

# MODEL CBR CALIFORNIA BEARING RATIO TESTING MACHINE



## EQUIPMENT DESCRIPTION

The California Bearing Ratio test, (usually called CBR test) is an empirical test developed in California, USA for determining the Relative Bearing Ratio and expansion characteristics under known surcharge weight of base, subbase and sub grade soils for the design of roads, pavements and runways. The CBR test is used extensively in selection of materials and control of sub grades. The test can be performed in the laboratory on prepared samples or in-situ on location. It is important to note that this test is empirical in nature and is valid only for the application for which it was developed, namely the design of highway base thickness.

## KEY FEATURES

- Compact, bench top design
- Rapid Platen Adjustment
- Complete with stabilizing bar
- Options for mechanical or electronic measurement

## APPLICABLE STANDARDS

BS 1377, 1924; EN 13286-4, EN 1997-2; ASTM D1883; AASHTO T193



## ORDERING INFORMATION

For BS 1377, 1924; EN 13286-4, EN 1997-2

TO-120-1-BS CBR Test Apparatus

TO-121-1-BS CBR Test Apparatus with Electronics Bundle

For ASTM D1883; AASHTO T193

TO-120-1-ASTM CBR Test Apparatus

TO-121-1-ASTM CBR Test Apparatus with Electronics Bundle

Model No + Electric Requirements Suffix  
Example: TO-120-1-ASTM-02

Where Suffix:

-01 - 110 VAC, 60 Hz, 1 ph

-02 - 220 VAC, 60 Hz, 1 ph

-03 - 220 VAC, 50 Hz, 1 ph



BS 1377, 1924; EN 13286-4, EN 1997-2 COMPLIANT MACHINES SUPPLIED WITH:

TO-11202 Light compaction rammer  
2.5kg x 300 mm fall



Model TO-120-1-ASTM CBR tester, shown with optional 50 kN proving ring (TO-274)

TO-11202-H Heavy compaction rammer  
4.5kg x 450 mm fall

TO-12001-BS CBR mold body

TO-12003-BS CBR extension collar

TO-12002-BS CBR perforated base plate

TO-12007-BS Annular surcharge weight  
2kg

TO-12008-BS Split surcharge weight 2kg.

TO-12011-BS CBR cutting collar

TO-12006-BS Spacing compacting disc

TO-12004-BS Penetration piston

TO-12005 Adjustable bracket for  
penetration dial gauge

TO-12009 Perforated swell plate

TO-12010 Metal tripod for dial gauge

ASTM D1883; AASHTO T193 COMPLIANT  
MACHINES SUPPLIED WITH:

TO-11302 Light Proctor compaction  
apparatus

TO-11302-H Heavy Proctor compaction  
apparatus

TO-12001-ASTM CBR mold complete  
with collar and base plate

TO-12003-ASTM BS CBR  
extension collar

TO-12002-ASTM BS CBR perforated  
base plate

TO-12011-ASTM CBR cutting collar

TO-12007-ASTM Annular surcharge  
weight 2.27kg

TO-12008-ASTM Split surcharge weight  
2.27kg

2.27kg

TO-12006-ASTM Spacing compacting disc

TO-12004-ASTM Penetration piston

TO-12005 Adjustable bracket for penetration  
dial gauge

TO-12009 Perforated swell plate

TO-12010 Metal tripod for dial gauge

## OPTIONAL ACCESSORIES

For TO-120-1



TO-274 Proving ring 50kN

TO-072 Dial gauge 0.25 x 0.01 mm

For TO-121-1

TO-12101 Electronic conversion kit  
comprising of digital indicator, Load cell  
50kN, Displacement sensor 0.20 mm



## SPECIFICATIONS

Maximum Vertical Clearance	800 mm
Horizontal Clearance	255 mm
Platen Diameter	133 mm
Platen Travel	105 mm
Dimension (l x w x h)	550 x 400 x 1220 mm
Weight	80 kg

## ELECTRONIC BUNDLE FOR CBR TEST

### SPECIFICATIONS

Capacity	50 kN (5000 kgf) compression load cell with 3 m long cable
Max overload	110% of the rated capacity
Sensing	Strain Gauges in full bridge configuration
Mode of Display	Micro controller multi line alpha numeric VFD display for all simultaneous channel (No need for channel selection)
Power supply	220V, 50Hz, Single Phase
Range	±10 mm with 3 m long cable
Sensing element	LVDT



### ORDERING INFORMATION

**TO-12101: Electronic Bundle for CBR comprising Digital Indicator, 50kN Load Cell and +/-10mm LVDT**

**Model No + Electric Requirements Suffix**

**Example: TO-12101-02**

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-03 - 220 VAC, 50 Hz, 1 ph

CONTACT YOUR LOCAL REPRESENTATIVE:



The First Name In Materials Testing

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