

## Ultra-High Pressure Triaxial Cell (HTRX-420)



- 420 MPa (60,000 psi) pressure capacity
- Hardened alloy steel construction
- Accepts samples with a diameter from 25 mm to 63.5 mm with a length of 2.5 times the diameter
- Upper platen provided with a spherical seat to compensate for non-parallel specimen ends
- Top & bottom pore pressure plumbing provided for effective stress and permeability measurements
- Electrical feed-through connectors for GCTS axial and circumferential deformation measurement devices, ultrasonic sensors, and other special transducers

### AVAILABLE OPTIONS:

- High temperature control subsystem for testing at up to 300 °C
- Axial and circumferential deformation measurement system
- Platens with ultrasonic transducers for P- & S-wave velocity measurements

### DESCRIPTION

The GCTS High Pressure Triaxial Cell HTRX-420 was designed for testing 63.5 mm (2.5 inch) rock specimens with lengths of up to 2.5 times the diameter at confining pressures of up to 420 MPa and axial loads of up to 4,600 kN. Other specimen diameters can also be tested with the use of optional platens. The HTRX-420 overall height is 40.2 inches and the overall diameter is 25 inches.

The 150 mm inside diameter of the cell wall and the electrical feed-through connectors installed at the cell base allow the use of in-vessel instrumentation for precise measurements of deformation modulus and Poisson's ratio. The standard specimen platens have O-ring grooves for sealing the specimen jacket and an upper spherical seat to minimize stress concentrations due to non-parallel specimen ends. Pore fluid lines and ports for both, upper and lower platens, are also standard for effective stress and permeability measurements.

Cell and pore fluid connectors are provided at the cell base for easy interface with either the GCTS computer servo-controlled pressure intensifier or the GCTS air/oil pressure booster system. A loading piston with spherical seating is also provided with this triaxial cell.