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Product Name :	**Product Code :**
Electronic Triaxial Shear Test Apparatus (Motorised) For Testing Lab for Soil Testing Lab	P63

Description :

for Soil Testing - The settlement of foundations and changes in earth pressure due to movement of retaining walls or other earth supports, the yield of soil caused by application of load, are affected by the stress-strain relationship of soils. The experimental investigation for determining the stress-strain relation is usually carried out with Triaxial Compression Test. During the test, the soil samples gradually stressed up to failure. Generally speaking, Triaxial Tests are performed to stimulate different types of stress and drainage conditions that can occur in the sub-soil for simulating the effect of building construction, excavation, tunneling etc. Three different Triaxial Tests are usually performed for total and effective stress measurement. The 50 kN capacity machine, designed primarily for triaxial testing of soil specimens upto 100mm diameter x 200 mm long, comprises a rigid twin column construction with an integral fully variable.
MODELS AVAILABLE
DIGITAL TRIAXIAL SYSTEM
Microprocessor controlled drive unit and LCD display with a touch sensitive keyboard. The machine is normally bench mounted for ease of installation and operation. The digital indication of the load, pressure and the strain are displayed on the front panel of the load frame. Selector switch has been provided to shift the digital indicator from load to pressure or to strain.
SPECIFICATION :
CAPACITY : 50kN
TYPE : Microprocessor Controlled Stepper Motor Drive
PLATEN SPEED RANGE : 0.00001mm/min. to 9.99999 mm/min.
Rapid Approach Speed : 25 mm/min.
Horizontal Clearance : 364 mm
Max. Vertical Clearance : 910 mm
Max. Platen Travel : 100 mm
Specimen Dia : 38 mm (50, 75 & 100 mm can also be used)
Universal Electronic Load Cell : 10 kN cap.
L.V.D.T. : 0-20mm
Pore Pressure Transducer : 20 bar cap.
Electrical supply : 230V, Single Phase, 50 cycles, A.C.
IT CONSISTS OF :
Perspex chamber with anvil and loading plunger. The cell is easily dismantled by releasing four tie rods. It is leakproof upto 10 bar (10 kg/cm2) fluid pressure. An oil plug and an air vent are provided for introducing a thin layer of oil over water. This provides effective sealing at the plunger for long duration tests. The cell is fitted with four ball packed valves of no volume change type base. The Triaxial cell is supplied with all essential accessories for assembly of 38mm dia sample. Oil Water Constant Pressure System is an extremely versatile

apparatus which can be used for a wide range of applications. This system provides an effective alternative to Mercury and Water Constant Pressure system, especially where the laboratory head room is insufficient. The apparatus is designed to provide confining pressure upto 16 bar to Triaxial Cells. The system consists of an oil pump, driven by an electric motor during the entire period of operation to maintain the desired pressure. The unit provides variable pressure upto 16 bar which can be increased or decreased simply by turning a control knob. A transparent oil water interchange vessel is provided to transmit water pressure to the test apparatus.
I. LOAD FRAME
II. TRIAXIAL CELL, STATIONARY BUSHING FOR TESTING SPECIMEN OF SIZE 38MM DIA X 76MM LONG
III. CONSTANT PRESSURE SYSTEM OIL WATER TYPE
RANGE : 0 to 16 bar (0 to 16 kg/cm2)
STEPS OF PRESSURE : 0.1 bar (0.1 kg/cm2)
ACCURACY : ± 1% of indicated pressure
ELECTRIC SUPPLY : 230 V, Single Phase, 50 Hz, A.C. Supply
Supplied complete with Pressure Gauge, Flow Valves, connecting Pressure Hose. This system has been provided with the facility to acquire data for interpretation and analysis. The outfit of this equipment is same as Digital Triaxial System except for Data Acquisition System and related software which are supplied in addition to fulfill the data acquisition requirements. The Data Acquisition System is a 16 Channel, 16 bit system for IBM-PC and 100% compatible. Is an integrated hardware system which provides user-friendly datalogging facility upto 16 channels. The software enables the user to calibrate transducers by direct measurement from the laboratory standards. The user can also enter transducer sensitivities and look-up tables. Groups of transducers can be associated into sets corresponding to specific locations called Stations. Data acquisition from each station can be independently controlled.
NUMBER OF CHANNELS : 16 single Ended/8 differential
RESOLUTION : 16 bits for plus full range or minus full range
INPUT VOLTAGE RANGES : ± 10V, ± 5V, ± 1V or ± 100mV
INPUT IMPEDANCE : Normal Power ON - 7 G-Ohm Power OFF-820 Ohm

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