System features include:

- Durable, corrosion-resistant construction
- Computerized control, data acquisition, and analysis
- PID temperature controller with digital display
- Two independent platinum RTDs for precise temperature control
- Mechanically-refrigerated cooling bath with environmentally-safe non-CFC coolant
- Integral LVDT and temperature-compensated load cell for accurate test results
- Patented air bearing ensures reliable loading with accurate, repeatable results
- Includes complete calibration kit with carrying case
- Includes ASTM/AASHTO-compliant specimen molds

The Bending Beam Rheometer (BBR) performs flexural tests on asphalt binder and similar specimens per ASTM D6648-01 and AASHTO T313-02. These tests, initially developed by the Strategic Highway Research Program (SHRP), consist of a constant force being applied to a specimen in a chilled fluid bath in order to derive specific rates of deformation at various temperatures. The complete BBR system consists of a fluid bath base unit, a three-point bend test apparatus, which is easily removed from the base unit for specimen loading and unloading, an external cooling unit with temperature controller and a calibration hardware kit with carrying case. The unit features an integral, stainless steel load frame and In-line, blunt-point loading shaft. The large, easy-to-read digital display shows load, displacement, and bath temperature for ease of setup and operation. Real-time displacement, loading, and temperature graphs are displayed during the test cycle and can be re-plotted and re-scaled as needed for easy viewing. Unit includes ASTM/AASHTO-compliant specimen molds and complete calibration kit with carrying case.
**H-1642 Bending Beam Rheometer**

**Load Frame:** Integral stainless steel frictionless construction  
**Loading Shaft:** In-line stainless steel with blunt point  
**Test Load:** Variable test range from 0 to 200g standard  
System maintains required test load within ±0.5g throughout the test cycle  
**Test Cycle Times:** Cycle times for pre-load, recovery, and test  
load are completely operator-adjustable  
**Load Cell:** 500g (temperature-compensated)  
**Mechanical Overload Protection:** Standard  
**Test Weights:** Calibrated and traceable to NIST  
**Sample Supports:** 25mm (0.98 in.) diameter stainless steel  
spaced 4.00 in. (101.6mm) apart  
**LVDT Displacement Transducer:** 0.25 in. (6.35mm) calibrated  
range to provide 2um resolution throughout testing  
and verification range  
**Data Display:** Large on-screen display of load, displacement,  
and bath temperature provides ease of setup  
and operation. Real-time displacement, loading,  
and temperature graphs are displayed during the  
test cycle and can be re-plotted and re-scaled as  
needed for easy viewing.  
**Cooling Unit:** Included (non-CFC refrigerant)  
**Recommended Cooling Bath Fluid:** Non-flammable ethylene  
glycol mixture  
**Operating Temperature:** Ambient to -40°F (-40°C)  
**Temperature Measurement:** Platinum RTD  
**Power Requirements:**  
H-1642: 115VAC 50/60Hz Standard  
H-1642.5F: 230VAC 50Hz Optional  
**Compressed Air Requirements:** 50 psi (0.34 MPa) clean,  
dry air supply required  
**Apprx. Shipping Weight:** 250 lbs. (115kg)  

Specifications subject to change without notice