring the moisture content of a wide range of materials including soils, aggregates, dust and powders (and liquids). The system consists of a low pressure vessel fitted with a pressure gauge and an electronic scale and test accessories. Moisture measurements are made by mixing a weighed sample of the material with a calcium carbide reagent in the sealed pressure vessel.</p>

No	Device name	Device photo	Description of the Equipment
7	Tri-axial Cells		<p>Triaxial Compression Tester 50 kN for speed-controlled triaxial tests with triaxial cells 10-3150... Two-column upright model with electronic load transducer flanged to testing machine crosshead, plus adjustable electronic 50 mm displacement transducer. Machine driven via stepper motor with central spindle and bottom pressureplate. Control and measured data recording by an integrated microprocessor system with Windows software.</p>
8	Autoproctor, Automatic Proctor /CBR digital compactor.		<p>The automatic compactor provides a fully automatic and uniform compaction of specified effort, thus ensuring repeatable test results and eliminating any operator fatigue during the tests. Conforming to ASTM and AASHTO Standards, this microprocessor-controlled soil compaction tester is designed for 4" and 6" moulds. The end of each layer compaction is indicated by a visual and acoustic signal.</p> <p>The machine is supplied complete with all relevant accessories as: 50.8 mm circular face for 4" diameter specimen and interchangeable sector face (triangular face) for 6" diameter specimens, and a rammer weights (2495/4535 g) that are easily interchangeable according to the reference standard.</p>
9	Motorised BS Liquid limit device with counter		<p>The Motorized Liquid Limit Device (Casagrande) are used to determine the moisture content at which clay soils pass from plastic to liquid state. The Devices consist of an adjustable crank and cam mechanism, a blow counter and a removable brass cup fitted on the base. Different models with the same shape but with different base and cup weights are available according to the required specifications. S4260/B model is supplied with a BS type plastic grooving tool. S4260/A model are supplied with a ASTM type plastic grooving tool. Other types of grooving tools should be ordered separately.</p>