



Instruction Manual
Model 1000 Large Capacity Stirrers
Model 2000 Large Capacity Stirrers



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PACKAGE CONTENTS

Model 1000 or Model 2000 Large Capacity Stirrer
92" (234cm) detachable power cord
Spin bar
Instruction manual

WARRANTY

Manufacturer warrants this product to be free from defects in material and workmanship when used under normal conditions for five (5) years. Register your equipment or instrument online at: www.vwrsp.com/warranty for US residents and www.vwrcanlab.com/warranty for Canadian residents. For your reference, make a note of the serial number, date of purchase and supplier here.

Serial No.: _____ Date of Purchase: _____

Supplier: _____

INSTALLATION

Upon receiving the VWR Large Capacity Stirrer, check to ensure that no damage has occurred in shipment. It is important that any damage that occurred in transport is detected at the time of unpacking. If you do find such damage the carrier must be notified immediately.

After unpacking, it requires two (2) people to lift the Large Capacity Stirrer, from the bottom of the unit, to place on a level bench, table or floor, away from explosive vapors. Ensure that the surface on which the unit is placed will withstand typical heat produced by the unit. Always place the unit on a sturdy work surface.

The Large Capacity Stirrer is supplied with a power cord that is inserted into the IEC connector on the left side of the unit first, then it can be plugged into a properly grounded outlet. The 120V unit plugs into a 120 volt, 50/60 Hz source. The 230V unit plugs into a 230 volt, 50/60 Hz source.

MAINTENANCE & SERVICING

The Large Capacity Stirrer is built for long, trouble-free, dependable service. No lubrication or other technical user maintenance is required. It needs no user maintenance beyond keeping the surfaces clean. The unit should be given the care normally required for any electrical appliance. Avoid wetting or unnecessary exposure to fumes. Spills should be removed promptly. Do not use a cleaning agent or solvent on the front panel or top plate which is abrasive or harmful to plastics, nor one which is flammable. Always ensure the power is disconnected from the unit prior to any cleaning. If the unit ever requires service, contact your VWR representative.

ENVIRONMENTAL CONDITIONS

Operating Conditions: Indoor use only.

Temperature: 5 to 40°C (41 to 104°F)

Humidity: 20% to 80% relative humidity, non-condensing

Altitude: 0 to 6,562 ft (2000 M) above sea level

Non-Operating Storage:

Temperature: -20 to 65°C (-4 to 149°F)

Humidity: 20% to 80% relative humidity, non-condensing

Installation Category II and Pollution Degree 2 in accordance with IEC 664.

SAFETY INSTRUCTIONS

Please read the entire instruction manual before operating the Large Capacity Stirrer.



WARNING! DO NOT use the Large Capacity Stirrer in a hazardous atmosphere or with hazardous materials for which the unit was not designed. Also, the user should be aware that the protection provided by the equipment may be impaired if used with accessories not provided or recommended by the manufacturer, or used in a manner not specified by the manufacturer.

Always operate unit on a level surface for best performance and maximum safety.

DO NOT lift unit by the top plate.

Heavy walled glass or polypropylene container recommended when stirring at high speeds. If spin bar de-couples at higher speeds, thin walled glass containers may break.



CAUTION! To avoid electrical shock, completely cut off power to the unit by disconnecting the power cord from the unit or unplug from the wall outlet. Disconnect unit from the power supply prior to maintenance and servicing.

Spills should be removed promptly. **DO NOT** immerse the unit for cleaning.

DO NOT operate the unit if it shows signs of electrical or mechanical damage.



Earth Ground - Protective Conductor Terminal



Alternating Current

STANDARDS & REGULATIONS

Troemner, LLC hereby declares under its sole responsibility that the construction of this product conforms in accordance with the following standards:

Safety standards:

IEC 61010-1

Safety requirements for electrical equipment for measurement, control and laboratory use. Part: General Requirements.

IEC 61010-2-051

Part II: Particular requirements for laboratory equipment for mixing and stirring.

UL Std. No. 61010-1

CSA/CAN C22.2 No. 0-M91

CSA/CAN C22.2 No. 61010-1-04

EMC standards:

EN61000-3-2

EN61000-3-3

EN61000-4-2

EN61000-4-3

EN61000-4-4

EN61000-4-5

EN61000-4-6

EN61000-4-11

IEC 61326

Associated EU guidelines:

EMC directive

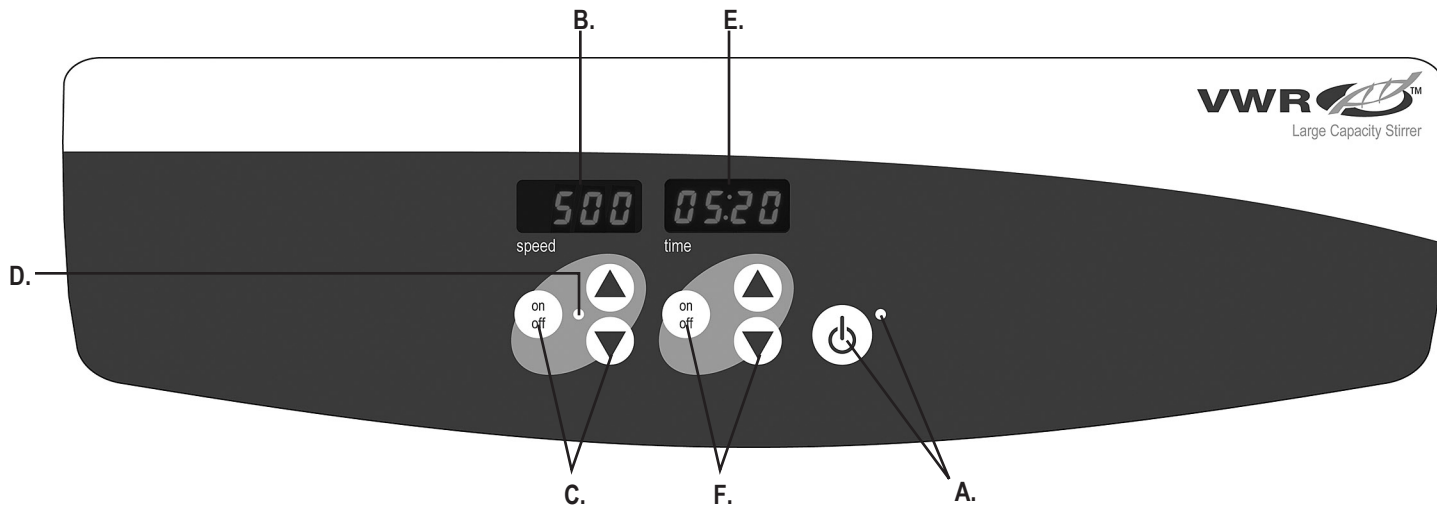
2004/108/EC

LVD directive

2006/95/EC

RoHS directive

2011/65/EU



CONTROL PANEL

The front panel of the Large Capacity Stirrer contains all the controls and displays needed to operate the unit.

A. Standby button/standby indicator light: The standby indicator light will illuminate when the unit is plugged in. The unit will be in standby mode. Press the standby button to activate the speed and time functions. The standby indicator light will shut off and the speed display and time display will illuminate. Press the standby button again and the unit will once again be in standby mode.

B. Speed display: Displays the speed of the stirrer. **C.** Up/down arrows for set-point control. On/off button starts/stops stir function. **D.** The stir indicator light will be illuminated when the unit is stirring.

E. Time display: Displays accumulated time (continuous mode) or how much time is remaining (timed mode). **F.** Up/down arrows for set-point control. On/off button starts/stops the time function. The display range is from 0 to 9,999 minutes in one (1) second increments. The display will indicate minutes and seconds until the timer reaches 99 minutes and 59 seconds (99:59), then the display will automatically display minutes up to 9,999.

SPECIFICATIONS

Overall dimensions (L x W x H):	28.5 x 26.75 x 5.25" (72.4 x 68 x 13.3cm)
Top plate dimensions (L x W):	21.25 x 25" (54 x 63.5cm)
Electrical (50/60 Hz)	
Model 1000:	120 volts: 1 amp, 41 watts 230 volts: 0.5 amps, 41 watts
Model 2000:	120 volts: 1 amp, 82 watts 230 volts: 0.5 amps, 82 watts
Fuses:	5mm x 20mm, 5 amp quick acting
Speed range:	
Model 1000:	100 to 1800rpm (increased in 10rpm increments)
Model 2000:	100 to 1650rpm (increased in 10rpm increments)
Speed stability:	±2%
Weight capacity:	425lbs (193kg)
Volume (H2O):	
Model 1000:	100L
Model 2000:	200L
Timer:	digital, 1 second to 9,999 minutes (increased in 1 second increments)
Controls:	see page 4
Ship weight:	63lbs (28.6kg)

OPERATING INSTRUCTIONS

The Large Capacity Stirrer has been designed for the speed and time functions to work independently of one another. The speed can be re-set without re-setting the timer and the timer can be stopped and started without interrupting the stirring function.

1. Getting ready:

- Plug the power cord into a properly ground outlet. The standby indicator light will illuminate, verifying power to the unit.
- Press the standby button to move the unit from standby mode. The standby indicator light will turn off and the speed/time displays will illuminate and display the previously used settings.



2. Setting speed:

- Press the up/down arrows below the speed display until you reach the desired speed. When you release the arrow button, the unit will blink off and then on indicating the new set speed has been accepted.
- Press the on/off button to start the stirring function. The indicator light below the speed display will illuminate to indicate the stirring function is in-use. While accelerating, the indicator light will blink until set-point is reached and then will remain lit until stirring has ceased. The microprocessor controlled ramping feature slowly increases speed until the set-point is reached which helps to avoid splashing and provides excellent low end control. The microprocessor also regulates the stirring speed, sensing your requirements whether stirring an aqueous, viscous, or semi-solid solution.
- Speed adjustments can be made without interrupting stirring by using the up/down arrows below the speed display. After the change has been made and you release the arrow button, the unit will blink off and then on indicating the new set speed has been accepted.
- To stop the stirring function, press the on/off button below the speed display.

OPERATING INSTRUCTIONS

3. **Setting time to zero (0:00) and continuous mode:** Accumulated time.
 - a. Press and hold the on/off button below of the time display. After three (3) seconds, the display will indicate the previous set time.
 - b. Simultaneously press both the up and the down arrows, the display will indicate zero (0:00). The unit time is now set to zero (0:00) minutes. Alternately, you can use the up/down arrows to get to zero (0:00).
 - c. Press the on/off button below the time display. The display will indicate accumulated time. The up/down arrows will become inactive. To stop timer, press the on/off button again. **IMPORTANT:** This will **NOT** interrupt the shaking function. Press the on/off button below the speed display to interrupt the shaking function.
 - d. To reset, press and hold the on/off button below the time display. After three (3) seconds the display will indicate the previous set time, which was zero (0:00).
4. **Setting timed mode:** Programmed time.
 - a. Press the up/down arrows below the time display until you reach the desired time.
 - b. Start this function by pressing the on/off button below the time display. The unit will run for the selected time, the up/down arrows will become inactive while the timer is running. The unit will stop shaking when time display reaches zero (0:00). Four (4) audible beeps will indicate the time down function is complete. The time display will default back to the set time. To repeat this function for the same set time, simply depress the on/off button again.
 - c. To interrupt an automatic timing cycle before it is completed, press the on/off button below the time display. The display will flash off and on to indicate the time function is on "hold". **IMPORTANT:** This will **NOT** interrupt the shaking function. Press the on/off button below the speed display to interrupt the shaking function. Restart the timer by pressing the on/off button below the time display. Unit will continue counting down to zero (0:00). When the display reaches zero (0:00), you will hear the four (4) audible beeps that indicate the count down function is complete and the shaking function will stop.

5. **Turning unit off:**

- a. To turn the unit off, press the standby button. The speed and time displays will be blank, the standby indicator light will illuminate. The stirrer should be kept in standby mode when not in use. To completely cut off power to the unit, disconnect the power cord from the unit or un-plug from the wall outlet.

OPERATING TIPS

Built-in memory maintains the last used speed and time settings during a power interruption.

The stirrer increases speed at a steady rate until the set-point is reached, if the spin bar is too large or the liquid is too viscous, the stirrer may not reach its set-point or become de-coupled from the units drive magnet. The set-point speed needs to be reduced. The unit is designed to ramp slowly to assure that the spin bar stays coupled.

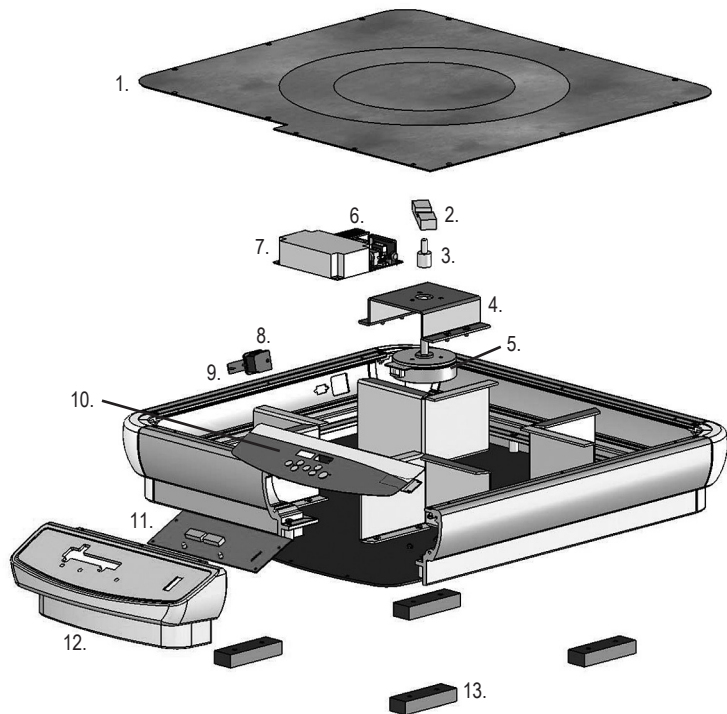
* The model 2000/200L unit contains a larger spin bar with a center pivoting ring. Ring may need to be replaced after eight (8) hours of use. Contact your VWR representative for replacement spin bars or rings.

TROUBLESHOOTING

<u>Error Code</u>	<u>Cause</u>
E01	motor locked/failure

E01 error should **NOT** be addressed by the end user. Switch the unit off and contact your VWR representative for repairs.

REPLACEMENT PARTS



DESCRIPTION	PART NUMBER
1. Top plate	286425-00
2. Magnet	286419-00
3. Extension shaft, Model 2000	286426-00
4. Mounting bracket, Model 1000	286428-00
Mounting bracket, Model 2000	286421-00
5. Motor, Model 1000	280633-00
Motor, Model 2000	386332-00
6. Power supply, Model 1000	380623-00
7. Power supply, Model 2000	386331-00
8. Wire harness, Model 1000	386333-00
Wire harness, Model 2000	386334-00
9. Connector cut-out cover	380170-00
10. Membrane switch (front panel)	386461-00
11. Processor board	386330-00
12. Front bezel	280501-00
13. Rubber foot (4)	580017-00

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