

“ Digital Point Load Apparatus



Evaluate the strength of rock specimen
in the field and in the laboratory

Principle

The Point Load Strength test is intended as an index test for the strength classification of rock materials. It may also be used to predict other strength parameters with which it is correlated, for example uniaxial tensile and compressive strength.

The test measures the Point Load Strength Index of specimens, and their Strength Anisotropy Index which is the ratio of Point Load Strengths in directions which give the greatest and least values.

Rock specimens in the form of either core (the diametral and axial tests), cut blocks (the block test), or irregular lumps (the irregular lump test) are broken by application of concentrated load through a pair of spherically truncated, conical patters. Little or no specimen preparation is needed.

The Test can be performed with portable equipment or using a laboratory testing machine, and so many be conducted either in the field or the laboratory.



Demonstration

The point tester is used to measure rock strength in the field or in the laboratory.

A load frame, hydraulic jack and digital display are mounted on the base of a carrying case.

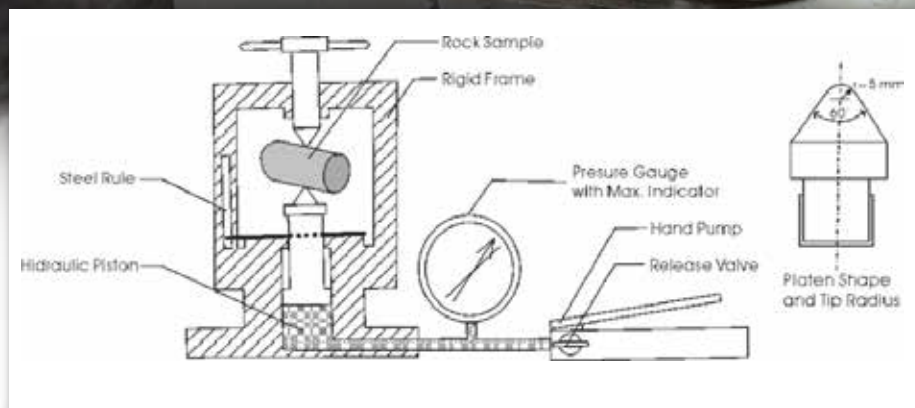
With this point load tester, samples up to 4" (101.6mm) diameter can be tested on 2 conical points.

A graduated scale indicates distance between conical points and is also used to measure specimen diameter.

Applied load is digitally displayed to 0.001Kn accuracy is $\pm 1\%$; range is 0 to 56Kn. Display shows maximum load and will also read in lb and tons.

Three point load test configurations are used depending on the available rock specimens: Diametrical – Axial – Irregular lump. The diametrical and axial tests use core specimens with length/diameter (L/D) ratios greater than 1.0 in the first case, and between 0.3 and 1.0 in the second case. Rock pieces of suitable irregular shapes are used when cores are not available. The testing steps are the same for all configurations:

- 1) The specimen is positioned between the conical platens. The platens are then closed to make contact.
- 2) The distance "De" between the points of contact is read on the scale.
- 3) The load is increased such that failure occurs within 10 to 60 sec. and the failure load "P" is read and recorded.



◀ Schematic Guide

Main Features

- Complete Set Easy Operation
- Load measured in both kN and Mpa
- Serial port for PC connection

Technical Specifications

Load range	0-60 kN
Digital display	2x16 characters
Resolution	32,000 div.
Accuracy	$\pm 1\%$
Case dimensions	800 x 500 x 280 mm
Weight	15 kg

Ordering

AG 0116 Digital Point load apparatus

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Standards and Guidelines

EN 1977-2, ASTM D-5731