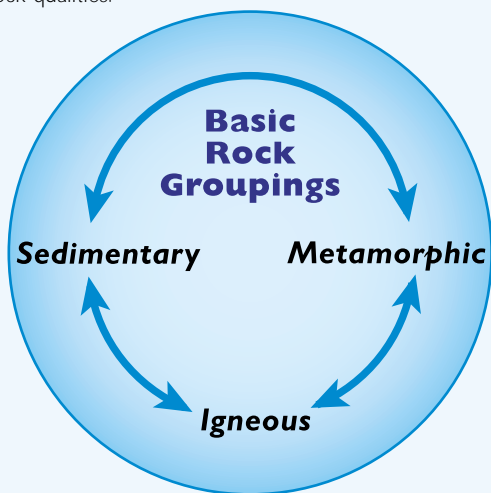


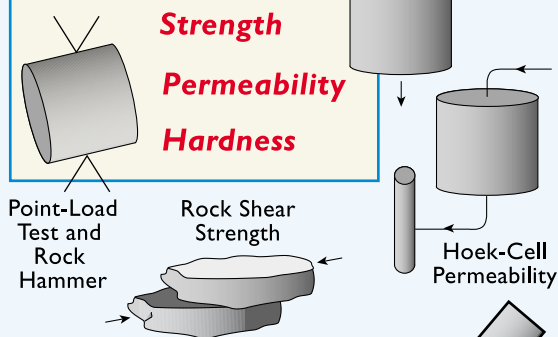
### The Engineering Classification of Rock

The Engineering Classification of Rock is an important stage in the selection and subsequent use of rock as a construction material.

The range of products available in this section provides test equipment suitable for determining the more important rock qualities.

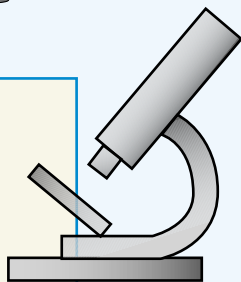


#### 1. Properties

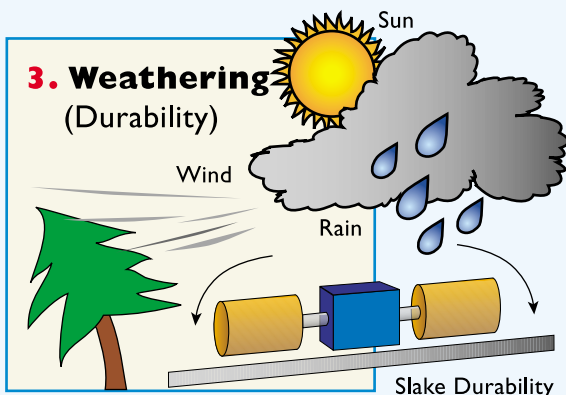


#### 2. Mineralogy

Petrographic Examination  
Thin Section Preparation



#### 3. Weathering (Durability)



### Rock Classification

*The classification and characterisation of rock are important parts of the science of rock mechanics. A knowledge of the rock formation on which engineering structures are founded is essential if sound engineering design is to be applied. Rock can be identified and subsequently categorised by a number of methods. The following equipment provides a selection of methods designed to enable the engineer to classify a rock with confidence.*

#### Ordering Information

**EL77-0020**

**Rock Colour Chart** BS 5930, EN DD ENV1997-2.

A 16 page chart displaying 115 colours indicating the range of rock colours. The chart provides numerical designations for Hue, Value and Chroma. Weight 85 g

**EL77-0032**

**Geological Hammer.** Chisel tail, Weight 900 g.

**EL77-0035**

**Geological Hammer.** Pick tail. Weight 620 g

### Rock Classification Hammer

This lightweight, portable impact hammer is used for rock classification tests. Cylindrical cores, usually NW size, are held in a horizontal position and the hammer mechanism impacted against the core to obtain rebound readings. A series of readings are taken along the length of the core to obtain the average classification rebound number.

#### Ordering Information

**EL77-0470**

**Rock Classification Hammer.** Weight 1.4 kg

### NW Rock Cradle

To obtain repeatable results from the impact test, specimens should rest on a base of uniform mass. The solid metal cradle is designed to locate NW cores for the Rock Classification Hammer impact test. The cradle incorporates a guide for positioning the hammer to allow for a series of readings along the length of the core.

#### Ordering Information

**EL77-0480**

**NW Rock Cradle.** Weight 9.1 kg

Rock Colour Chart



Rock Classification Hammer and NW Rock Cradle



## The Point-load Strength Test

### Digital Point-load Test Apparatus EN DD ENV 1997-2, ASTM D-5731.

Originally developed at Imperial College, London, the apparatus comprises a two-column fixed crosshead frame and a hand operated hydraulic jack.

Pressure applied by the jack extends the piston carrying the lower conical point. The upper point is fixed to the crosshead with a scale mounted on the frame to provide specimen diameter information for use in point load strength index calculations.

Pressure is indicated directly on the digital readout unit. Loads up to 55 kN can be applied to specimens as large as 101.6 mm in diameter.

The apparatus is supplied complete with heavy-duty face mask.

#### Specification

Capacity	55 kN
Maximum sample size	101.6 mm
Load range	0 to 55 kN x 0.001 kN
Weight	25 kg

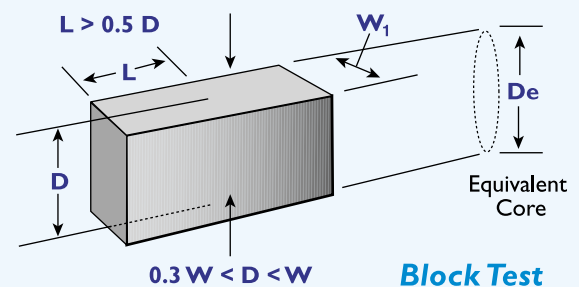
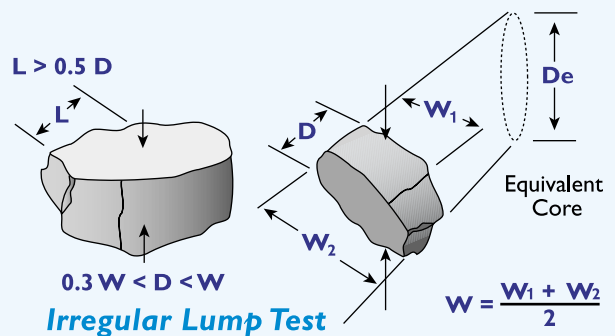
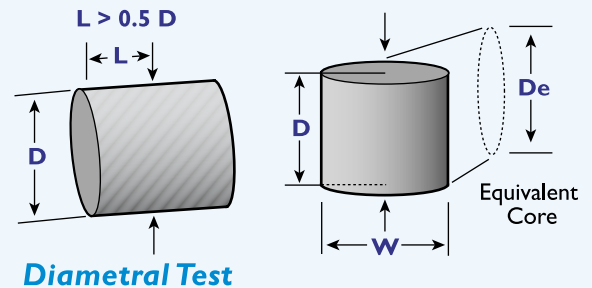
#### Ordering Information

**EL77-0115**  
**Digital Point-Load Test Apparatus**

EL77-0115 Digital Point-Load Test Apparatus



### Point Load Test on Different Sample Shapes



ELE International has a policy of continuous product review to ensure compliance to the relevant testing standards.

The latest product information can be found on the ELE e-commerce system at [www.ele.com](http://www.ele.com)

We recommend that you take a few minutes to register for access to this fully integrated and advanced facility for:

- Placing and tracking orders anytime 24/7
- Receiving mailings on special offers and new products
- Expanded product specifications
- Downloading available product datasheets

### Rock Shear Strength

*The engineering strength and slope stability of a rock formation is directly related to the strength of any fault line within it, therefore it is essential to obtain data concerning such weakness at the design stage.*

### Portable Shear Box Assembly

The technique enables the engineer to select specimens of rock from exposed faces or bore holes, observe orientation of fault lines, then set and test the fault in the shear box.

The apparatus consists of a diagonally split box assembly. The upper half incorporates a vertical ram for compressive loading, and the lower half, two horizontal rams for reversible shearing action. The force applied by the horizontal ram is aligned with the centre of the box and the discontinuity in the specimen. Pressure is applied to the rams by means of hand-operated hydraulic pumps and load is indicated on two Bourdon tube gauges. An adjustable low friction pressure maintainer incorporated into the loading system allows a constant load to be maintained during the test. The pressure maintainer is supplied with a foot pump.

#### Specification

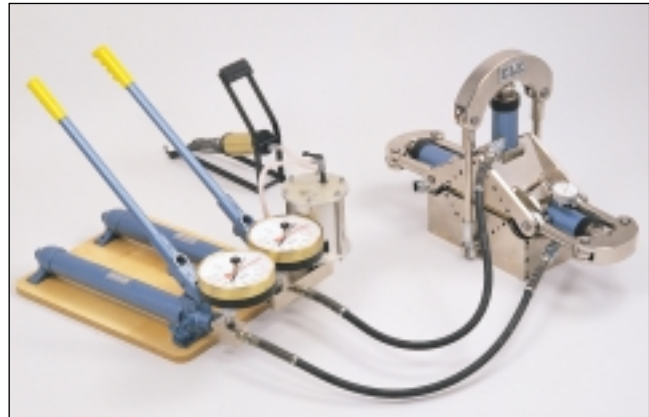
<b>Maximum sample size</b>	
Irregular	125 x 115 mm face area
Cores	101 mm diameter
<b>Load application</b>	
Hydraulic via two single speed hand pump/reservoir assemblies	
<b>Load gauge</b>	
Two x 150 mm dia dual-marked scale 50 kN x 1 kN and 11 000 lbf x 200 lbf	
<b>Horizontal displacement</b>	
Dial gauge 25 mm travel x 0.01 mm	
<b>Weight</b>	
45.5 kg	

#### Ordering Information

**EL77-1030**  
**Portable Shear Box Assembly**

#### Accessory

**EL77-1100**      **Crystacal Plaster** for casting specimens in position. Weight 25 kg bag



EL77-1030 Portable Shearbox Assembly

### Rock Durability

### Slake Durability Apparatus

ASTM D 4644

This apparatus provides a means of predicting the durability of rock to weakening and disintegration when subjected to the simulated effects of climatic slaking. The system incorporates a motor drive unit mounted on a base board with quick-release drive assemblies capable of revolving two or four specimen test drums at a speed of 20 revolutions per minute. The test drums are supported on water lubricated bearings allowing unobstructed clearance below the drum.

Two drums manufactured from a corrosion resistant material are supplied with two water troughs.

#### Specification

<b>Dimensions (l x w x h)</b>		1320 x 368 x 267 mm
<b>Drums</b>	Length	100 mm
	Diameter	140 mm
	Mesh	2 mm
<b>Weight</b>		20 kg

#### Ordering Information

**EL77-0510/01**  
**Slake Durability Apparatus**  
For 220 – 240 V AC, 50 – 60 Hz, 1 ph

EL77-0510 series Slake Durability Apparatus

