



HM-59



HM-73

ATS BENDING BEAM RHEOMETERS ASTM D6648; AASHTO T 313

Bending Beam Rheometers measure the flexural creep stiffness of asphalt binder at cold temperatures (ambient to -40°C) to predict low-temperature thermal cracking of asphalt pavements. Special molds are used to form small asphalt beam samples for testing. The three point bend apparatus is easily removed and reinstalled in the base unit for convenient sample preparation and loading. Deflection of the beam specimen is measured and recorded as a constant load is applied. Load, displacement, and bath temperature are displayed in tabular and graphic form in real time. The stiffness value is calculated at the lowest temperature anticipated for the region. A fluid bath controls the temperature of the Ethylene Glycol/Water/Methanol mixture down to -40°C (-40°F). Process temperature is controlled and monitored by two independent platinum RTD temperature transducers to maintain temperature stability. Both BBR models fully comply with ASTM/AASHTO requirements. A source of clean, dry, compressed air at 50 PSIG minimum must be provided by the user.

HM-59 ATS Bending Beam Rheometer is a proven and reliable model constructed of stainless steel and durable, high-strength polymer components. The unit uses an air bearing system to assure reliable loading with accurate and repeatable results. A linear variable displacement transducer (LVDT) with a range of 6.35mm and accuracy to $\pm 2\mu\text{m}$ measures deflection. The temperature-compensating 500g load cell with mechanical overload protection ensures accurate load results. Safe, rapid cooling of the test fluid is provided by the mechanical refrigeration system.

The HM-59 includes a Computer with pre-loaded control, acquisition, and analysis software, five aluminum specimen Molds with mylar strips, a Calibration Kit with required weights, and Confidence Beam. Calibrated test weights and a certified LVDT NIST-traceable standard are provided with each system. The easy-to-use software allows daily verification and periodic calibration of load cell, LVDT, and RTD transducers. **Product Dimensions:** 49x49x41 in (1,245x1,245x1,040mm), LxWxH.

HM-73 ATS Touch Screen Bending Beam Rheometer is a new design incorporating state of the art design features but retaining all of the accuracy, quality, and performance characteristics of the HM-59. Its built-in computer makes test set up and operation easier than ever. The touch-screen controller also has intuitive step through menus for guidance. This model can also be started, stopped and monitored remotely using an App installed on a smartphone, iPad, or tablet.

The HM-73 is ruggedly built with integral stainless steel construction. The unit uses an air bearing system to assure reliable loading with accurate and repeatable results. A linear variable displacement transducer (LVDT) with a range of 6.35mm and accuracy to $\pm 2\mu\text{m}$ measures deflection. The temperature-compensating 500g load cell with mechanical overload protection ensures accurate load results. The fluid bath is chilled by a thermoelectric cooling system. The complete system consists of a fluid bath base unit with removable three-point bend test apparatus, a cooling unit with temperature controller, five aluminum specimen Molds with mylar strips, a Calibration Kit with required weights, and Confidence Beam. Calibrated test weights and a certified LVDT NIST-traceable standard. The easy-to-use control, acquisition, and analysis software is preloaded on the internal computer, and allows daily verification and periodic calibration of load cell, LVDT, and RTD transducers. A USB port is located on the front of the unit for software upgrades and data storage.

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Bending Beam Rheometer, 115V/60Hz	HM-59
230V/50Hz	HM-59F
Touch Screen Bending Beam Rheometer, 115V/60Hz	HM-73
230V/50Hz	HM-73F

Accessories

Aluminum Beam Molds, set of 5.....	HMA-348R
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