BPS INSTRUMENT
TENSILE TESTING MACHINE

Product Code

UTS-0860	Automatic CBR Test Machine, 220-240 V 50-60 Hz
UTS-0860/110	Automatic Digital CBR Test Machine, 110 V 60 Hz

UTEST
MATERIAL TESTING EQUIPMENT

Standards

EN 13286-47; BS 1377:4; ASTM D1883; AASHTO T193; NF P94-078; UNI CNR 10009

The UTS-0860 Automatic CBR Test Machine is designed for performing laboratory evaluation of the CBR value of highway sub-bases and sub-grade, and determination of the strength of cohesive materials which have maximum particle sizes less than 19 mm (3/4").

The UTS-0860 is composed of a robust and compact two column frame with adjustable upper crossbeam driven by an electromechanical ram with a maximum capacity of 50 kN and a data acquisition and processing system.

The UTS-0860 is designed to load the penetration piston into the soil sample at a constant rate to measure the applied load and piston penetration at predetermined intervals. The ram speed can be set between 0.5 mm/min to 5 mm/min by using the Digital Readout Unit. This main feature allows the user to perform tests complying to BS, EN, ASTM or AASHTO standards with the same machine.

Rapid adjustment of the platen is also provided by up and down buttons which are located on the front panel of the machine. The UTS-0860 is supplied complete with a 50 kN load cell, penetration piston, linear potentiometric displacement transducer (25 mm x 0.001 mm), computer software and connection cable. PC is optional.

BC 100 TFT Graphic Display Data Acquisition and Control Unit

BC100 TFT Graphic Display Data Acquisition and Control Unit is designed to control the machine and processing of data from load-cells, pressure transducers or displacement transducers which are fitted to the machine.

All the operations of BC100 are controlled from the front panel consisting of a 800x480 pixel 65535 color resistive touch screen display and function keys.One analog channel for load cell and one analog channel for displacement transducer exists.

BC100 has easy to use menu options. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seemless manner to activate the option or enter a numeric value to set the test parameters. The BC100 digital graphic display is able to draw real-time "Load vs. Time", "Load vs. Displacement" or "Stress vs. Time" graphics.

BC100 unit offers many addition unique features. You can save more than 10000 test results in its internal memory. BC100 unit has support for various off-the-shelf USB printers, supporting both inkjet and laser printers. Thanks to its built-in internet protocol suite, every aspect of BC100 device can be controlled remotely from anywhere around the world.

Dimensions	480x650x1150 mm
Weight (approx.)	110 kg
Power	370 W

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Main Features

- Calculates corrected CBR value at 2.5 and 5 mm the digital unit saves the load value at user defined displacement values such as 0.625, 1.25, 1.875, 2.5, 3.75, 5, 7.5,10, 12.5 mm
- The load corresponds to the displacements corrected respect to the linear region of the data has also saved
- The % CBR at 2.5 mm and % CBR at 5 mm is also automatically calculated and saved
- Can make test with displacement and limited load control.
- Real time display of test graph.
- CPU card with 32-bit ARM RISC architecture
- Permanent storage capacity up to 10000 test results
- 4 analog channels, 2 channels are active for CBR
- 1/256000 points resolution per channel
- 10 data per second sample rate for each channel
- Ethernet connecting for computer interface
- 800x480 resolution 65535 color TFT-LCD industrial touchscreen
- 4 main function keys
- Multi-language support
- 3 different unit system selection; kN, Ton and lb
- Real-time clock and date
- Test result visualization and memory management interface
- Remote connection through ethernet
- USB flash disc for importing test results and for firmware
- USB printer support for inkjet and laser printers (ask for compatible models)
- Camera support for real-time video recording during test (ask for compatible models)
- Free of charge PC software for the test control and advanced report generation

The CBR Test Machine is supplied complete with

- Load Cell, 50 kN
- Penetration Piston
- Linear Potentiometric Displacement Transducer with Connection Part, 25x0.001 mm
- Computer Software
- Connection Cable

Data Acquisition & PC Software

CBR Test Software is developed for EN/ASTM/AASHTO/BS CBR Test. The software includes control of machine, acquisition of load and displacement data, saving them and preparing reports. The software prepares a summary result for the user that will only need some specific loads such as at 0.625 mm,1.25 mm, 2.5 mm and 5 mm. The software continously updates load, stress and displacement till the end of test. When the test is completed, the sharpest slope of the graph is calculated. The point that this line crosses displacement axis is commented as an offset. The corrected stress values are then calculated respect to this offset.The CBR value at 2.5mm and 5.0mm are calculated by using the standart load values at those penetrations. On the general information tab, there is an easy usage dry density calculation. These results are used on generating 3 point CBR graph. The software supports metric, SI and Imperial unit system.

- Foreign Language Support and Customizable User Interface
- Graphical data on the screen is refreshed simultaneously during test procedure
- Capable to Access and use previously done test data
- Able to edit test parameters of the testing equipment through Software
- Graphical outputs and reports can be saved as a MS Excel worksheet
- Maximum Flexibility to edit report and graph templates