



# HUMBOLDT

The HM-5150 Loader has been specifically designed to handle CBR and LBR applications. Its heavy-duty design and precise stepper-motor control provide a stable platform for years of reliable service. From educational institutions and consulting firms to high-volume commercial labs and construction projects, the CBR and LBR Loader can handle these applications with ease.

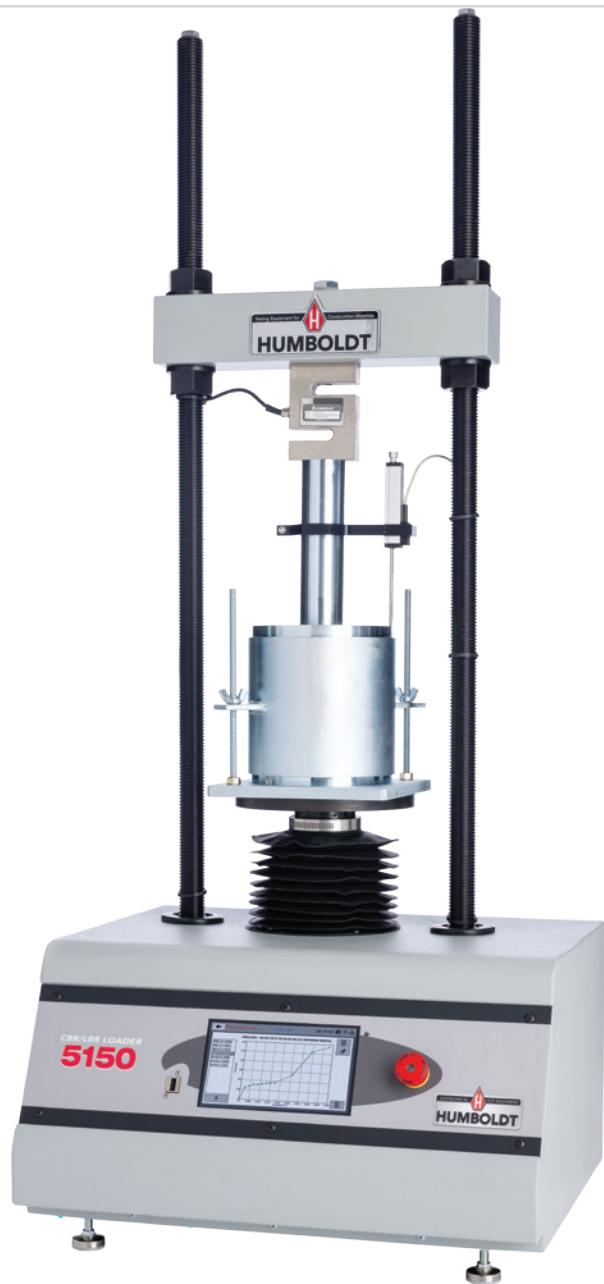
The HM-5150 is built around Humboldt's integral, data logger with touch-screen control, which allows the load frame to be used as a standalone device capable of full test control and data logging. It can also be controlled by a networked computer at any location with access to the network.

The HM-5150 is sold as a load frame only. For CBR or LBR testing it is recommended that you purchase the following items: a HM-2300.100 S-type, 10,000 lbf (50kN) load cell, a HM-2305.10, 1" (25mm) strain transducer, a H-4178 Penetration piston with stud, and a HM-2305BRT Displacement transducer bracket.

In stand-alone mode, the HM-5150 load frame provides a 7" (178mm) touch-screen controller. These new waterproof, touch screens provide colorful, at-a-glance monitoring of testing functions without the use of a computer. Operators can see all the data in several formats at the machine while the test is running. Data can then be viewed simultaneously or downloaded later to a computer in the lab, in the next room or at a different location, while also providing report generation capabilities from within Humboldt's NEXT software enhanced CBR and LBR-specific software module.

The HM-5150 is sold as a Load Frame ONLY, refer to the recommended accessories chart for items needed to perform CBR and LBR testing.

## HM-5150.3F CBR and LBR Loader



Load capacity	10000 lbf (50kN)
Speed range:	0.05 in/min (1.27 mm/min) 1.00 mm/min (0.03937 in/min)
Data channels	2
Platen Size / Travel	8" (203mm) / 4" (100mm)
Data storage	1000 tests and up to 3000 readings per test
Clearance, vertical	27" (686mm)
Clearance, horizontal	11" (286mm)
Voltage	110/220V 50/60Hz - 5.0 amps
Shipping weight	120lbs (54kg)

### Recommended CBR and LBR Accessories

HM-2300.100	Load Cell, S-type 11,000 lbf (50kN)
H-4178	Penetration Piston
HM-2305.10	Strain Transducer 1" (25mm)
HM-2305BRT	Bracket, Displacement Transducer
HM-5001SW	CBR & LBR Software Module
H-4151	CBR Mold, perforated base, 6"
H-4149	CBR Mold, solid base, 6"
H-4163	LBR Mold, 6"
H-4154FP	Filter Paper
H-4154	Filter Screen, SS, 5-15/16" (152mm)

## **HM-5150.3F** **CBR and LBR Loader**

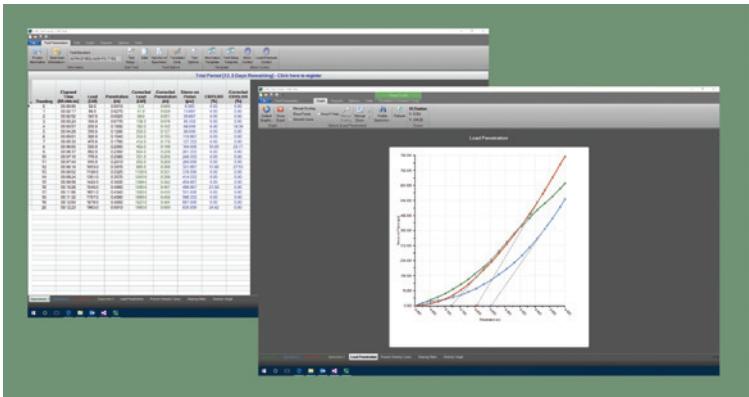
# **Computer Control**

Humboldt's Next software, which is included with the HM-5150 Load frame can be enhanced with the HM-5001SW Next test-specific CBR/LBR software module. This software provides robust machine control, calibration, data acquisition and report generation for those using a computer to control load frame operations.

Humboldt's NEXT software and the CBR and LBR-specific module provide you with the following capabilities:

- test-specific setup that guides you through the process, which includes selecting data collection parameters that best fit the specific test
- input specific project information for each test, such as project name, client information, etc
- all test-specific initial, intermediate, and final parameters required by ASTM and BS standards are dynamically calculated for you, based on your input of specimen information, such as size, weight, etc
- tabulated test data, graphs and all test-specific calculations are provided in real time, allowing you to monitor tests in process
- generate test-specific reports that include all graphs and data presented in a project
- create and store test-specific test setup templates for rapid setup of future tests
- produce test-specific graphs, which allow you to draw construction lines to calculate angles and other test-specific parameters
- automatically recover from a PC shutdown without loss of data
- all unit parameters can be adjusted individually
- simultaneously run multiple tests on one computer, involving any of the available NEXT software modules and any compatible Humboldt equipment up to 255 device connections, which is up to 1020 inputs
- access free, downloadable software upgrades for purchased modules

## **CBR/LBR Module, HM-5001SW**



# **Stand-alone Control**

Humboldt's touch-screen controller provides you with full, graphical monitoring of all testing functions in a stand-alone application, while maintaining full computer control when desired.

The seven-inch, waterproof screen provides at-a-glance monitoring of testing functions, in a real-time graphical display, without the use of a computer, building upon Humboldt's dedication to modular, stand-alone data acquisition.

In a stand-alone application, you will be able to run tests and display results while viewing tabulation, basic x-y graphs and instrument readings in real-time during the test, using user-defined, basic data acquisition. Test data is stored in the device and can be downloaded to a USB drive via the machine's FRONT USB port or the data can be transferred to a computer via the LAN port.

A second USB port located on the back of the machine can also be used to power a wireless access point, which can provide a wireless hook-up with a computer, if no LAN is available.

### **Touch-Screen Controller provides:**

- 2-channel data acquisition
- Hi-res, 7" waterproof, touch-screen provides total control and real-time graphical display of tests
- Machine /Test control and data acquisition via touch-screen
- Calibration of channels to load cells, transducers and other suitable instruments
- Real-time graphical chart and numerical display of tests via touch-screen display
- Effective sampling rate of 50 readings per second
- Stores up to 1000 tests with 3000 points per test
- 2 USB ports. One in front for data transfer and the rear port is for powering a wireless access point.



**Humboldt Mfg. Co.**  
[www.humboldtmfg.com](http://www.humboldtmfg.com)  
875 Tollgate Road  
Elgin, Illinois 60123 U.S.A.

U.S.A. Toll Free: 1.800.544.7220  
Voice: 1.708.468.6300  
Fax: 1.708.456.0137  
email: hmc@humboldtmfg.com