# HOTPLATE/STIRRER OPERATING INSTRUCTIONS

#### Introduction

Your VWRbrand hotplate, stirrer and hotplate stirrer are general purpose heating and/or stirring devices intended for general laboratory procedures.

Please Note: If you observed any damage to the carton or any shipping damage to the unit, contact the carrier immediately to file a claim.

#### **Safety Information**

After unpacking, place your VWR unit on a suitable bench or table, away from flammable or combustible materials. Connect the unit to a suitable electrical power source. 220 volt units do not come with a connector plug. One must be installed or the unit can be hard wired to a circuit. Both must be done by a certified electrician.

Place a vessel containing the solution to be heated and/or stirred directly in the center of the top plate. A vessel with a flat bottom is recommended for use on the top plate for ideal heat transfer and maximum torque. While heating a solution, other materials - especially those with insulating properties (e.g., asbestos pads, sand baths, etc.) - should not be placed on the top plate. These materials will cause overheating and damage to the top plate.

## **Specifications**

For models 351, 361, and 371 maximum temperature is 400° C (on heater units only) and the speed range is 60-2500 rpm (on stirrer units only).

For models 355, 365 and 375 the maximum temperature is  $520^{\circ}$  C (on heater units only) and the speed range is 60 - 2500 rpm (on stirrer units only).

For models 305, 315 and 325 the maximum temperature is  $570^{\circ}$  C (on heater units only) and the speed range is 60 - 2500 rpm (on stirrer units only).

Gross weight of items placed on the  $7" \times 7"$  should not exceed 25 lbs and 10 lbs on the  $4" \times 4"$  models.

# **Maintenance and Servicing**

To avoid electrical shock always disconnect from power source before maintenance and servicing. No special maintenance is required other than keeping the surface of the top plate clean. Clean spills as soon as the top plate cools down.

Service should be attempted only by VWR service personnel. If the unit requires repair, contact your VWR International sales office at 1-800-932-5000.

#### **Operating Hotplate**

Turn the "Heat" control knob in a counter-clockwise direction. The graduations surrounding the control knob do not indicate specific temperatures but represent the percentage of time the heating element is "on".

To determine the temperature at a particular setting, place a thermometer in the solution and allow the solution to reach thermal equilibrium. Adjust the temperature by turning the control knob counter-clockwise to increase or clockwise to decrease. The pilot light indicates when the heating element is being energized.

The "10" position represents the element being "on" 100% of the time. This is used for fast warm-up or to achieve maximum temperature. Do not operate the unit without a fluid filled vessel on the top plate. To turn the unit off, rotate the knob in either direction until the "off" position is reached.

Caution: The top plate can get very hot. Please use all necessary precautions when handling the unit.

## **Operating Stirrer**

Select an appropriate stirring bar and place it in the vessel. Slowly turn the "Stir" knob clockwise until the desired action is obtained. Once the fluid in the vessel is thoroughly in motion, the stirring speed will remain constant. The electronic speed control of our VWRbrand units deliver high torque at all speeds.

## Speed Adjustment/Tuning

There is a speed adjustment potentiometer on your stirrer which allows you to fine tune the range of the speed dial on the unit. The blue colored potentiometer is accessible through the slot on the bottom plate closest to the front of the unit.

This adjustment potentiometer will allow you to correct conditions where your unit runs either too fast or too slow at low speed settings on the dial. To adjust the speed range up, turn the potentiometer counterclockwise. To adjust the speed range down, turn the potentiometer clockwise.

This unit was calibrated to run at 60rpm at the lowest speed setting at 120V. A difference of voltage at your location could cause the unit to operate at different speeds. The adjustment procedure described above will correct for this condition.

#### **CERAMIC TOP UNITS**

	33918-30 33918-368 33918-368 33918-368	Top plate size 7'' x 7'' x 7'' x 7'' x 7''	Description 351 Hotplate 220V 361 Stirrer 220V 371 HPS 220V	33918-360 33918-360 33918-360	Top plate size 7'' x 7'' 7'' x 7'' 7'' x 7'' 7'' x 7''	Description 351 Hotplate 361 Stirrer 371 HPS
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	33918-244 33918-248	τ., x τ., τ., x τ., τ., x τ.,	305 Hotplate 220V 315 Stirrer 220V 325 HPS 220V	33918-242 33918-245	†,, x †,, †,, x †,, †,, x †,,	305 Hotplate 315 Stirrer 325 HPS
	33918-260 33918-260 33918-260 AMK Cat. #	Top plate size 7'' x 7'' 7'' x 7''	Description 355 Hotplate 220V 365 Stirrer 220V 375 HPS 220V	33618-767 33618-728 33618-724 AMK C <sup>91</sup> *	Top plate size	Description 355 Hotplate 365 Stirrer 375 HPS

**TROEMNER** 

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