



# Boekel Paraffin Wax Dispenser

Model Numbers

145600

145600-2

## Operating Instructions

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# 1. Safety

**The following symbols marked on the equipment mean:**



Caution: Read these operating instructions fully before use and pay particular attention to sections containing this symbol.



Caution: Surfaces can become hot during use.

**Always observe the following safety precautions:**



- Use only as specified by the operating instructions or the intrinsic protection may be impaired. After transport or storage in humid conditions, dry out the unit before connecting it to the voltage source. During drying out, the intrinsic protection may be impaired.
- Connect only to a voltage source with a voltage corresponding to that on the serial number label.
- Connect only to a voltage source that provides a safety ground terminal.
- Before moving, disconnect the power cord from the unit.
- Do not touch surfaces that become hot during high temperature operation.
- Ensure that the power switch is easily accessible during use.
- It is the user's responsibility to carry out appropriate decontamination if hazardous material is spilled on or inside the equipment.
- This product must be used with an UL Listed / CSA Certified power cord set.
- The responsible body shall be made aware that, if the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Unit is designed to melt Paraffin Wax only; no other matter should be placed into the wax reservoir.

## 2. Product Information

The Boekel Paraffin Wax Dispenser is designed to help meet the needs of today's histology labs by having 5 liters of molten paraffin wax available when required by user. The unit has a set temperature range of 40.0°C to 75.0°C. The unit has a heated dispenser valve to insure a consistent flow and precise control of flowing wax. The unit also features a rapid warm up and an advanced safety over-temperature cut-off.

## 3. Assembly

### 3.1 Unpacking

Remove packing materials carefully, and retain for future shipment or storage of the unit. Inspect for damage. Report all shipping damage to the carrier immediately. Shipping damage is covered by the carrier and repair/replacement for shipping damages must be coordinated through the carrier. Complete and return the Warranty Registration Card. Contents include:

- Wax Dispenser
- Lid
- Operating Instructions
- Power Cord
- Warranty Card

### 3.2 Installation

Place the Wax Dispenser on a flat and stable surface, preferably away from drafts. Plug the power cord into a voltage source that matches the voltage listed on the serial number label on the rear of the unit. Insure that the surface on which the unit is placed will withstand the radiated heat produced by typical laboratory equipment.

## 4. Operation

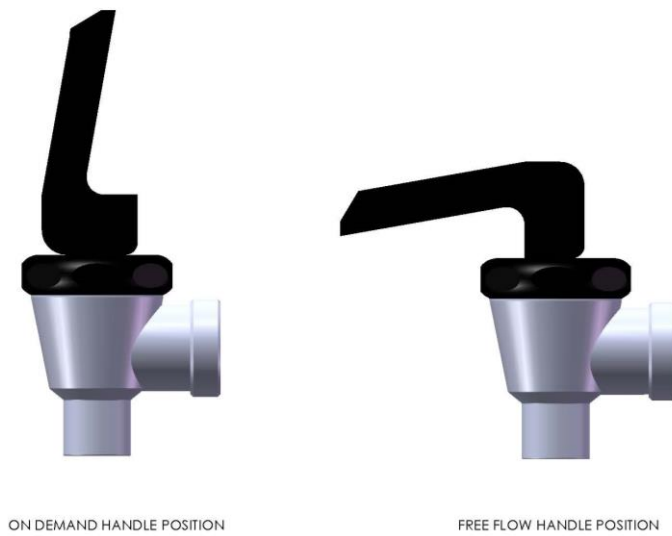
### 4.1 Controls and Indicator Lamp (see Figure 1)

1. Power Switch - Controls power to the unit.
2. Heater Control Dial – Used to set desired temperature.
3. Power on Lamp – When illuminated indicates unit is powered up.
4. Heater Indicator – When illuminated indicates heater is on.
5. Dispenser Valve –Used to dispense wax. The valve can be used to dispense wax on demand, or rotate the handle 180° to lock the handle into a constant flow position (See Figure 2).

FIGURE 1



FIGURE 2



Caution: Assure the reservoir is filled with a minimum of 2.5 cm of wax and a maximum of 2.5 cm below the top of the reservoir and the dispenser valve is positioned for "On Demand" dispensing before applying power. Use caution when filling the reservoir with wax to avoid overfilling the unit.

#### 4.2 Setting the Temperature

1. When setting the temperature to melt the Paraffin Wax, refer to Paraffin Wax manufacturers recommended melting temperature prior to adjusting the heater control knob. Generally, it will take approximately 2 hours to fully melt a reservoir full of Paraffin pellets.
2. Adjust the heater control dial to desired temperature.
3. The Heater Indicator Lamp will illuminate to indicate that the unit is heating up. When the set temperature is reached the heater indicator lamp will cycle on and off to maintain the set temperature.

### 5. Fault Diagnosis

Symptom	Possible Cause	Action Required
1. Power indicator will not illuminate	<ol style="list-style-type: none"> <li>a. Unit is not turned on</li> <li>b. Unit not plugged into power supply</li> <li>c. Fuses blown</li> <li>d. Power supply failure</li> </ol>	<ol style="list-style-type: none"> <li>a. Turn power switch to the on position.</li> <li>b. Plug in, turn power switch to the on position.</li> <li>c. Replace fuses per Figure 7.2</li> <li>d. Check that other electrical appliances on the same circuit are working</li> </ol>
2. Wax does not melt	<ol style="list-style-type: none"> <li>a. Temperature control knob not set high enough</li> <li>b. Temperature control circuit fault</li> </ol>	<ol style="list-style-type: none"> <li>a. Check set temperature</li> <li>b. Have unit checked by competent person</li> </ol>
3. Temperature continues to rise when not expected	<ol style="list-style-type: none"> <li>a. Temperature control knob set to high</li> <li>b. Temperature control circuit fault</li> </ol>	<ol style="list-style-type: none"> <li>a. Check set temperature</li> <li>b. Have unit checked by competent person</li> </ol>
4. Heater Indicator Lamp does not illuminate	<ol style="list-style-type: none"> <li>a. Temperature control knob set to low</li> <li>b. Safety over-temperature cut out activated</li> </ol>	<ol style="list-style-type: none"> <li>a. Check set temperature</li> <li>b. Have unit checked by competent person</li> </ol>
5. Wax will not flow when dispenser valve is engaged	<ol style="list-style-type: none"> <li>a. Wax is not melted</li> <li>b. Filter screen on bottom of the wax reservoir is clogged</li> </ol>	<ol style="list-style-type: none"> <li>a. See #2 above</li> <li>b. Clear clog</li> </ol>

## 6. Technical Specifications

Operating Temperature Range		20°C to 30°C		
Settable Temperature Range		40.0°C to 75°C		
Temperature Accuracy		±2.0°C		
Reservoir Capacity		5.0 Liters		
Altitude		Up to 2000m		
Humidity		80% non-condensing		
Voltage fluctuations		±10%		
Overvoltage		Category II		
Pollution		Degree 2		
Electrical	Model # 145600	115VAC	50/60hz	250W
	Model # 145600-2	230VAC	50/60hz	250W
Approvals	Model # 145600 Model # 145600-2	Certified to UL 61010-1 and CSA C22.2 CE Certified		

## 7. Maintenance and Service

The reservoir screen in the bottom of the reservoir should be checked and cleaned periodically.

### 7.1 Cleaning

Disengage power cord prior to cleaning. Paraffin build-up should be avoided around the top area of the Wax Dispenser. The outer casing may be cleaned with water and a damp cloth. Do not submerge or immerse the Wax Dispenser in water. Before using any cleaning or decontamination method, users should verify that the proposed method would not damage the equipment.

### 7.2 Replacement of Fuses

There are two supply fuses located in the fuse drawer. To replace the fuses:

- Disconnect the unit from the power supply.
- Remove the plug from the socket in the back of the unit.
- Pull back on the fuse drawer (see figure 2)
- Pull out the fuse drawer
- Check and replace with the correct fuses if necessary. The fuses must be 5 mm x 20 mm fast acting, rated 4A and 250V.
- Push the fuse drawer back in. Reconnect unit to the power supply.

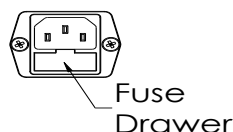


Figure 2

## **8. Warranty**

When used in laboratory conditions and according to these operating instructions, Boekel warrants this product to be free of defective material and workmanship for a period of two years from the date of manufacture. The liability of Boekel for any defective equipment during the warranty period shall be limited to the repair of such equipment or replacement thereof without charge for parts or labor.

## **9. Service**

It is required to obtain a Returned Material Authorization (RMA) number before any Boekel products are returned for any reason. A Decontamination Certificate must be completed, signed by the user, and returned to Boekel Scientific prior to receiving the RMA number. Please be sure to mark the outside of the returned goods package with this RMA number to ensure prompt handling.

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