# Humboldt Material Testing Software

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 HMTS is configured in two levels of functionality.

#### Basic, User-Defined Level

The basic solution, or user-defined level, is provided free with our HM-3000 MasterLoader, HM-2325A and HM-2330D MiniLoggers, HM-2560A ShearScan 10 and the HM-2700A and HM-2700D Direct Residual Shear Machines. This free software allows you to:

- set up and run user-configured tests;
- save test configurations as templates for rapid setup of future tests;
- collect and view data in real time with basic graphing functions;
- generate graphs in real time through the use of customdesigned Excel templates for report generation and printing, and
- simultaneously run multiple tests on one computer— based on the number of Humboldt logger-capable machines listed above you have connected.

#### Advanced, Module Level

The advanced version of the HMTS involves upgrading the capabilities of the basic HMTS by purchasing and registering test-specific modules that are unlocked with a registration code. Purchasing test-specific modules allows you to go beyond the functionality of the basic software by providing 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;

Available advanced modules include:

Consolidation (ASTM D2435)— HM-1100SW

Direct Shear (ASTM D3080)— HM-2700SW

CBR/LBR (ASTM D1883)— HM-3001SW

Unconfined Compression (ASTM D2166)— HM-3004SW

UU Triaxial (ASTM D2850)— HM-3002SW

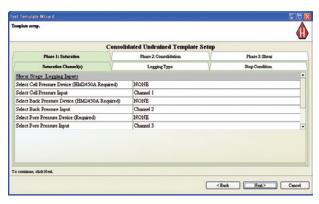
CU/CD Triaxial (ASTM D4767)— HM-3003SW

Marshall Design (ASTM D6927)— HM-3005SW

- 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 is 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 the projects. Reports are generated in Microsoft Excel workbooks allowing you to modify any report template to fit your company's needs
- simultaneously run multiple tests on one computer, involving any of the available HMTS modules and any compatible Humboldt equipment up to 255 device connections, which is up to 1020 inputs;
- 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;
- single click between imperial and metric units;
- easily change between different test standards, and
- access free, downloadable software upgrades for purchased modules.



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Test templates for quick test setup.

#### How to Use the Software

The HMTS disk contains the complete HMTS offering including all test-specific modules. After installation on your computer, you will be able to use the Basic Level software capabilities for any applicable application, for as long as you like for free. You will also be able to use all the Advanced Level Modules, with full capabilities 20 times for each test module as a free trial. The software will keep track of the number of uses and display the remaining number of tests available on the screen.

#### **Operating System Requirements**

Windows 2000 (with at least Service Pack 4), Windows XP Professional, Windows XP Home, and Windows Vista. Other Windows versions, such as Windows 3.1, Windows 95, 98, and NT are not supported.

#### **Software Requirements**

Microsoft® Excel is required for creating reports.

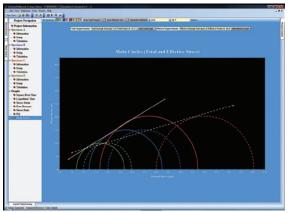
Hardware Requirements

- Pentium® 4 (32-bit) equivalent or faster
- Minimum 512 MB RAM (1024 MB or more recommended)
- 300 MB swap space (or more)
- CD-ROM or DVD Drive
- 1024 x 768 display resolution

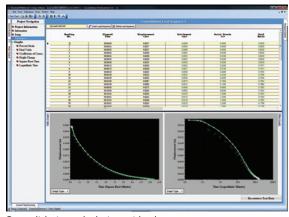
### **Internet Connection**

As recommended above, it is highly recommended that you have an internet connection. With an internet connection you can:

- Check for updates.
- Automatic updates are performed.
- Tests can be sent to Humboldt or to anyone you choose.
- Humboldt can be notified of issues.
- Registration can be sent directly to Humboldt for quicker processing.
- In the event of issues with the software we can connect to your computer remotely and help you.



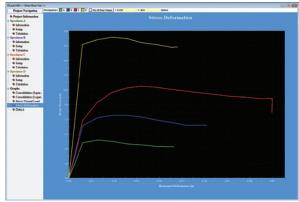
Mohr Circles plot from CU test.



Consolidation tabulation with plots.



Data Entry Tabulation from CU Shear and Direct Shear tests.



Stress Deformation graph from Direct Shear test.



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