



## Melting Point Apparatus

### Mel-Temp® and IA9000 Series

Electrothermal's range of melting point apparatus consists of the Mel-Temp® and IA9100, IA9200, IA9300. The Mel-Temp® gives a temperature resolution of  $\pm 1^\circ\text{C}$ , whereas the IA900 series has a temperature resolution of  $\pm 0.1^\circ\text{C}$  and other performance enhancements.

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1101D & 1102D Mel-Temp®

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IA9100, IA9200, IA9300 Melting Point Apparatus

# 1101D and 1102D Mel-Temp®

## Digital Melting Point Apparatus

The updated 1101D Mel-Temp® Digital Melting Point Apparatus offers a quick and easy way to measure the melting points of samples at a budget price. It is ideal for multiple users, being ergonomically designed to ensure comfortable viewing for everyone, with a height-adjustable extension arm and a viewing head that may be rotated to suit each user. As a visual aid, the viewing head holds a viewing magnifier that offers 8x magnification.

As a further convenience, the extension arm is completely collapsible and can be neatly folded away into the unit, so that the unit can be stored flat to save space.

Each Digital Mel-Temp® comes supplied with a complimentary pack of 50 capillary tubes, its own power supply and power cable.

The 1101D Mel-Temp® has power requirements of 115-120V and 50-60Hz. The 1102D Mel-Temp® Digital Melting Point Apparatus has exactly the same functionality, but has power requirements of 230-240V; 50-60Hz.

## Performance

- Membrane keypad with simple menus for intuitive use
- Push button controls are conveniently located to ensure that temperatures can be recorded without looking away from the sample
- Digital microprocessor with  $\pm 1^{\circ}\text{C}$  resolution provides fast warm-up and accurate temperature control
- Samples in 3 capillary tubes may be viewed simultaneously

## Safety and convenience

- 3 Audible beeps indicate that the oven temperature is stable and ready for sample
- Adjustable arm with 8x viewing magnifier can be folded away into the unit
- Adjustable object lens for sharp focus
- Rotating viewing head and safety eye piece to protect against glare and hot zone
- Integral light and wide angle 8x magnifier enhance sample observation, so that all 3 samples can be viewed without eye strain
- Units can be calibrated by the user on their site or by manufacturer/service organisation. If calibrated by the user, a calibration kit is required.

## Key Features

- Temperature resolution  $\pm 1^{\circ}\text{C}$
- Accommodates 3 Melting point capillaries of up to 2mm outside diameter
- Tube Guide removal for cleaning and use of cold finger
- 32-bit Processor
- 4 x 1 Melt memory capacity
- 13-key membrane keypad



1101D

1102D also available



# 1101D and 1102D Mel-Temp®

## Digital Melting Point Apparatus

### Technical Information

|                             |   |
|-----------------------------|---|
| Colour                      | Black   |
| Processor                   | 32-bit Processor  |
| Keypad                      | 13-key membrane keypad  |
| Capillary tubes             | Accommodates 3 capillary tubes up to 2mm OD (Storage for pack 100)        |
| Tube Guide                  | Tube Guide removal for cleaning and use of cold finger                    |
| Lens                        | 40mm diameter lens (magnification 8x) removable and with adjustable focus |
| LED                         | White LED illuminated oven  |
| Melt memory                 | 4 x 1 Melt memory capacity  |
| Temperature range           | Ambient to 400°C  |
| Fixed temperature ramp rate | 1.0°C/minute  |
| Fast temperature ramp rate  | 10°C/minute   |
| Temperature resolution      | ±1°C  |
| Accuracy                    | ±1%   |
| Temperature sensor          | PT100 Platinum Resistance   |
| Display                     | 2 Rows of 12 characters with backlit LCD                                  |
| Power requirements          | 115-120V, 50-60Hz for 1101D<br>230-240V, 50-60 Hz for 1102D               |
| Dimensions (d x w x h), mm  | 355 x 200 x 80  |
| Shipping weight, kg         | 2.5   |

### Ordering Information

#### 1101D and 1102D Mel-Temp®

| Model   | Description                     | Electrical Requirements         |
|---------|---------------------------------|---------------------------------|
| 1102D   | Mel-Temp® Fixed Ramp Rate Model | 230V, 50/60Hz, 45W              |
| 1101D   | Mel-Temp® Fixed Ramp Rate Model | 115V, 50/60Hz, 45W              |
| 1102DX6 | Mel-Temp® Fixed Ramp Rate Model | 230V, 50/60Hz, 45W with EU plug |

*\*Please note that each instrument is supplied with a pack of 50 capillary tubes, power supply and power cable.*

### Accessories - Ordering Information

| Part Code | Description                            |
|-----------|--|
| AZ9001    | Cold Finger                            |
| AZ9002    | Dust Cover                             |
| AZ9218    | P-nitrotoluene                         |
| AZ9118    | Carbazole (245.61deg) 0.5g             |
| AZ9253    | Calibration Key                        |
| AT4042    | Capillary Tubes 1.5mm (10x100 pack)    |
| AT4043    | Capillary Tubes 2.0mm (10x100 pack)    |
| PR2000S   | Printer (with connecting ribbon cable) |
| AT4044    | Paper Roll (2) and ribbon for printer  |
| AZ9220    | 1A PSU Mains lead (UK)                 |
| AZ9220X1  | 1A PSU Mains Lead (115V – USA)         |
| AZ9220X6  | 1A PSU mains Lead (European)           |

# IA9100, IA9200, IA9300

## Digital Melting Point Apparatus

### Features of all 3 models of the IA9000 series:

The updated IA9000 series Digital Melting Point Apparatus offers a quick way to measure the melting points of samples, without sacrificing accuracy; the temperature resolution is within 0.1°C. It is ideal for multiple users, being ergonomically designed to ensure comfortable viewing for everyone, with a height-adjustable extension arm and a viewing head that may be rotated to suit each user. As a visual aid, the viewing head holds a viewing magnifier that offers 8x magnification.

As a further convenience, the extension arm is completely collapsible and can be neatly folded away into the unit, so that the unit can be stored flat to save space.

Each IA9000 series model comes supplied with a complimentary pack of 50 capillary tubes, its own power supply and power cable. The IA9000 series operates at both 115V and 230V.

### Performance

- Membrane keypad with simple menus for intuitive use
- Push button controls are conveniently located to ensure that temperatures can be recorded without looking away from the sample
- Digital microprocessor with  $\pm 0.1^\circ\text{C}$  resolution provides fast warm-up and accurate temperature control
- Samples in 3 capillary tubes may be viewed simultaneously

### Safety and convenience

- 3 Audible beeps indicate that the oven temperature is stable and ready for sample
- Adjustable arm with 8x viewing magnifier can be folded away into the unit
- Adjustable object lens for sharp focus
- Daylight-balanced LEDs for improved sample illumination
- Rotating viewing head and safety eye piece to protect against glare and hot zone
- Integral light and wide angle 8X magnifier enhance sample observation, so that all 3 samples can be viewed without eye strain
- Units can be calibrated in the field or at the factory; if in the field a calibration kit is required
- Improved calibration procedure using a calibration key

## Additional features

### Additional features of the IA9200 and IA9300 series Digital Melting Point apparatus

- Temperature resolution  $\pm 0.1^\circ\text{C}$
- Selectable ramp rates between 0.2°C/min and 10°C/min; the IA9200 has a default setting of 0.2°C/min and the IA9300 has a default setting of 1°C/min
- Date and time facility
- PC output facility
- Interface with optional PR2000S Printer
- Printer output facility via RS232-C serial port
- USB output to flash drive
- 3 x 2 Melt memory capacity (IA9300 only)
- Batch memory of 500 Melts (IA9300) and 1000 Melts (IA9200)



IA9100

IA9200, IA9300 also available

## Technical Information

| Model  | IA9100         | IA9200   | IA9300   |
|--|----------------|--|--|
| 32-bit Processor   | •              | •  | •  |
| Accommodates 3 Capillary Tubes up to 2mm OD<br>(Storage for pack 100)                      | •              | •  | •  |
| Tube Guide removal for cleaning<br>and use of cold finger.                                 | •              | •  | •  |
| 40mm diameter Lens (magnification x 8)<br>removable and with adjustable focus              | •              | •  | •  |
| Oven temperature range (ambient to 400°C)  | •              | •  | •  |
| Temperature resolution $\pm 0.1^{\circ}\text{C}$   | •              | •  | •  |
| Accuracy $\pm 1\%$   | •              | •  | •  |
| 13-key membrane keypad   | •              | •  | •  |
| Cooling temp selection   | •              | •  | •  |
| Fast ramp rate of $10^{\circ}\text{C}/\text{minute}$ .                                     | •              | •  | •  |
| Selectable ramp rate of $1.0^{\circ}\text{C}/\text{min}$ & $10^{\circ}\text{C}/\text{min}$ | •              |  | •  |
| Selectable ramp rates of $0.2 - 10^{\circ}\text{C}/\text{min}$                             |                | •<br>(default $0.2^{\circ}\text{C}/\text{min}$ ) | •<br>(default $1.0^{\circ}\text{C}/\text{min}$ ) |
| White LED illuminated oven   | •              | •  | •  |
| Nicad battery for memory, clock back-up  |                | •  | •  |
| Date & Time facility   |                | •  | •  |
| PC Output facility   |                | •  | •  |
| Printer Output facility  |                | •  | •  |
| USB Output to flash drive  |                | •  | •  |
| Display (2 rows of characters with backlit LCD)  | •              | •  | •  |
| 4 x 1 Melt memory capacity   | •              | •  |  |
| 3 x 2 Melt memory capacity   |                |  | •  |
| Batch memory capacity of 500 melts   |                |  | •  |
| Batch memory capacity of 1000 melts  |                | •  |  |
| Serial (RS232-C) Port for Printer  |                | •  | •  |
| Dimensions (d x w x h), mm   | 355 x 200 x 80 | 355 x 200 x 80                                   | 355 x 200 x 80                                   |
| Shipping Weight, kg  | 2.5            | 2.5  | 2.5  |

# IA9100, IA9200, IA9300

## Digital Melting Point Apparatus

### Ordering Information

| Model    | Description   | Electrical Requirements     |
|----------|---|-----------------------------|
| IA9100   | Fixed Ramp Rate Model   | 230V, 50/60Hz, 45W          |
| IA9100X1 | Fixed Ramp Rate Model   | 115V, 50/60Hz, 45W          |
| IA9100X6 | Fixed Ramp Rate Model   | 230V, 50/60Hz, 45W, EU Plug |
| IA9200   | Programmable Ramp Rate Model                                      | 230V, 50/60Hz, 45W          |
| IA9200X1 | Programmable Ramp Rate Model                                      | 115V, 50/60Hz, 45W          |
| IA9200X6 | Programmable Ramp Rate Model                                      | 230V, 50/60Hz, 45W, EU Plug |
| IA9300   | Beginning/Ending Recording Model<br>for Pharmacopeia Requirements | 230V, 50/60Hz, 45W          |
| IA9300X1 | Beginning/Ending Recording Model<br>for Pharmacopeia Requirements | 115V, 50/60Hz, 45W          |
| IA9300X6 | Beginning/Ending Recording Model<br>for Pharmacopeia Requirements | 230V, 50/60Hz, 45W, EU Plug |

*\*Please note that each instrument is supplied with a pack of 50 capillary tubes, power supply and power cable.*

## Accessories

### Digital Melting Point Apparatus

### Ordering Information

| Part Code | Description                            |
|-----------|--|
| AZ9001    | Cold Finger                            |
| AZ9002    | Dust Cover                             |
| AZ9218    | P-nitrotoluene                         |
| AZ9118    | Carbazole (245.61deg) 0.5g             |
| AZ9253    | Calibration Key                        |
| AT4042    | Capillary Tubes 1.5mm (10x100 pack)    |
| AT4043    | Capillary Tubes 2.0mm (10x100 pack)    |
| PR2000S   | Printer (with connecting ribbon cable) |
| AT4044    | Paper Roll (2) and ribbon for printer  |
| AZ9220    | 1A PSU Mains lead (UK)                 |
| AZ9220X1  | 1A PSU Mains Lead (115V – USA)         |
| AZ9220X6  | 1A PSU mains Lead (European)           |



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

**Keison Products,**

**P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.**

**Tel: +44 (0)330 088 0560**

**Fax: +44 (0)1245 808399**

**Email: [sales@keison.co.uk](mailto:sales@keison.co.uk)**

Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.