Rock Creep Testing System (eRCT-100)

- 980 kN (100 ton) axial load capacity
- Load or displacement servo control
- Energy efficient testing (55 watts typical)
- Manual and remote operation through on-board keypad or mobile device application software
- Unconfined, Triaxial, and Creep testing software included for automatic data acquisition and report generation
- Pressure controllers and data acquisition / control system can be connected to Uninterruptible Power Supply for protection against power outages – suitable for long-term testing
- Performs tests according to ASTM D7070 and ASTM D7012
- Accepts GCTS HTRX Triaxial Cells for confined testing
- Electromechanical pressure / volume controller for control of confining pressure (additional ePVC available for pore pressure control)
- On-specimen deformation measurement, ultrasonic velocity measurement, acoustic emission measurement, and temperature control are available as optional upgrades

DESCRIPTION

The GCTS eRCT-100 Rock Creep Testing System is designed to perform long-term tests reliably. Its low power consumption makes it both cost effective and capable of continuing operation during short power outages using a battery UPS. An electromechanical load/displacement controller is used to servo control the axial actuator. The eRCT-100 can be upgraded with a pressure vessel and an energy-efficient ePVC electromechanical pressure/volume controller for long-term creep testing in triaxial conditions. A heating jacket is offered as an option to perform tests at elevated temperatures. An additional ePVC can also be added for pore pressure control.

The system includes 8 input channels with 24-bit resolution to record axial load and displacement as well as additional sensors such as local axial and radial strain sensors, temperature, etc. Also included is a keypad to manually adjust the piston position or seating load or to apply full load or deformation. Alternatively, this frame can be controlled wirelessly through a mobile device (iOS or Android) or Windows computer, either manually or through an application program.

GCTS offers several application programs to perform standard tests, such as Creep (Unconfined or Triaxial), UCS, Triaxial Compressive Strength, Indirect Tension, 3- or 4-Point Bending, etc. (Test fixtures sold separately).