

YORK Survey Supply



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Prospect House
George Cayley Drive
Clifton Moor
York
England
YO30 4XE

Tel: +44 (0) 1904 692723
Fax: +44 (0) 1904 690385

E-Mail: sales@yorksurvey.co.uk



YORK Survey Supply

Pocket Penetrometer



Code: 34100

Operating Instructions

Pocket Penetrometer

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The pocket penetrometer was developed for use by field engineers to check the visual classification of soils. The readings of the penetrometer were compiled from several thousand unconfined compression tests of silty and clay-like soils.

Operation

The ring on the barrel of the penetrometer holds the maximum reading of the scale for easy reading.

Slide the ring down against the instrument handle.

Grip the knurled portion of the penetrometer into the soil to the groove located $\frac{1}{4}$ " from the tip.

Read the unconfined compression strength directly in tons per square foot (TSF) or kilograms per square centimetre (kg/cm^2) from the scale. The reading is located on the lower side of the ring - side closest to knurled handle.

Special Notes

Select test spots with a smooth surface.

Hold the pocket penetrometer at right angles to the surface being tested.

To minimise errors, take several readings near each other, discard those readings which may vary significantly from the majority and average the readings.

When the adaptor foot is used for very soft soils, divide the reading by 16 obtain the correct compression strength of the soil. Push the foot into the soil the total thickness of the adaptor foot.

Nature of the terrain	Allowable load in kg/cm^2 at a depth of 1/1.5m	Observations
Compact gravel, solidly stratified	5 ~ 7	The presence of water decreases resistance
Loose sand, solidly stratified	3 ~ 5	
Medium fine sand	2 ~ 3	
Short clay (sandy) and compact clay	2 ~ 3	Only if influx of water can be excluded definitively
Very short clay and wet clay	0.5 ~ 1	Based on imbibition
Backfill	0.5 ~ 1	Based on packing
Farmland (virgin)	0.5	Not suitable for stable construction
Muddy or swampy terrain	0 ~ 0.5	