

S. No	Name of the Equipment	Quantity (nos.)	Capacity	Purpose	Location	Prof. Incharge for the equipment
1	Cyclic Triaxial system	1	Frame : 50kN capacity, 100mm traverse, 158mm dia bottom loading platen, displacement controlled. Actuator: 5kN capacity pneumatic. Cell: 2MPa pressure, 100mm dia sample pedestal, suction help top cap. Transducers: Load cell ±25kN, Cyclic LVDT ±15mm, Static LVDT ±25mm, cell pressure 1MPa, Back pressure 1MPa, Pore pressure 1MPa, Volume change 100 cc. Controller: Automatic for cell pressure, back pressure, actuator	Stress/strain controlled cyclic triaxial tests using pneumatic actuator on 100 mm diameter soil sample with automated controls and logging	Advance and Dynamic Soil Testing Laboratory, 4th Floor, VMCC	Prof. Ashish Juneja
2	Standard triaxial system	1	Frame : 50kN capacity, 100mm traverse, 158mm dia bottom loading platen, displacement controlled. Cell: 2MPa pressure, 100mm dia sample pedestal, Transducers: Load cell ±10kN, Static LVDT ±20mm, cell pressure/Back pressure 2MPa, Pore pressure 1MPa, Volume change 100 cc. Controller: Manual cell pressure, back pressure	Strain controlled triaxial tests on 100mm dia soil sample with logging		
3	Stress/strain controlled loading frame	2	Frame : 50kN capacity, 100mm traverse, 158mm dia bottom loading platen, displacement/load controlled. Consolidation cell 70mm dia sample, 20 mm height. Transducers: Load cell ±10kN, Static LVDT 50mm, Pore pressure 1MPa. Automatic control and logging.	Stress/Strain controlled consolidation of soil sample, UCS tests with logging		
4	Direct simple shear system	1	5kN static/cyclic shear load, 5kN normal load, ±12.5mm horizontal LVDT. ± vertical LVDT	Stress/strain controlled static/cyclic direct simple shear on 70mm diameter samples		
5	Flexible wall permeameter	1	Consolidation cell 100mm dia 100mm height sample, 1MPa cell pressure. Transducers:2 Pore pressure 1MPa, 2 Volume change 100cc. Controller: Manual cell pressure, top and bottom pressure, Automatic logging.	Permeability and consolidation experiments on 100 mm dia samples		
6	Constant pressure/Volume controllers	2	2MPa water pressure controller	Pressure/volume control for experiments		
7	Vane shear apparatus	2	Torque sensor 3Nm. Rotation speed 0 to 360 ° per minute, infinite rotation. Vane sizes: 12.7diax12.77mm, 12.7 diax19mm, 40diax80mm	Vane shear tests on clay soil sample		
8	Bender element system	1	upto 50kHz, 20V excitation bender element, 40MHz waveform generator, 8 channel oscilloscope	Measure small strain stiffness parameters of soil		
9	Loading actuator		30kN load cell, 1mm/min to 100mm/min loading, 374mm traverse	load/displacement controlled loading on 1g and centrifuge models		
10	Air compressor	1	Screw type 1MPa pressure, 500 L tank	Supply compressed air for pneumatic devices		
11	Hot oven	1	Temperature controlled 300°C	Heating soil sample		
12	Hot plate	1		Heating soil sample		
13	Rowe cell	1	150 mm dia , 50mm height	Consolidation tests on soft soils with large deformation		
14	Triaxial frame	1	Frame : 50kN capacity, 100mm traverse, 158mm dia bottom loading platen, displacement controlled. Cell: 1.7MPa pressure, 38mm dia sample pedestal. Transducers: Load cell ±2.5kN, Static LVDT ±20mm, Pore pressure 1MPa, Volume change 100 cc. Controller: Manual cell pressure, back pressure	Perform standard triaxial test on 38mm dia soil sample		
15	Small sample consolidation frame	5	250 kPa stress, 70mm dia sample	Prepare consolidated sample of small size		
16	Large sample consolidation frame	2	400 kPa stress, 250mm and 400mm dia sample	Prepare consolidated sample of large size		
17	Plastic limit apparatus	1		Perform plastic limit test		
18	Cone penetrometer	2	5 sec timer	perform liquid limit test using fall cone		
19	Cassagrande liquid limit apparatus	1	with counter	perform liquid limit test using groove method		
20	Conductivity probe	1		Measure conductivity and TDS of pore fluid		
21	pH meter	1		Measure pH of pore fluid		
22	Vacuum Pluviator	1	700mm maximum fall height, constant fall height control	Prepare pluviated sand sample		
23	Weighing balances	3	20kg, 0.1g LC			
24	Weighing balances	1	600g, 0.01g LC			
25	Weighing balances	2	720g, 0.001g LC			