

Rock Unconfined Compressive Strength

RockSchmidt for Rock UCS

Schmidt hammers are used internationally for testing of rocks as well as concrete/cementitious material. ASTM D5873 (Rock) has been developed as a standard for this form of testing. Generally an L Type Test Hammers is used. Conversion to rock strength (UCS) also rely on the mineralogy of the rock in question. Many conversion curves exist and can be loaded into the RockSchmidt for UCS conversion on site. Schmidt Hammers lend themselves to grading rock core in the lab and testing rocks in the field.

Equotip for Rock UCS

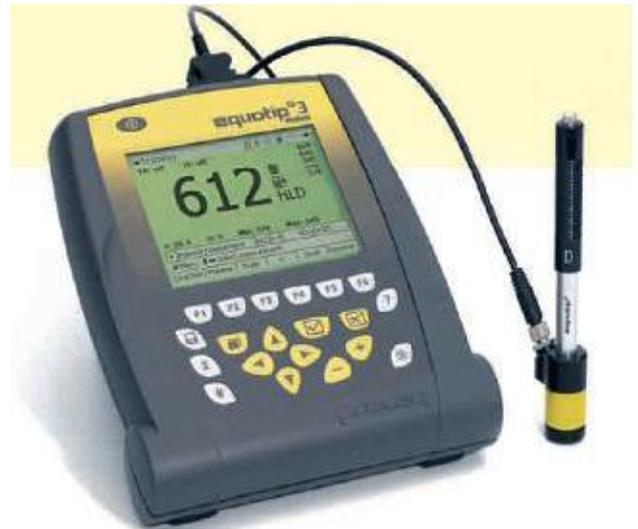
The Equotip 3 provides the user with a highly portable, accurate tool to test rock hardness. The instantaneous results can be stored and saved on the indicating device. Whilst designed and used to determine the hardness of metal a new application in determining the compressive strength rock (UCS) and logging rock core sample has been researched. This allows the Equotip to be used as a rock strength testing machine without destroying sample

Equipment

The Equotip 3 consists on the Impact device and the control/logging box. Seen below the impact device consists of a 3mm dia. Spherical shaped tungsten carbide test tip which is spring mounted in an impact body. The test tip impacts on the test surface under spring force from which it rebounds. The velocity that the impact body is impelled and rebounds with is measured by the passing of a permanent magnet through a coil of wire. This induces a voltage proportional to the devices velocity. The LEEB hardness value is the quotient of the impelled velocity over the rebound velocity multiplied by 1000. Harder materials will rebound the impact device giving higher LEEB hardness values.

Ring Supports

Accurate testing using the Equotip 3 relies on the test specimen being immobilized. This can be achieved using a simple test jig firmly connected to a heavy vibration resistant base. Furthermore the Support Ring is designed to give a firm connection between the Impact Device and the core. The standard support ring I ideal for cores with radius greater than 60mm and flat surfaces. The Z14.5 to 30 support ring allows testing of cores between 29 and 60mm dia.



Equotip 3 vs Equotip 2

- Automatic correction for the orientation of the probe. A larger screen with backlight
- Choice to use internally rechargeable batteries or standard "C" Batteries
- Connection to PC using USB or Ethernet.
- New and Improved Equolink 3 software has also been introduced.

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.

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