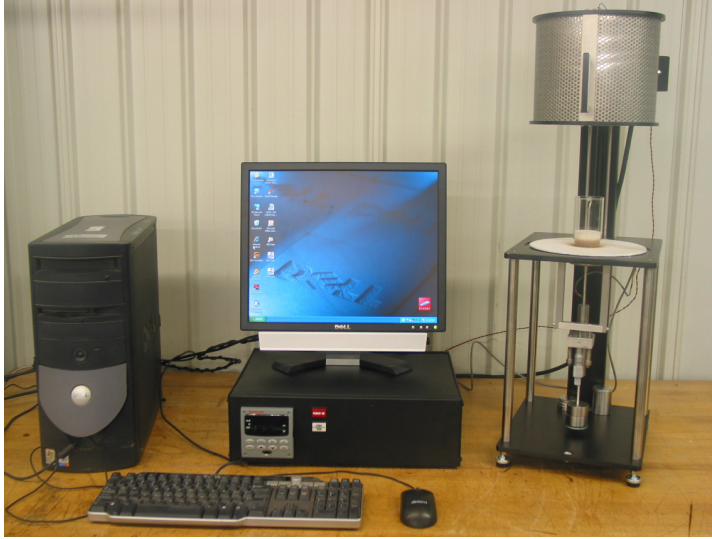




# Glass Testing Instruments **Model BBV Series**

## Annealing & Strain Points (Beam Bending Viscometer)

### Automatic Annealing & Strain Point & Viscosity (Log 14.0 to Log 9.0 Poises)



The annealing and strain points of a glass are widely used production control parameters. Changes in the annealing and strain point temperatures are indications of chemistry changes.

The Model BBV Series has been designed to automatically determine the **Annealing** and **Strain Point** Temperatures of a solid glass sample (precision cut beam, rod, or tube) according to the ASTM C-598 test procedure, or measure the **Viscosities** (between Log 14.0 and log 9.0 poises) of the glass sample according to the ASTM C-1350M test procedure (dynamic and isothermal). Changes in the annealing and strain point temperatures or changes in viscosity for a given temperature

can be used as an indication of changes in batch chemistry from raw material changes or batching errors. The system is well suited for glasses that are not adaptable for flame working, glasses that the operator does not want to expose to flame working, or for applications where thermal expansion or effective length corrections (common to the fiber elongation method) are eliminated.

**EASY OPERATION** requires little training. After the sample beam (rod or bar) is prepared and the test parameters are entered into the software, the operator lifts the furnace, places the beam on the sample support fixture, applies the weight, lowers the furnace, and clicks the START button on the computer monitor. The system does the rest. At the conclusion of the test, the Annealing and Strain Point Temperatures, or other viscosity data are displayed on the computer monitor. *(computer not included)*

Software prompts the operator to select the ASTM C-598 or ASTM C-1350M (dynamic or isothermal) procedures, or modify the testing procedures and parameters for individual testing requirements, such as high volume QC testing.

**ACCURATE, RELIABLE, and REPRODUCIBLE:** The LVDT system automatically monitors the deflection, the computer calculates the rate of deflection, and the computer determines the annealing and strain point temperatures, or the viscosity/ temperature data.

**POWERFUL:** The data acquisition software displays the test and conditions while the test is underway. The data review software shows the test results, and generates a report that automatically calculates the temperature points, or tabulates viscosity / temperature data.

	<u>Model BBV-1000</u>	<u>Model BBV-1200</u>
Max. Temperature	1000 °C	1,200 °C
Thermocouple	Type "S"	Type "S"
Sample Pedestal	Fused Quartz	Alumina
Process Controller	Honeywell	Honeywell
Elongation Tracking System	LVDT	LVDT
Sample size	2.53 to 3.78mm dia. rod (or)	2.21 to 3.31mm bar
Power Requirements	120VAC, 10amp, 50/60 Hz (240VAC optional)	
Computer Requirements	Windows 2000/XP OS, with available PCI slot	
Measuring Unit Dimensions	12" Wide x 14" Deep x 33" Tall (305 x 355 x 840 mm)	
Process Controller Dimensions	18" Wide x 12" Deep x 5" Tall (460 x 305 x 130 mm)	

