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Test Smart. Test with Confidence. Test for Success.

# CALIFORNIA BEARING RATIO
# LOADTRAC II

The California Bearing Ratio (CBR) test is used in evalutating 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**


Standard Fully Automated California Bearing Ratio System

## Applicable Test Standards

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

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## 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)

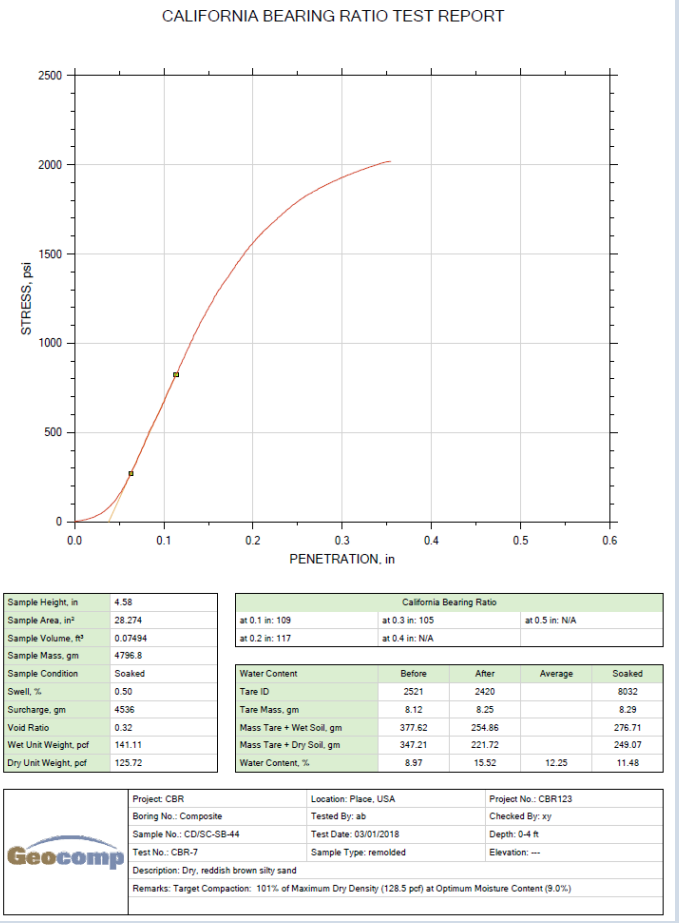
### WEIGHT
55 kg (120 lbs)

### 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)




| | |
|---|---|
| Sample Height, in | 4.58 |
| Sample Area, in² | 28.274 |
| Sample Volume, ft³ | 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 | Soaked |
|---|---|---|---|---|
| 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 | 11.48 |

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| | | |
|---|---|---|
| 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