

Unsaturated Soils Triaxial Double Cell (TRX-2C)



- Stainless steel construction
- 2,000 kPa (300 psi) capacity
- Double external cell wall (internal tie rods)
- Top pore air, bottom pore water, bottom flushing, & independent internal & external cell pressure/drainage ports
- Sealed electrical feed-through connectors for internal instrumentation including deformation device, ultrasonic velocity, mid-plane pore pressure, and other sensors
- Specimen platens with easily interchangeable HAEV ceramic discs
- Stiff, low friction loading piston & graphite seal
- High ductility metallic reinforcement rings

DESCRIPTION

The main feature of this triaxial cell is the incorporation of a double cell wall. This prevents differential pressure changes for the inner wall while changing the confining pressure and thus eliminating volume changes errors associated with single cell units due to cell expansion.

The triaxial cell is constructed of stainless steel and accommodates cylindrical specimens up to 150-mm in diameter with length to diameter ratio between 2 to 2.5. The system features see-through Plexiglas external double cell wall and a stiff loading piston with a low friction graphite seal. The advantage of the double external cell wall is that once the specimen is ready, the cell wall is lowered over the cell and fastened in place with minimum disturbance to the specimen.

Even though the piston friction is typically negligible, an internal load cell option is provided if desired to fully eliminate the friction. The low-friction graphite seal offer less than 10 N friction resistance (5 N typical) and without the static friction behavior normally associated with standard O-ring seals.

At the bottom of the cell are ball valves and quick disconnect fittings for top drainage/pore pressure, bottom drainage/pore pressure, bottom flushing, internal confining fluid pressure and external confining fluid pressure. The external and internal confining fluid ports are isolated from each other allowing for an external volume change device to measure the bulk specimen deformation while virtually eliminating compliance errors from pressure changes. A bleeding port is also provided at the top of the cell.

Included is an internal spherical seat loading connection set and a rigid loading connection for stress reversal. Stress reversal is easily applied with these cells. The loading piston diameter a 15.9 mm (5/8") SS shaft which is not easily bent. It is threaded at both ends and screws into the top platen.

The standard unit also includes 4 sealed electrical feed-through connectors to accommodate different type of sensors like load cells, LVDT's, ultrasonic transducers, etc. Also includes four plugs for sealing the feed-through connectors while not in use.

SPECIFICATIONS

For full specifications, please contact GCTS.