

# CALIFORNIA BEARING RATIO/UCS/ CONSOLIDATION LOADTRAC II

The California Bearing Ratio (CBR) test is used in evaluating subgrade, subbase and base materials as an aid to the design of pavements. The laboratory test uses a circular piston to penetrate material compacted in a mold at a constant rate of penetration. The CBR is expressed as the ratio of the unit load on the piston required to penetrate 0.1 in. (2.5mm) and 0.2 in. (5.1 mm) of the test material to the unit load required to penetrate a standard material of well-graded crushed stone.

- **Load capacity of 45 kN (10 klbf) or 90 kN (20 klbf)**
- **Unmatched automation from test start to finish** - 2 to 32 times faster results and labor time savings of 30% to 95% vs. manual testing
- **Flexible design** - perform additional testing on the same platform and save money and space in your lab
- **Full test control and remote monitoring allows you to take your testing on the go** - view real-time results, check test quality, and change parameters
- **Convenient reporting** - produce complete, compliant reports instantly or export data for desired manipulation
- **Designed for consistent and repeatable testing you can be confident in**

## Applicable Test Standards

- ASTM D1883
- AASHTO T193
- BS 1377-4
- AS 1289



Standard Fully Automated California  
Bearing Ratio System

# CALIFORNIA BEARING RATIO LOADTRAC II

## TECHNICAL SPECIFICATIONS

### LOAD CAPACITY

45 (10 klbf) or 90 kN (20 klbf)

### MOTOR

Micro-stepper system with built-in controls

### RATE OF DISPLACEMENT

0.00003 to 25 mm per minute  
(0.000001 to 1.0 in per minute)

### TRAVEL

Built-in displacement transducer with 76 mm (3 in) range and 0.0013 mm (0.00005 in) resolution

### POWER

110/220 V, 50/60 Hz, 1 phase

### DIMENSIONS

464 x 546 x 1206 mm (18 x 21.5 x 47.5 in)

### WEIGHT

55 kg (120 lbs)

### INCLUDED

- Geo-NET network card and cable to link to PC
- CBR software module to automatically run and report tests

### ACCESSORIES

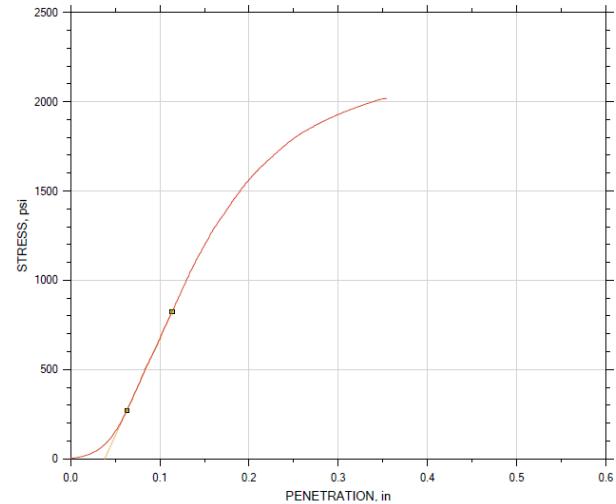
- CBR piston and mold

### WARRANTY

- 12 month warranty; extended warranties available

## Typical Test Output (example)

### CALIFORNIA BEARING RATIO TEST REPORT



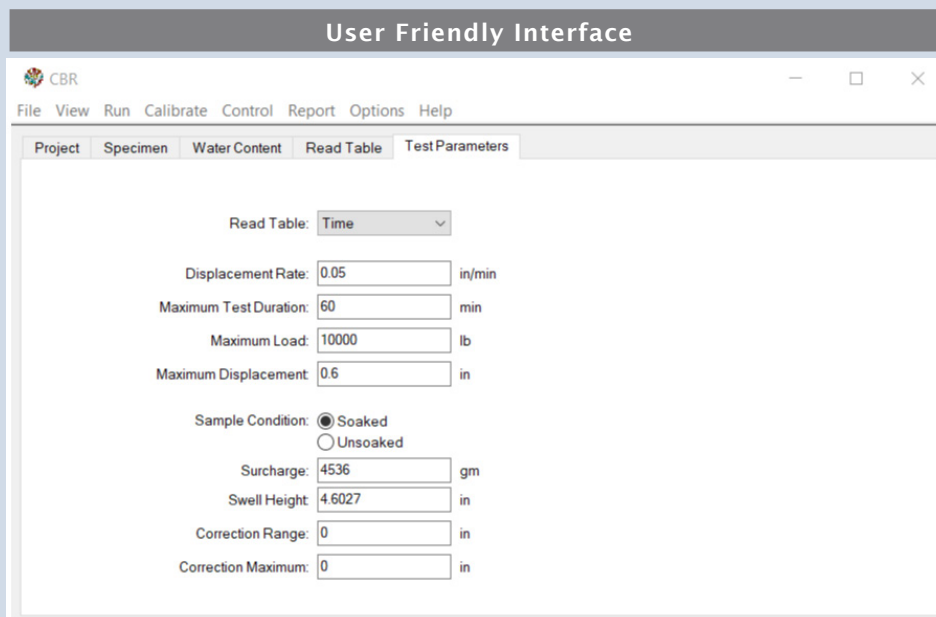
Sample Height, in	4.58
Sample Area, in <sup>2</sup>	28.274
Sample Volume, ft <sup>3</sup>	0.07494
Sample Mass, gm	4796.8
Sample Condition	Soaked
Swell, %	0.50
Surcharge, gm	4536
Void Ratio	0.32
Wet Unit Weight, pcf	141.11
Dry Unit Weight, pcf	125.72

California Bearing Ratio			
at 0.1 in: 109	at 0.3 in: 105	at 0.5 in: N/A	
at 0.2 in: 117	at 0.4 in: N/A		

Water Content			
	Before	After	Average
Tare ID	2521	2420	8032
Tare Mass, gm	8.12	8.25	8.29
Mass Tare + Wet Soil, gm	377.62	254.86	276.71
Mass Tare + Dry Soil, gm	347.21	221.72	249.07
Water Content, %	8.97	15.52	12.25

Project: CBR	Location: Place, USA	Project No.: CBR123
Boring No.: Composite	Tested By: ab	Checked By: xy
Sample No.: CD/SC-SB-44	Test Date: 03/01/2018	Depth: 0-4 ft
Test No.: CBR-7	Sample Type: remolded	Elevation: ---
Description: Dry, reddish brown silty sand		
Remarks: Target Compaction: 101% of Maximum Dry Density (128.5 pcf) at Optimum Moisture Content (9.0%)		

## User Friendly Interface



The screenshot shows the 'Test Parameters' tab of the CBR software. It includes fields for Displacement Rate (0.05 in/min), Maximum Test Duration (60 min), Maximum Load (10000 lb), and Maximum Displacement (0.6 in). There are radio buttons for Sample Condition (Soaked selected, Unsoaked). Other fields include Surcharge (4536 gm), Swell Height (4.6027 in), Correction Range (0 in), and Correction Maximum (0 in). The top menu bar includes File, View, Run, Calibrate, Control, Report, Options, and Help.

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