



## Humboldt CBR/LBR Solutions

The California Bearing Ratio (CBR) Test was developed by The California State Highway Department and is widely used to determine the resistance strength of subgrade and subbase materials. The test is basically a simple penetration test using a load frame and a standard, compacted CBR test mold of the material to be tested. The results of the test are then compared and evaluated to known standards already established for the material being tested. Meets ASTM D1883; AASHTO T193; BS 1377 Part 4.

LBR or Limerock Bearing Ratio is a variation of the CBR test. Developed primarily in Florida, it is used with materials with high lime content.

Humboldt offers several CBR/LBR testing solutions based on your overall testing needs and budget, from the advanced HM-3000.3F Load Frame with computer interface using our HMTS software to a simple, hand-operated H-4156 Load Frame suitable for lab or field use.

### CBR Setup using the HM-3000.3F Load Frame

Pictured is the HM-3000.3F Load frame with a typical CBR setup. See the chart below for items to order for the setup shown. See page 60 for more information on the HM-3000.3F Load Frame.

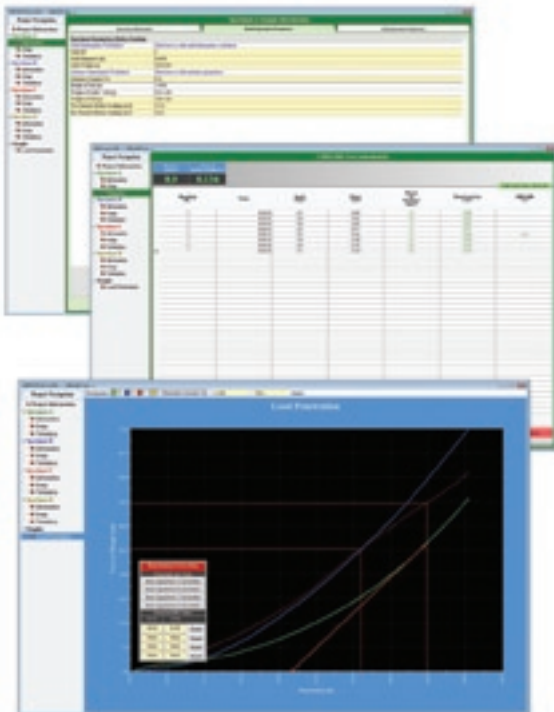
#### Typical CBR Setup using HM-3000.3F

Part #	Qty	Description
HM-3000.3F	1	Digital MasterLoader 110/220V
HM-2300.100	1	S-Type Load Cell, 10,000lbf (50kN)
HM-2310.10	1	Strain Transducer 1" (25mm)
H-4178	1	Penetration Piston with Stud
HM-4178BRT	1	Displacement Transducer Bracket
HM-3001SW	1	CBR/LBR Reporting Software

### Typical LBR Setup

For LBR setups, substitute H-4178F.4 for the H-4178 penetration piston and HM-2300.100P for the HM-2300.100 S-type load cell.

HM-3000.3F



### HMTS Reporting Software, CBR/LBR Module— HM-3001SW

Humboldt Material Testing Software (HMTS) provides a complete solution for the acquisition, recording and presentation of test data, as well as controlling testing operations when used in conjunction with compatible Humboldt testing equipment. HMTS works in conjunction with Microsoft Excel to present test data in easy-to-read Excel workbook format files, which can be evaluated directly or sent to any computer using Microsoft Excel.

The CBR/LBR Module provides a simple, test-specific interface to control CBR/LBR test operations and automatically record data while also displaying it in real-time tables and graphs. Technicians can be freed-up for other duties with the assurance that all test data is being collected and saved.

- Test Information is stored, and all calculations are performed automatically
- Live tests and live graphing capabilities (real-time)
- Complete test report including all calculations and graphs required for testing
- Review and export tests using Microsoft Excel

**See page 72 for more information on Humboldt's HMTS software.**