

# AUTOMATIC MELTING POINT RANGE APPARATUS

## Automatic Melting Point Range Apparatus

### Test Method

The melting point of a crystalline solid is the temperature at which the solid to liquid phase transition occurs, referenced at one atmosphere (1 ATM) of pressure.

- Conforms to BP Appendix 5 - Method 6 and GLP specifications
- Readily interchanged between automatic and manual detection of melting point ranges
- Intelligent Lamp Intensity Control with Soft Start
- Storage capacity for up to 20 sample tests
- User-interactive software and data entry, including easy alphanumeric entry of sample name, ID number, and date
- User selectable operating modes:
  - **AUTO detection mode:** Start/end of melting point range is automatically detected by a photosensing infrared device. The melting process is recorded and viewed on-screen in real-time by a CCD camera.
  - **MANUAL detection mode:** Start/end of melting point range can be selected manually with a key-press by user. Sample melting point can be determined as per BP method by 'Heat & Cool' temperature function. As above, the melting process is recorded and viewed on-screen in real-time by a CCD camera.

The Automatic Melting Point Apparatus is the latest technology for microprocessor-based determinations of melting point ranges of crystalline, powdered and polymeric materials, and is used to assess sample purity. Requires approximately 5mg of sample spread uniformly on a glass slide, covered with a glass coverslip. The slide is placed on a uniformly heated, round furnace and subjected to a heating profile as required by the user. Precise temperature control gives reproducible results to within 1%. The unit contains an automatic temperature safety cut-off feature if no melting points are detected 15°C above the expected melting point or if the oven reaches 315°C. The melting process is magnified, recorded, and viewed on-screen in real-time by a CCD camera. The change in physical appearance of the sample with respect to temperature is recorded, and the start/end of melting is observed automatically. A representation of the entire process can be printed out in graphical form for validation.

### Dimensions lwxhxh,in.(cm)

Main Unit: 16½x12¼x13 (42x31x33)

Monitor: 8x5½x5½ (20x14x14)

Net Weight: Main Unit: 22 lbs (10 kg)

Monitor: 1.8 lbs (0.8 kg)

### Shipping Information

Weight: 29 lbs (13 kg)

Dimensions: 3.6 Cu. ft.



**K90190 Automatic Melting Point Range Apparatus**

### Specifications

Conforms to the specifications of:

BP Appendix 5-Method 6; GLP

Visual Image: 10x magnified displayed on monitor

Temperature Range: ambient + 5 to 315°C

Heating Rates: 0.2, 0.5, 1.0, 2.0, 3.0, 6.0, 12.0°C/min

Temperature Readability: 0.1°C

Cooling Time: 20 minutes (300°C to ambient)

Temperature Accuracy: ±0.5°C (ambient + 5 to 200°C)

±0.8°C (200 to 315°C)

Sample size: 5 mg (approximately)

Sample Holder: Glass Slide ≤1mm ±0.02mm thick

Sample Cover: Glass Coverslip ±0.17mm thick

Temperature Sensor: Pt-100 (2 wire RTD)

Test Storage: Up to 20 tests with parameters

Electrical Requirements: **CE**

115V, 60Hz, Single Phase

220V, 50Hz, Single Phase

### Ordering Information

Catalog No.		Order Qty
K90100	Automatic Melting Point Range Apparatus, 115V 60Hz	1
K90190	Automatic Melting Point Range Apparatus, 220V 50Hz	

### Accessories

K90100-1	Glass slides (pack of 500)
K90100-2	Cover slips (pack of 1000)
K90100-3	Sampling jig