

Concrete Creep Testing

Concrete Creep Testing Machine

UTSP-0400

UTEST Creep Testing System on Concrete specimen is designed to determine time - dependent deformation of concrete under sustained and constant load. To find the creep strain of concrete, the deformation must be measured regularly over time, and then compared to companion unloaded specimens. Once the creep strain of the concrete has been obtained, the creep compliance can then be determined. The machine has a capacity of 300 kN on each loading frame. The dimensions of the cylindrical specimens are 130x700 mm. One power pack is used for three frames. The Concrete Creep Testing Systems comes complete with a loading frame, a data acquisition unit and a hydraulic power pack and load control system, which is used to apply a constant load on the cylindrical specimens.

Hydraulic Power Pack

The Power Pack has been manufactured to supply the frames with the power required. The power pack works only when the load decreases on the sample which ensures that the oil does not over-heat, and the energy consumption is dramatically reduced. The unit has been designed so that sudden discharge of loads on the specimens will not occur when the electricity is down. If the system requires hydraulic pressure, the Power Pack will work until the system reaches enough hydraulic pressure.

Frame

The frames of these systems have been manufactured with high stiffness construction, and stable loading on the specimens. Special seals are used to ensure frictions on the piston is on minimum value. There is a load adjustment valve located on the each frame to set the required load value. The frame loads can be adjusted independently on each frame by using those pressure valves.

Data Acquisition & Control Unit

The data acquisition unit collects and evaluates the data which has been obtained by the data logger using sensors. Each piston has a pressure transducer and on each sample there are two 0.001 mm accuracy displacement transducer attached to the sample with compression meter. It is also possible to connect temperature sensors to data acquisition system.



About PCTE

PCTE have over 30 years' experience in the measurement and testing of construction materials. PCTE can provide more than just the equipment, they can provide expert training. PCTE have a service centre in Sydney in which they can provide calibration, repairs and warranty repairs.

Other Equipment

PCTE supply three main ranges: NDT, Lab and Geotech Instrumentation.

NDT includes: Rebound Hammers, Covermeters, Ultrasonics, GPR, Corrosion Testing, Coating Testing and Foundation Testing

Lab includes equipment for: Concrete, Cement, Aggregate, Soil, Asphalt and Metal

Geotech Instrumentation includes: Strain Gauges, Piezometers, Inclometers, Extensometers, Tiltmeters, Load Cells and Dataloggers