



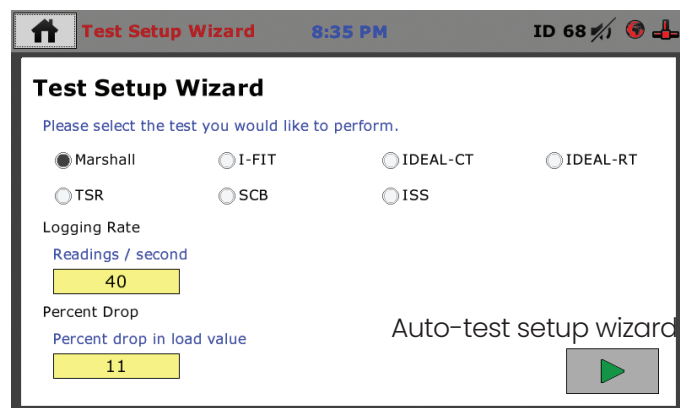
# Balanced Mix Load Frame HM-5125A.3F

## Balanced Mix, Automated Load Frame

Humboldt's HM-5125A.3F load frame has been designed to provide precise, test-rate control for the automated testing of balanced mix samples. This control is provided by Closed-Loop Feedback Control of the speed function, which ensures highly-accurate results.

### Tests that can be run with this load frame are:

- Marshall — ASTM D6927, AASHTO T245
- TSR — AASHTO T283
- I-FIT (SCB IL Method) — AASHTO TP124
- SCB (LSU Method) — ASTM D8044
- IDEAL-CT (TTI Method) — ASTM D8225, Tex-250-F
- IDEAL-RT (TTI Method) — ASTM D8360-22
- ISS (Interlayer Shear Strength) — AASHTO TP114
- Hveem — ASTM D1560



The easy-to-operate, HM-5125A load frame allows you to quickly choose your test and its parameters in the Test Setup Wizard for automated operation of the testing process and results. Humboldt's HM-5125A.3F is the ideal load frame for use when testing balanced mix design samples.

# Balanced Mix Load Frame

Balanced mix design involves using a variety of cracking tests, which are used to simulate different types of loading conditions on a test sample. The HM-5125A.3F is designed to easily and efficiently provide precise test-rate control for the automated testing of balanced mix samples.

At the completion of each test, the HM-5125A will display test results on its display screen per current ASTM or AASHTO specifications. This function eliminates the need for operators to download

or transfer data to a computer for calculating or displaying test results. This also allows operators the ability to quickly evaluate whether a specimen mix design is within desired specifications.

If reports or test data need to be printed or shared, data results can be transferred to a computer via an ethernet connection with a networked computer or via a USB thumb drive.



IDEAL-CT (TTI Method) ASTM D8225, Tex-250-F

| Description                             | Qty | Part #        |
|---|-----|---------------|
| Load frame                              | 1   | HM-5125A.3F   |
| Load Cell, Pancake<br>11,000 lbf (50kN) | 1   | HM-2300.100CP |
| Linear Potentiometer 1"<br>(25mm)       | 1   | HM-2305.10    |
| Potentiometer Bracket                   | 1   | HM-5000BR     |
| Lottman head, 150mm                     | 1   | H-1369M       |

IDEAL-RT (TTI Method) ASTM WK71466

| Description                             | Qty | Part #        |
|---|-----|---------------|
| Load frame                              | 1   | HM-5125A.3F   |
| Load Cell, Pancake<br>11,000 lbf (50kN) | 1   | HM-2300.100CP |
| Linear Potentiometer 1"<br>(25mm)       | 1   | HM-2305.10    |
| Potentiometer Bracket                   | 1   | HM-5000BR     |
| IDEAL-RT Test Head                      | 1   | H-1354        |

ISS (Interlayer Shear) AASHTO TP114

| Description                                   | Qty | Part #              |
|---|-----|---------------------|
| Load frame                                    | 1   | HM-5125A.3F         |
| Load Cell, Pancake<br>11,000 lbf (50kN)       | 1   | HM-2300.100CP       |
| Linear Potentiometer 1"<br>(25mm)             | 1   | HM-2305.10          |
| Potentiometer Bracket                         | 1   | HM-5000BR           |
| Asphalt Tack Bond Shear<br>Strength Apparatus | 1   | HA-1343<br>HA-1343M |



## The Load Frame for all Asphalt Tests

The HM-5125A's 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 HM-5125A Load Frame can perform these applications with ease.

The HM-5125A is built around Humboldt's integral, data logger with touch-screen control, which allows the load frame to be used as a stand-alone device capable of full test control and data logging. Operators can see all the data in several formats at the machine during the testing procedure.

The benefits and features of Humboldt's HM-5125.3F load frame establish it as the perfect load frame to use when testing balanced mix design samples. Its unique versatility and excellent quality make it the most highly-regarded option in its field.



### Marshall ASTM D6927, AASHTO T245

| Description                             | Qty | Part #            |
|---|-----|-------------------|
| Load frame                              | 1   | HM-5125A.3F       |
| Load Cell, Pancake<br>11,000 lbf (50kN) | 1   | HM-2300.100CP     |
| Linear Potentiometer<br>1" (25mm)       | 1   | HM-2305.10        |
| Potentiometer Bracket                   | 1   | HM-5000BR         |
| Marshall Breaking Head,<br>6" (150mm)   | 1   | H-1362            |
| Marshall Breaking Head,<br>4" (100mm)   | 1   | H-1342<br>H-1342M |



### SCB (LSU Method) ASTM D8044

| Description                             | Qty | Part #        |
|---|-----|---------------|
| Load frame                              | 1   | HM-5125A.3F   |
| Load Cell, Pancake<br>11,000 lbf (50kN) | 1   | HM-2300.100CP |
| Linear Potentiometer<br>1" (25mm)       | 1   | HM-2305.10    |
| Potentiometer Bracket                   | 1   | HM-5000BR     |
| SCB head, 150mm                         | 1   | H-1351        |

### SCB (I-Fit, IL Method) AASHTO TP124

| Description                             | Qty | Part #        |
|---|-----|---------------|
| Load frame                              | 1   | HM-5125A.3F   |
| Load Cell, Pancake<br>11,000 lbf (50kN) | 1   | HM-2300.100CP |
| Linear Potentiometer<br>1" (25mm)       | 1   | HM-2305.10    |
| Potentiometer Bracket                   | 1   | HM-5000BR     |
| SCB head, 150mm                         | 1   | H-1351        |

### TSR AASHTO T283

| Description                             | Qty | Part #            |
|---|-----|-------------------|
| Load frame                              | 1   | HM-5125A.3F       |
| Load Cell, Pancake<br>11,000 lbf (50kN) | 1   | HM-2300.100CP     |
| Lottman head, 6" (150mm)                | 1   | H-1369<br>H-1369M |
| Lottman head, 4" (100mm)                | 1   | H-1349<br>H-1349M |

# Balanced Mix Load Frame

## Stand-Alone Control

The HM-5125A is built around Humboldt's integral, data logger with touch-screen control, which allows the load frame to be used as a stand-alone device capable of full test control and data logging. Operators can see all the data in several formats at the machine during the testing procedure.

The HM-5125A has the capability to perform all these various cracking tests while adhering to each test's distinct specifications. Additionally, the machine's ability to produce detailed and reliable results is crucial for beneficial data.

## Touch-Screen Controller Provides:

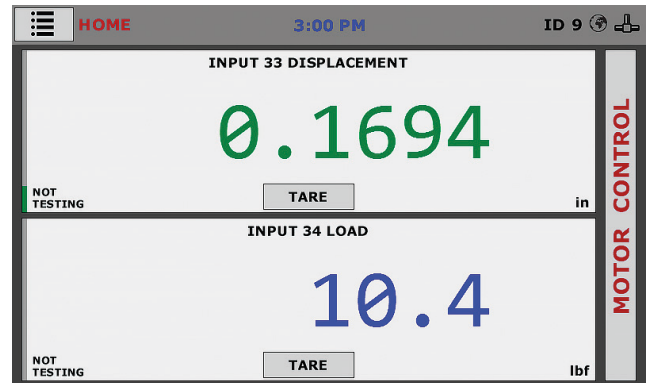
- Multi-channel data acquisition
- Hi-res, 7", waterproof, touch-screen provides total control and real-time graphical display of tests
- Machine/Test control and data acquisition via touch-screen
- Calibration of channels for load cell and transducer
- Real-time graphical chart and numerical display of tests via touch-screen display
- Effective sampling rate of 40 readings per second
- Stores up to 1000 tests with 3000 points per test
- 2 USB ports — One in front for data transfer and one in rear for powering a wireless access point

| HM-5125.3F Specifications |   |
|---------------------------|---|
| Load capacity             | 11000 lbf (50kN)                                |
| Speed Range Testing:      | As Defined by Test<br>2.25 in/min (57.1 mm/min) |
| Data channels             | 2   |
| Platen Size / Travel      | 10" (254mm) / 4" (100mm)                        |
| Data storage              | 1000 tests and up to 3000 readings per test     |
| Clearance, vertical       | 40" (1000mm)                                    |
| Clearance, horiz.         | 15" (380mm)                                     |
| Voltage                   | 110/220V 50/60Hz. 5.0 amps                      |

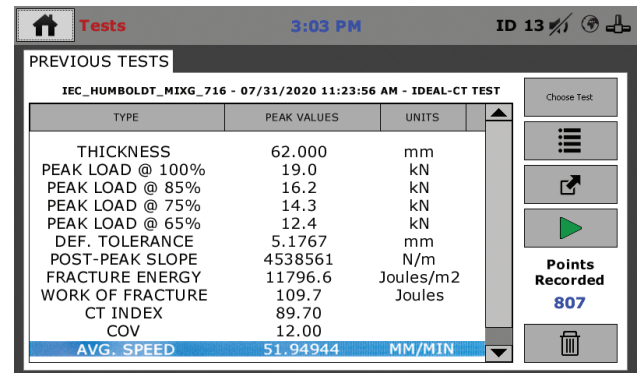


## Next Software

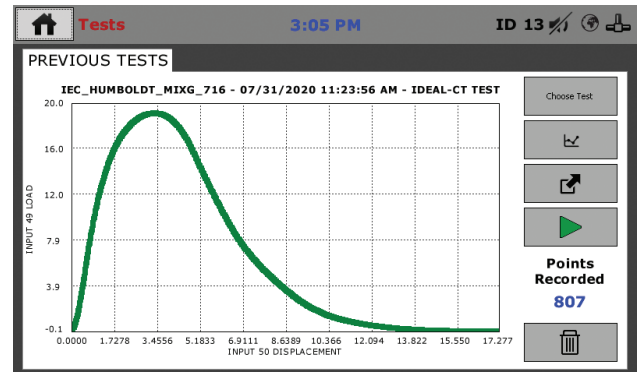
Operators can see all the data in several formats at the machine during the testing procedure. Test data can then be transferred to a computer for use with Humboldt's NEXT Software for report generation. A Marshall-specific software module is also available for use with the NEXT software, which provides Marshall-specific setup and formatting, rather than the generic formatting provided with the included HM-5000SW NEXT software.



Test data displayed in real time during test



Complete test data display for current and previous tests



Test data displayed as curve

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