S D INSTRUMENTATION Ltd

CLEGG IMPACT SOIL TESTER TYPE CIST/884
With 2.25 Kg Hammer / 0.5 Kg Hammer
(With Integral Global Positioning - GPS)

Easy To Use Instrument for Checking Sports Surface Firmness & Soil Strength

Introduction: - The GPS equipped CIST/884 Clegg Impact Soil Tester manufactured by SDi provides an easy and straightforward means for measuring sports surface firmness using the 2.25 Kg hammer. For golf course testing a 0.5 Kg probe is used instead. The GPS 884 readout is clamped to the guide tube and the displayed reading is viewed from the top during use. Single button operation design provided for easy use.

Data Logging Feature:- On board data logging and data storage are provided with the instrument. Latitude & Longitude coordinates of the test location are received by the in-built GPS providing users with an accurate location reference for later viewing in eg Google earth™. Bluetooth connection provides data download to a PC. PC software is provided.

Usage:- The instrument is used to confirm uniform surface hardness in football, rugby, cricket and equestrian surfaces. It quickly identifies variations in surfaces firmness over wide areas. Google Earth provides the visual location of the test locations as yellow map pins.

Design:- The instrument is provided with a 2.25 Kg hammer for sports surfaces or a golf ball sized 0.5 Kg domed probe for golf course fairways and delicate surfaces. These are allowed to fall from a fixed height onto the surface under test. The surface hardness value is immediately displayed on the recording unit unit. The instrument runs from 2 x 'AA' batteries for typically 12 months operation. The CIST/884 Clegg Impact Soil Tester is a compact and reliable instrument. An aluminium Transit & Storage Case is included.

GPS Map Points: -
When the data is downloaded to a PC the time and date of the test and the surface firmness (Gm) are shown against yellow pins in Google Earth as in the example on the right.

Example:

8 tests = 8 yellow pins.

Time Date Gm
hh:mm dd/mm/yy Gm

The GPS CLEGG IMPACT SOIL TESTER TYPE CIST/884

The Clegg Impact Soil Tester is designed and manufactured by S D Instrumentation.

CIST884 READOUT UNIT

The Readout Unit displays readings of firmness (Gm) on its large easy to see back lit display.

It also shows the number of GPS satellites detected confirming successful GPS location fixes.

Carrying out a test is quick and straightforward. The ground surface is brushed lightly with the foot to remove loose material and the guide tube is placed in position. The digital readout is located on the guide tube shown below during testing.

The high gain GPS antenna receives the satellite signals. The hammer is raised to a height of 450 mm as indicated by the white line on the hammer and then allowed to fall freely onto the surface under test.

The firmness or hardness value is then displayed followed briefly by a display of the number of GPS satellites in view. The automatic GPS measurement provides a Latitude and longitude fix.

An aluminium framed transit case is supplied.

Specification and Ordering Code

CIST/884 Specification:-		**Order Code 2.25Kg Hammer: CIST/884/2K25/Stor/Blu** **Order Code 0.5Kg Hammer: CIST/884/0K5/Stor/Blu**
Model Number	:	(2.25 Kg: CIST/884/2K25/Stor/Blu) or (0.5 Kg: CIST/884/0K5/Stor/Blu)
Hammer Weight (Sports)	:	**2.25 Kg:** for football, rugby, cricket, equestrian surfaces.
Hammer Weight (Delicate)	:	**0.5 Kg:** 42.7mm golf ball dia probe for golf, tennis & bowling greens.
Readout Display *(alphanumeric)*	:	Backlit vertical display. Readout unit clamped to Guide Tube – Easy to view.
Readout Range	:	Up to 800 Gm.
Power Source	:	Low power 3V: From two 'C' Cells. 12 Month typical battery life.
Battery Level	:	Displayed at switch-on.
Power 'On' & Controls	:	Single push button. Auto switch off.
Data Storage in Readout	:	Flash Memory for approx 10,000 drop tests. Each stored field contains the time and date of the test, firmness and the latitude, longitude & number of satellites.
Data Transfer Method	:	Bluetooth™ Wireless data transfer to Microsoft based PC or laptop.
Data Files when Transferred	:	Comma Separated Variable (CSV) data for manipulation in 3rd party packages such as Excel™ & KML readable by eg Google earth™. Viewable directly in Google map™. Calculates & stores Ordnance Survey GB Eastings & Northings.
GPS Accuracy / Output	:	Typically < 2.5m average. Google map™, Google earth™ & Ordnance Survey GB Easting & Northing to 1m res. (eg "ST 80269 55704" & "E380269 N155704").
GPS Operation	:	Selectable ON / OFF by side button.
System Software	:	PC Software provided from SDi to facilitate data transfer, real time test view, time/date setting and configuration set-up. Very easy to use.
Transit & Storage Case	:	Type CIST/ATS/15. Aluminium case for added protection in transit.
Size & Weight (packed).	:	Approx: 83 x 31 x 29 cm. Weight in case approx 12 Kg.

Specifications subject to change without prior notice.

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