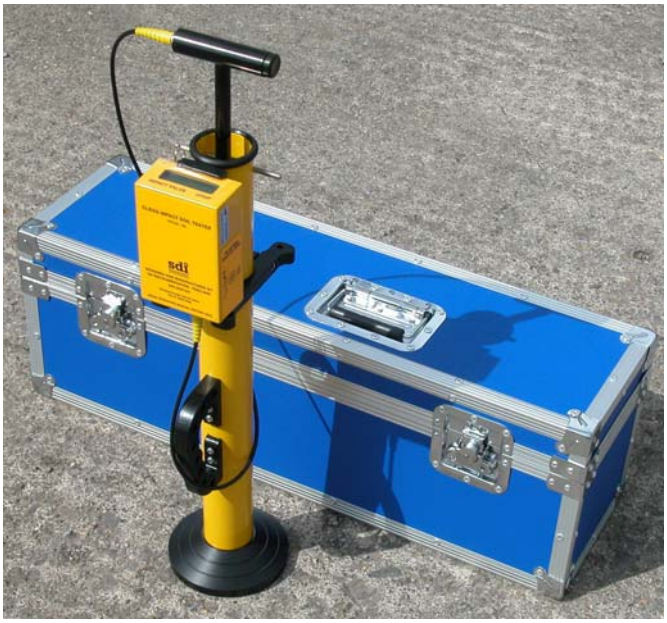
S D INSTRUMENTATION Ltd

CLEGG IMPACT SOIL TESTER TYPE CIST/883 – 4.5 Kg

Ruggedly Designed Tool for Checking Trench Re-instatement & Soil Strength

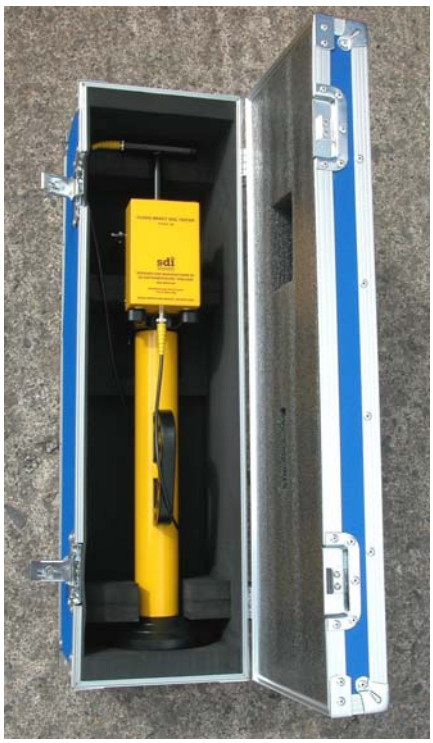


Introduction: - The 4.5 Kg CIST/883 Clegg Impact Soil Tester manufactured by SDi provides an easy and straightforward means for measuring and controlling soil strength and consolidation levels during trench re-instatement. The 883 readout is clamped to the guide tube and the displayed reading is viewed from the top during use. Single button operation design provided for easy use.

Data Logging Feature:- On board data logging and data storage with wireless data transfer facilities are features provided with the CIST/883 instrument. Users can download their test results from site to PC, wirelessly, using the PC software supplied with the instrument.

Usage:- The instrument is used to confirm uniform compaction of over wide areas of ground, identifying poorly compacted areas and ineffective rolling of materials.

Tough Design:- The CIST/883 Clegg Impact Soil Tester is a very rugged design suitable for prolonged use in damp, dirty and harsh site environments. The CIST/883 readout unit is made from high strength alloy that has been proven to last for decades. The CIST/883 battery compartment, sealed to IP67, is fitted with 2 x AA batteries for typically 12 months operation. The CIST/883 Clegg Impact Soil Tester is a compact and reliable instrument. An aluminium framed Carry Case is included as shown here.



Operating Principle: - The Tester consists of a 4.5 kg compaction hammer operating within a vertical guide tube. The Hammer falls through the tube when released and strikes the surface under test, decelerating at a rate determined by the stiffness of the material within the region of impact. The readout registers the deceleration in units of Impact Value (IV). The IV is an indication of soil strength.

CBR Measurement: - Good correlation with results from CBR tests exists. Data from the CIST/883 can be used in a similar manner as CBR testing performed in the laboratory and in the field. The CIST/883 display can directly show the %CBR result based upon Dr Clegg's original pioneering work.

History:- The Clegg Test was introduced by British Gas in the UK in 1990 following extensive laboratory and site testing. Since then several thousands of the instrument are now being used throughout the UK and overseas, with operators employing the recommended test routines.

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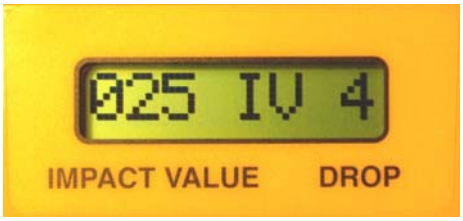
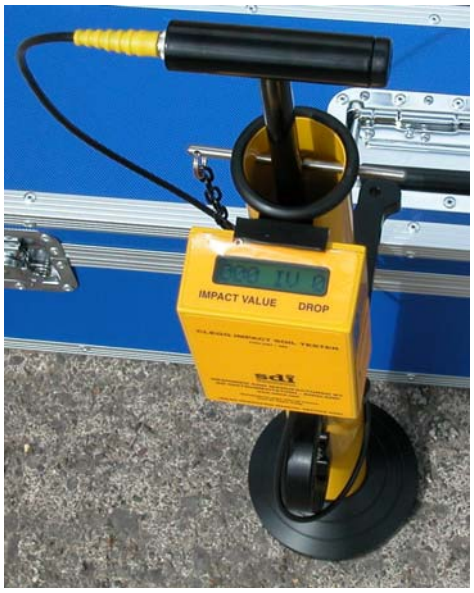
The Tester, described in the UK Design Manual for Roads and Bridges (DMRB) has been approved by the American Society for Testing and Materials and a Standard, under Designation No D 5874 was issued in 1995, entitled “Standard Test Method for Determination of the Impact Value (IV) of a Soil”.

The Clegg Impact Soil Tester is designed, manufactured and marketed by SD Instrumentation (SDi, UK) under an exclusive licence from Dr Baden Clegg, the original Australian inventor.

CIST883 READOUT UNIT



The backlit display in the Readout Unit displays readings of Impact Value (IV) and also shows the number of times that the hammer has been dropped during each test operation. Example:- readings of 25 IV and drop number 4 are shown on the readout unit in the picture on the left.



Carrying out a test is easy 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 above, during testing allowing easy use as there is no need to hold the readout in the hand. The hammer is raised to a height of 450 mm as indicated on the hammer head and then allowed to fall freely. This procedure is repeated four times, the reading achieved on the fourth drop being recorded as the Impact Value. Software selectable Quality Assurance (Q. A.) Readout firmware can advise the user of a failed re-instatement.

Tables of target IV for a range of backfill and subgrade materials are given in the operating manual, enabling the operator to check the compliance of reinstatements with the specification levels.

Specification and Ordering Code

CIST/883 Specification:- **Order Code:- CIST/883/4.5K/Stor/Blu**

Model Number	:	CIST/883/4.5K/Stor/Blu
Hammer Weight	:	4.5 Kg.
Bumble Bee Guide Tube	:	Strong Anodised Yellow Aluminium, Black Acetal Base Flange & Handle.
Readout Display *(alphanumeric)*	:	Vertical display with readout unit clamped to Guide Tube – Easy to view.
Readout Range	:	Up to 101 Impact Values (IV).
Power Source	:	Low power 3V: From two ‘AA’ Cells, type Alkaline / NiMH / NiCAD located in battery holder at base of readout. Sealed to IP67. 12 Month typical battery life.
Battery Level	:	Displayed at switch-on.
Power ‘On’ & Controls	:	Single push button. Auto switch off after 5 minutes from last reading.
Data Storage in Readout	:	Flash Memory for up to 10,000 5-drop test readings. Each field contains the 5 drop IV readings, time & date of each test & result validity pass/fail flag.
Data Transfer Method	:	Bluetooth™ Wireless data transfer. No cables & hence hassle free connection to Microsoft based PC or laptop. Bluetooth USB Dongle provided.
Data Type when Transferred	:	Comma Separated Variable (CSV) data for manipulation in third party packages such as Excel™. Up to 10,000 x 5-drop test storage & output.
Readout Displaying %CBR	:	Software Selectable %CBR display from CIST/883 LCD.
Readout Q. A. Firmware	:	Software Selectable TREND Algorithm checks inter-IV readings & Readout advises user if surface being tested has failed (Readout displays ‘ABORT’).
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 (approx).	:	71 x 13 x 13 cm. Instrument weight 6.8 Kg. Packed weight in case 12Kg.

Specifications subject to change without prior notice.

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