

Hoek Cell Test

Automatic Pressure System

UTR-0550

The UTR-0550 Automatic Pressure System is designed to apply lateral pressure in the Hoek Cell during the triaxial testing of rock specimens. The power pack has been fitted with a proportional valve which allows for control of the loading rate and maintaining a constant confining pressure to within 0.1 bar. The operator can control the pressure through the PID closed loop controlled electronics. The BC100 control and readout unit can be used to display and change the lateral pressure.

BC100 TFT unit is used to control the power pack and processing of data from pressure transducers which have been fitted to the power pack.

The BC100 unit consists of a front panel with a 800x480 pixel 65535 colour resistive touch screen display and function keys. 4 analogue channels are provided for load cells, pressure transducers or displacement transducers.

BC100 TFT unit has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seamless manner to activate the option or enter a numeric value to set the test parameters. The BC100 digital graphic display is able to draw real-time "Load vs. Time", or "Stress vs. Time" graphics.



Technical Specifications

Max. Working Pressure	420 bar
Min Controllable Pressure	3 bar
Pressure Accuracy	0.1 bar
Dimensions	400x450x1000 mm
Weight (approx.)	80 kg
Power	750 W

Features of BC100

- More than 10,000 test results can be saved in its internal memory
- The use of SD memory cards or USB disk-drives can increase the story capacity up to 32 GB
- Support for various off-the-shelf USB printers, supporting both inkjet and laser printers
- Built-in internal camera which can save real-time video during testing for security purposes
- Every aspect can be controlled remotely from anywhere around the world
- Support for Android tablets permitting to control and monitor your testing equipment remotely

Safety Features

- Maximum pressure valves to avoid machine overloading
- Emergency stop button
- Software controlled maximum load valve

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Manual Pressure System

UTR-0552

The manual pressure system has been designed to maintain the constant lateral pressure in the Hoek triaxial cells. The apparatus is supplied complete with a hydraulic hand pump with oil reservoir (UTGE-3800), a precision LPI digital readout unit (UTC-4920), a pressure transducer (UTGM-0110) and a 3 m long flexible hose with quick release coupling. The manual pressure system is used with any Hoek triaxial cell and 2000 kN Automatic Compression Testing Machine (UTC-4231) for the triaxial tests. However, other types of UTEST compression testing machines (respect to the capacity) can be used instead of UTC-4231.



Specimen Extruder for Hoek Triaxial Cells

UTR-0570

The UTR-0570 Specimen Extruder is used to extrude the rock sample from its jacket, while avoiding emptying the pressure fluid (confining oil) out of the Hoek Cell. It consists of a steel frame with a rack and pinion mechanism.

The Specimen Extruder is supplied complete with;

- BX Type Adaptors
- NX Type Adaptors



Hoek Triaxial Cells

UTR-0555 - Hoek Triaxial Cell BX, 42.04mm dia.

UTR-0557 - Hoek Triaxial Cell NX, 54.7mm dia.

The Hoek Cells have been designed for triaxial testing of rock specimens.

Hoek Cells consist of a steel body complete with:

- 2 quick release self-sealing couplings
- 2 pieces of upper loading caps
- 2 pieces of lower loading caps
- Spherical coupling
- 2 steel end caps (screwed to the cell body)
- Rubber sealing sleeve



Technical Specifications

	Lateral Pressure Equipment	UTC-4231
Max. Working Pressure	700 bar	410 bar
Dimensions	1050x500x300 mm	800x500x970 mm
Weight (approx.)	20 kg	795 kg

UTR-0570

Dimensions	470x220x200 mm
Weight (approx.)	13 kg

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