

## Pocket Penetrometer HM-500



HM-500



HMA-15

### INTRODUCTION

This lightweight, direct reading penetrometer provides instant estimates of unconfined compressive strength of cohesive soils. The scale corresponds to equivalent unconfined compressive strength in tons per square foot (TSF) or in kilograms per square centimeters (kg/cm<sup>2</sup>). This type of penetrometer is specified by OSHA for soil strength estimates with evaluating stability and safety of trench excavations.

### OPERATING INSTRUCTIONS

1. Move the black ring on the barrel towards the handle to the lowest reading on the scale. When the ring is properly located, it should rest against the lower edge of the instrument handle.
2. Hold the penetrometer at a right angle to the surface being tested. Grip the handle and slowly push the piston with steady pressure into the soil up to the calibration groove, machined into the piston 0.25 inches from the end. The calibration groove should be even with the level of the soil.

3. Read estimated unconfined compressive strength directly in TSF or kg/cm<sup>2</sup> on the lower side of the ring (away from piston end, closest to the handle). Indicator ring will hold its position after piston is released. An error of up to ½ division on the scale, equivalent to 0-0.124 TSF is possible.
4. It is recommended to take several readings and discard those readings that vary significantly from the majority, then average the readings.

### ACCESSORIES

#### HMA-15 Penetrometer Adapter Foot

This 1-inch adapter is recommended when measuring the compression strength of very soft soils. The adapter foot has 16 times the piston area of the regular 0.25in piston. When using, divide the recorded compressive strength by 16 to determine the correct value.