**Melting Point**

**MANUAL MEL-TEMP®**

**Electrothermal**

**THE LOWEST COST MELTING POINT APPARATUS FOUND ANYWHERE!**

- Low cost unit
- Temperature range to 500°C

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**PRODUCT SPECIFICATIONS**

- Aluminum casting conducts and radiates heat uniformly to capillaries and thermometer.
- Heating chamber consists of aluminum heating block which avoids the hazards and mess associated with oil baths.
- Sample observation is enhanced by an integrated light and precision 6X lens.
- Three thermometer options are available: mercury thermometer, student digital thermometer, or a precision digital thermometer.

**OPERATION**

- Mel-Temp provides precise melting points up to 500°C.
- Simple manual controls adjust the heating rates.
- Accepts up to three samples simultaneously using glass capillaries.
- Simple to operate: bring oven to a stable temperature, insert capillary tubes, adjust heating rates and record melt temperature when sample(s) melt.

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**PRODUCT SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Product Specifications</th>
<th>Temperature Range</th>
<th>Heating Rate Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ambient to 500°C</td>
<td>Continuously adjustable with built-in variable transformer</td>
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<table>
<thead>
<tr>
<th>Specifications</th>
<th>Resolution</th>
<th>Reproducibility</th>
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<tbody>
<tr>
<td>Melting Point Capillaries</td>
<td>1.5-1.75 mm outside diameter</td>
<td>1°C</td>
</tr>
<tr>
<td>Thermometer Well</td>
<td>6.75 mm inside diameter, 70mm deep</td>
<td></td>
</tr>
<tr>
<td>Heat-up time (Full Power)</td>
<td>25°C-400°C in 5 minutes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400°C-500°C in 4 minutes</td>
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<tr>
<td>Cool-down time (unassisted)</td>
<td>500°C-400°C in 2 minutes</td>
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<tr>
<td></td>
<td>400°C-300°C in 2 minutes</td>
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<tr>
<td></td>
<td>300°C-200°C in 5 minutes</td>
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</table>

**Power Requirements**

- 200 watts, 100-120 VAC or 200 watts, 210-250 VAC

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Model #</th>
<th>Volts</th>
<th>W</th>
<th>H</th>
<th>D</th>
<th>Shipping Weight Lb. (kg)</th>
<th>US List Price</th>
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<td>120</td>
<td>4.3 (11)</td>
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<td>$735.00</td>
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</tbody>
</table>
**Melting Point**

**DIGITAL MEL-TEMP® 3.0**

**Electrothermal**

**COMPACT AND LOW COST!**
- Compact size saves bench space
- Audible-visual alarm indicates when oven temperature is stable
- Selectable ramp rates
- High speed fan cools unit quickly

**PRODUCT SPECIFICATIONS**

- Used for recording beginning and ending points of each of three samples.
- Designed for determinations of melting points using glass capillary tubes.
- Space saving design; occupies only 4.5” x 6.5” (11 x 16 cm) of bench space.
- Easy to follow instructions are printed directly on the front of the unit.
- Sample observation is enhanced by an integrated light and precision 6X lens.
- Safety eye piece reduce protects your eyes from contact with the capillary tubes.
- Digital microprocessor with 0.1°C resolution provides fast warm up, accurate temperature control and eliminates the need for a mercury thermometer.
- Dual digital LED's display actual and set temperature simultaneously.
- The temperature display is easily calibrated without tools, using a melting point standard.
- Temperature data can be temporarily stored and recalled on the LED display.
- Heating chamber consists of aluminum heating block which avoids the hazards and mess associated with oil baths.
- Conforms to U.S. Pharmacopeia requirements.

**OPERATION**

- Programmable ramp rates from 0.1 to 10°C/min in 0.1°C increments.
- An audio-visual alarm indicates when oven temperature is stable.
- User may then insert charged capillaries and press the ramp key to begin testing at the predetermined heating rate.
- A distinct “beep” confirms that the temperature has been stored and allows uninterrupted sample observation.
- Stored temperatures may be recalled and recorded.
- High-speed fan quickly cools the unit back to the selected start temperature.

**PRODUCT SPECIFICATIONS**

- Temperature Range: Ambient to 400°C
- Temperature Accuracy: ±0.5°C from 20-200°C, ±1°C from 200-400°C with factory calibration. (User may calibrate to ±0.1°C accuracy at a specific temperature using a melting point standard.)
- Temperature Resolution: 0.1°C
- Ramping Rate: Selectable from 0.1°C/min - 10.0°C/min in 0.1°C/min increments
- Reproducibility: 0.2°C
- Heat-Up Time: 20° to 250°C in 5 minutes
- Cool-Down time (with built-in cooling fan): 400° to 100°C in 3 minutes
- Melting Point Capillaries: 1.5-1.85 mm outside diameter x 100 mm long
- Power Requirements: 100 watts, 100-120 VAC or 100 watts, 210-250 VAC

**ORDERING INFORMATION**

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<tr>
<th>Model #</th>
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</tbody>
</table>

**48 Hour or Sooner Express Shipping Guaranteed!**

*see inside front cover for details
**Melting Point**

**DIGITAL 9000 SERIES**

**Electrothermal**

**Model IA9300**

**BEST SELLING, TOP-OF-THE-LINE!**

- Adjustable 8 x viewing magnifier arm folds away
- Stored temperature data available
- Large LCD display eliminates subjective interpretation
- Optional accessories

**PRODUCT SPECIFICATIONS**

- Adjustable extension arm facilitates comfortable viewing and helps reduce operator fatigue.
- The viewing head can be rotated for easier viewing and folds flat for easy and compact storage.
- Object lens can be adjusted to sharpen the focus on the sample.
- Safety eye piece reduces glare and protects your eyes from contact to the hot zone.
- Sample observation is enhanced by an integral light and an 8 x wide angle viewing magnifier which enables all three samples to be viewed.
- Digital microprocessor with 0.1°C resolution provides fast warm up, accurate temperature control and operates without the need for a mercury thermometer.
- Three audible beeps indicate when oven temperature has stabilized and it is time to place the sample in the oven.
- Simple push-button controls are conveniently located so you can easily record temperatures without looking away from the sample.
- Heating chamber consists of aluminum heating block which avoids the hazards and mess associated with oil baths.
- Models 9100, 9200 & 9300 are designed for determinations of melting points using glass capillary tubes. Model 9400 utilizes glass slides.
- Models 9100, 9200 & 9300 have a temperature range of ambient to 400°C. Model 9400 has a temperature range of 0 - 100°C.
- Optional CCTV camera allows live image to be viewed on large monitor. (Models 9200, 9300 only.)
- RS232 output connector allows interface with the PR2000B printer or computer. (Models 9200, 9300 & 9400 only.)
- Units can be calibrated in the field or can be sent back to the manufacturer for calibration.

**MODEL IA9100**

- Records four discrete temperatures by simply pushing the “go-to” button.
- Unit comes with one fixed temperature ramp rate (1°C/min.).
- Fast Ramp Rate of 10°C/min. feature can be used if the melt temperature is unknown. This fast ramp feature can help to find an approximate measurement of melt temperature.
- Temperature data can be temporarily stored and recalled on the LCD display.

**MODEL IA9200**

- Records up to four discrete temperatures by simply pushing the “go-to” button.
- Five fixed temperature ramp rates (0.2, 0.5, 1.0, 2.0 and 3.0°C/min.).
- Programmable ramp rates from 0.2 to 10.0°C/min. in 0.1°C increments.
- Can store up to 1000 batches of data, which can be later recalled and viewed on the LCD display or can be printed.
- Dates and time can be recorded or printed using the real time clock function.
- Optional accessories: CCTV and printer.
- RS232 output connector allows interface with a printer or computer.
**M O D E L  I A  9 3 0 0**

- Used for recording beginning and ending points (melting point ranges) of each of three samples.
- Features pre-programmed ramp rates of 1°C per minute.
- Programmable ramp rates from 0.2 to 10.0°C/min. in 0.1°C increments.
- Batch memory can store up to 500 sets of data, which can be later recalled on the LCD display or can be printed.
- Each set of data contains the beginning and ending points for each of the three samples.
- Dates and time can be recorded or printed using the real time clock function.
- LED indicator light identifies which of the three capillary tubes is being viewed on recorded.
- Optional accessories: CCTV and printer.
- RS232 output connector allows interface with a printer or computer.
- Conforms to U.S. Pharmacopeia requirements.

**M O D E L  I A  9 4 0 0**

- Used to test waxes, fats, grease oils, etc.
- Samples for test are located on a glass slide and placed in slide chamber.
- Temperature range of 0 to 100°C.
- Capable of holding a slide at temperatures down to 0°C.
- Features preprogrammed ramp rate of 1°C/min.
- Programmable ramp rates available from 0.2°C per minute to 10°C per minute.
- Temperature data can be temporarily stored and recalled later on the LCD display.
- Dates and time can be recorded or printed using real time clock function.
- RS232 output connector allows interface with the PR2000B or computer.
- Optional accessories: Printer.

### ORDERING INFORMATION

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PRODUCT SPECIFICATIONS

CCTV
- A compact camera produces the quality image that will provide better information and more accurate results.
- Teaching aid using one melting point rather than several small systems.
- Connects to a video system for data file storage for QC and QA Departments.
- Small compact CCTV camera with mounting kit.
- Interfaces to a PC to enable the live capture of the screen, which can be incorporated into reports or recorded or played back.
- Displays the image and data including: temperature, time, date. (IA9200 and IA9300 only.)
- Magnifies of the image on a TV monitor to approximately 50 x.
- Shows actual color image of the melt.

Printer
- Interfaces with IA9200, IA9300 and IA9400.
- Allows print out of data with date codes included.
- Plastic case.
- Power saving feature allows unit to shut off after 1-5 minutes as selected by the user.

ORDERING INFORMATION

CCTV

<table>
<thead>
<tr>
<th>Model #</th>
<th>Part #</th>
<th>Magnification on Screen Size</th>
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<tr>
<td>CCTV9100 (PAL)</td>
<td>A29151</td>
<td>Up to 50 X</td>
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<td>CCTV9200 (PAL)</td>
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<td>CCTV9300 (PAL)</td>
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PC Interface requirement: See above.

Printer

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