

California Bearing Ratio (CBR) System

Related Standards: BS 1377-4; ASTM D1883-07; AS 1289.6.6.1

The California Bearing Ratio (CBR) test is a penetration test for evaluation of the load-bearing capacity of soils used for building roads.

The CBR System consists of a CBR sample setup with either an Advanced Triplex II Load Frame (with inbuilt data logger) or a Standard Triplex II Load Frame with separate data logger.

The Triplex II is a stepper motor controlled digital 50 kN machine manufactured to a very high standard, ideally suited to laboratory CBR testing.

The microprocessor based design provides accurate speed control, and a rapid platen adjustment speed is also available.

The necessary accessories are all manufactured to a very high standard in a non-corrosive material.

Common Features

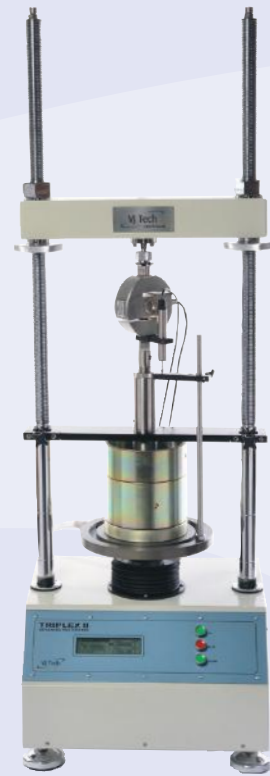
- Large LED display with adjustable contrast
- Manual or automated operation
- RS232 port included
- User friendly software for partial or complete automation

Additional Features of an Advanced Triplex II

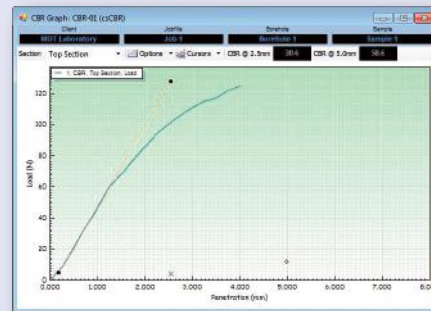
- Inbuilt data logging
- Live display of Load and Displacement measurements
- Two additional Channels for alternative Load capacities.

VJT Clisp Studio csCBR software

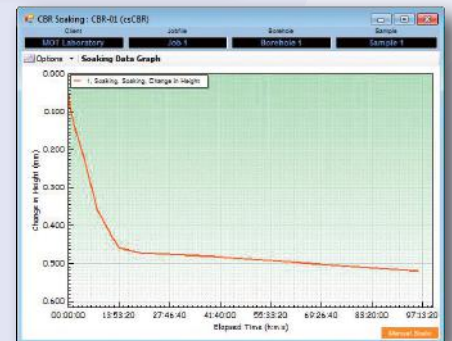
- Software Assistant for easy Test setup
- User defined data logging intervals
- Optional Soaking Stage
- Automated test control
- Display of live data in Tabular or View format
- Display of live data in Graphical format
- Data export to Excel & test script export & import
- Easily viewed results



CBR System Setup



CBR Results Stage



Graph CBR Soak Stage

Section	Top Section	Time T (h:m:s)	Penetration Input S_p (mm)	Load Input N_p (N)	Load N (N)	Penetration L (mm)
1		00:00:00	10.000	410	0	0.000
2		00:00:15	10.250	418	0	0.250
3		00:00:30	10.500	430	20	0.500
4		00:00:45	10.750	444	26	0.750
5		00:01:00	11.000	456	36	1.000
6		00:01:15	11.250	470	46	1.250
7		00:01:30	11.500	478	58	1.500
8		00:01:45	11.750	487	77	1.750
9		00:02:00	12.000	498	88	2.000
10		00:02:15	12.250	509	94	2.250

CBR Results Stage Table

California Bearing Ratio (CBR) System

Accessories



CBR Accessories

Ordering Information

VJT5011-RS	TriPLEX Multitester with RS232 interface
VJT5011-ADV	TriPLEX Multitester with built-in data logger
VJT-csCBR	Clisp Studio CBR software

Specifications

Load capacity	50 kN
Speed Range	0-50.8 mm/min
Fast Platen Adjustment Speed	50 mm/min
Vertical Clearance	1000 mm
Horizontal Clearance	380 mm
Platen Diameter	158 mm
Power Supply	90-240V, 50/60Hz, 1ph
Dimensions (w x d x h)	480 mm x 445 mm x 1490 mm
Weight	100 kg

Load and Penetration Measurement

Penetration	Load	Bracket/Adaptor
VJT0110-M Dial Gauge 25 mm x 0.01 mm	VJT0223 30 kN Load Ring	Not required
VJT0110-MIT 25 mm Digital Dial Gauge (DDG)	VJTS0360 2.5 kN S-Beam Load Cell	VJT0287C for DDG or VJT0287B for LCST
	VJTS0361 5 kN S-Beam Load Cell	
	VJTS0362 10 kN S-Beam Load Cell	VJT0285C for DDG or VJT0285B for LCST
	VJTS0363 20 kN S-Beam Load Cell	
	VJTS0365 50 kN S-Beam Load Cell	VJT0285A for DDG or VJT0281K for LCST

Accessories Ordering Information

	BS	ASTM
MINISCANNER2 CBR/Marshall 2 Channel Data Logger	VJT1300A	VJT1300A
Adjustable Plunger Head (3"sq)	VJT0715	VJT0715
Stabilising Bar	VJT0716	VJT0716
CBR Mould Body	VJT0720	VJT0740
CBR Extension Collar	VJT0721	VJT0741
CBR Cutting Collar	VJT0725	VJT0742
CBR Perforated Base Plate	VJT0723	VJT0743
CBR Solid Base Plate	VJT0722	VJT0744
Locking C-spanner (2 required)	VJT0724	-
Base Plate Tool	VJT0726	-
Static Compaction Plug	VJT0731	VJT0745
Surcharge Weight complete ring (2.0 kg)	VJT0732	-
Surcharge Weight complete ring (10lbs)	-	VJT0746
Surcharge Weight split ring (2.0 kg)	VJT0733	-
Surcharge Weight split ring (5 lbs)	-	VJT0747
Base Plate with penetration dial gauge arm	VJT0717	VJT0717
Swell Tripod	VJT0735	VJT0735
Swell Plate	VJT0734	VJT0734
Swell Dial Gauge	VJT0110-M	VJT0110-M
Compaction Rammer (2.5 kg)	VJT0711	-
Compaction Rammer (5.5 lb)	-	VJT0712
Compaction Rammer (4.5 kg)	VJT0710	-
Compaction Rammer (10 lb)	-	VJT0713