USER GUIDE

AHN myLab® Analogue Magnetic Stirrer With Heating 2200 RPM

AHN

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Analog Magnetic Stirrer with heating 10L



AHN myLab SMH-01



Instruction Manual

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1. INTRODUCTION

This manual provides important safety information for this Hot Plate Magnetic Stirrer. This manual should be kept near the equipment for quick & easy reference. This stirrer is specially designed for stirring operation with variable speed (300-2200 RPM) and temperature (from ambient to 320 °C) setting which allows gentle to vigorous mixing of liquid, maximum capacity of 10 L.

2. INTENDED USE

The hotplate stirrer is suitable to use for mixing and/or heating the liquids with the maximum capacity of 10 L (H_2O). It is designed for use in general laboratories, pharmaceuticals, schools and universities.

NOTE: *Before using the instrument, please read this user manual carefully. This user manual is intended to assist with the operation and care of the unit only and not its repair. For repair please contact the supplier. This manual should be always kept near instrument for guidance.*

3. SYMBOL

	Warning		Waste electrical
	Fuse		Don't touch, Plate can be Hot

4. KEY FEATURES

- Powerful DC motor delivers constant speed under varying load conditions.
- Temperature ranges from ambient to 320°C.
- Variable speed setting from 300 to 2200 RPM.
- Small footprint saving valuable bench space.
- With double knobs for easy operations.

5. ACCESSORIES

- Magnetic Stirring Bar (25mm).
- Power Cord.
- User Manual and Warranty Card.

6. TECHNICAL SPECIFICATIONS

Motor	DC
Number of stirring position	1
Max Stirring Quantity on Equip (H_2O)	10 Litres
Speed range	300 to 2200 RPM
Temp. range	Ambient to 320°C
Set-up plate material	SS top with Ceramic coating

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6. TECHNICAL SPECIFICATIONS

Set-up plate dimensions	140 mm
Dimensions (L x W x H)	248 x 156 x 115 mm
Heat output	650 W
Protection class according to DIN EN	IP 21
Permissible ambient temp.	5 - 40°C
Permissible relative humidity	≤80%
Weight	2 Kg
Altitude	Use upto an altitude of 2000 m above MSL
Pollution Degree	2
Environment	For indoor use only
Power Supply	230 VAC, 60Hz
Motor rating	5-7 W
Total Power Consumption	650 W
Safety Fuse Rating	3 Amp

Maximum recommended bar size	**Maximum Speed**
25mm (10 L)	2200 RPM
35mm (10 L)	2000 RPM
50mm (10 L)	1650 RPM
60mm (10 L)	1500 RPM

7. SAFETY INSTRUCTIONS

Read all safety & usage information provided in this manual carefully before using the device.

1. Place the device on a flat, stable, clean, non-slippery and fire-proof surface.
2. Ensure that only trained staff uses the device. Keep the instructions manual in a place where it can be accessed easily.
3. Beware of the possible effects of magnetic field on pacemakers, data media, etc.
4. Do not touch the hotplate surface, top plate can be hot, this could result in serious burns or injury. Pay attention to the residual heat after switching off.
5. Properly lift the device with both hands while moving or installing. Also, the device should only be moved from its position once it attains the room temperature.
6. Make sure that power supply cord or temperature sensor cable must not come in contact with the heated mounting plate.

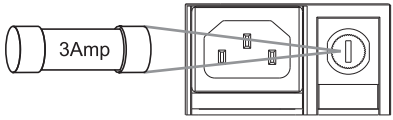
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7. SAFETY INSTRUCTIONS

7. Do not place any steel or magnetic material on the top surface except the recommended magnetic stirring bar with beaker or flask in between. Doing this can affect the magnetism of device.
8. Wear your personal protective equipment in accordance with the hazardous category of the media to be processed. Otherwise, there is a risk from:
   - Splashing and evaporation of liquids.
   - Ejection of parts.
   - The release of toxic or combustible gases.
9. The top surface must be clean and kept intact. Wear protective gloves while cleaning the device. Use a soft mild cloth to clean.
10. Do not use damaged beaker, flask, stirring bar or any other component for operation. It may affect the efficiency of the device.
11. Reduce the speed if:
    - If the medium splashes out of the vessel due to high speed.
    - If the appliance is not running smoothly.
    - If the container moves on the base plate.
12. Do not move the device when it's connected to power supply or during its operation.
13. Ensure that the product is used only for specified operation. It should not be used for shaking hazardous or reactive solutions.
14. Give specific attention to the risks associated with:
    - Flammable materials.
    - Flammable media with low steam pressure.
    - Overfilling of medium.
    - Incorrect vessel size.
    - Unstable vessel.
    - Glass breakage.
15. Note that, there is a possibility of contamination or unwanted chemical reaction.
16. The rating of power supply must match with the specified rating.
17. The top surface will be hot after any heating operation. Do not touch the top surface.
18. Process pathogenic materials only in a closed vessel under a suitable extractor hood. Do not operate the appliance in explosive atmospheres, with the hazardous substance or under water.
19. Only that liquid should be used for mixing which does not react dangerously to the extra energy produced through processing. This also applies to any extra energy produced in other ways. For example: Through light irradiation, through surrounding temperature etc.
20. Abrasion of the dispersion equipment or the rotating accessories can get into the medium you are working on.

7. SAFETY INSTRUCTIONS

21. The chemical reaction of PTFE can occur when in contact with molten or dissolved alkaline earth metals, as well as with fine partied powders of metals of the 2 and 3 group of the periodical system at temperatures above 300-400 °C. Only elementary fluorine, chlorine trifluoride and alkaline metals do attack PTFE, halogen hydrocarbons have a reversible swelling effect. Only glass-coated magnetic rods should be used in combination with solute alkali metals or alkaline earth metals or at the temperature above 250°C.
22. To protect do not cover the device, even partially, with elements such as metallic plates or sheets otherwise it may overheat. Ensure that mounting plate remains clean.
23. The socket must be earthed (protective ground contact).
24. Do not use the device if the top plate surface is damaged.
    e.g. scratches, splinters or corrosion. A damaged set-up surface could break if used.
25. Safety Fuse is provided of 3Amp configuration which can be replace by the operator. The same will protect the machine circuit during an electrical fault or overload.

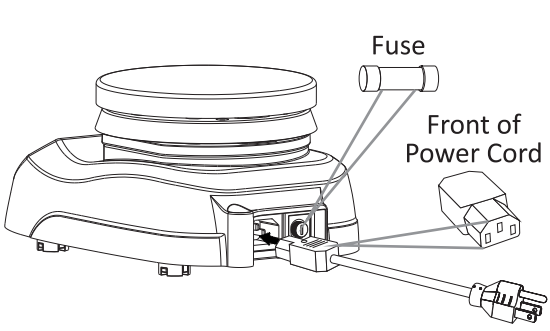


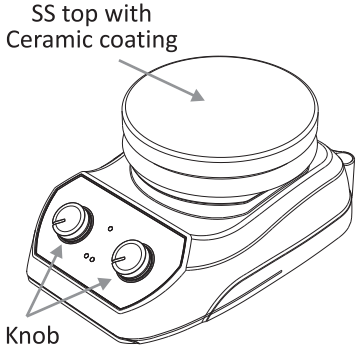
8. INSTALLATION

The hot plate stirrer is provided in a box. Open the box, then remove the packaging. Take care while unpacking & removing all accessories. Please keep all packaging in safe storage for at least two years for warranty purpose.

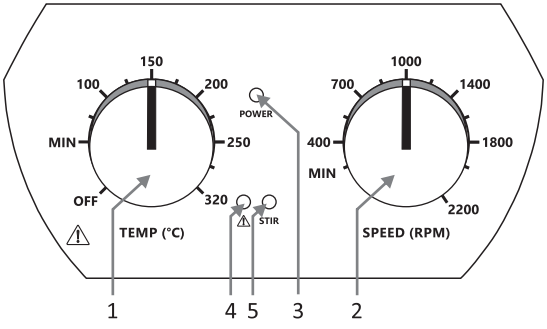
8.1 CONNECTING POWER CORD

Connect one end of the power cord to the rear side of the stirrer and another end to the power supply as shown in the figure below. Turn ON the main switch.





9. USER DISPLAY & OPERATION



Item	Name	Function
1	Temp. knob	Rotate “Temp” knob to start heating. Turn knob from left to right for increment & right to left for decrement.
2	Speed knob	Rotate “Speed” knob to start stirring. Turn knob from left to right for increment (Min - 2200) & right to left for decrement. Stirring LED will be ON.
3	Power LED	Once the unit on power LED will be on.
4	Caution LED	Glows when the stirrer is on.
5	Stir LED	Glows when the stirring process is on.

TEMPERATURE FUNCTION

Rotate Knob to start heating. Rotate knob from left to right for temperature increase & rotate Knob right to left for temperature decrease.

The tables below represent a relationship between the temperature set on the graduated sticker and the actual temperature measured on the top plate:

Set Temperature (°C)	Actual Top Surface Temperature (°C)
Min	45 - 95
100	80 - 130
150	130 - 170
200	180 - 220
250	220 - 260
320	250 - 295

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(The data was collected with no top load in 25 °C temperature ambient conditions)

9. USER DISPLAY & OPERATION

11.3 SPEED FUNCTION

Rotate Knob to start stirring. When knob is turned clockwise, Stir LED will turn on. Rotate Knob from left to right for increase RPM value (300-2200) & rotate Knob right to left for decrease RPM value (2200-300).

NOTE: *Stirrer run 300 RPM on below conditions:*

1. *Switched off Heating .*
2. *Remove load on top plate.*
3. *In case stirrer run with load, go on higher RPM to get the torque then set on minimum RPM.*

10. MAINTENANCE & CLEANING

1. Before cleaning the device, allow the instrument to attain room temperature remove the power cord from the mains.
2. To clean the housing of the device from dyes, building materials or cosmetic materials use isopropyl alcohol as a cleaning agent.
3. To clean the housing of the device from food materials or fuels, use water containing detergent as cleaning agent.
4. Wear proper protective gloves while cleaning the instrument.
5. Be careful that no liquid enters the device during cleaning.
6. Kindly contact suppliers before using any other methods for cleaning.

11. WARRANTY STATEMENT

This product is warranted to be free from defects in material and workmanship for a period of two (2) years from date of purchase. Your product will be duly repaired upon prompt notification in compliance with the following conditions :

The warranty is invalidated by any non-factory modification, which will immediately terminate all liabilities on us for the products or damages caused by its use. The customer shall be responsible for the product or use of products as well as any supervision required for safety. If requested the products must be returned to the distributor in well packed and insured manner and all shipping charges must be paid.

NOTE: *Some states do not allow limitation on the length of implied warrantiesor the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights. This warranty is given expressly in lieu of all other warranties, expressed or implied.*

The purchaser agrees that there is no warranty of merchant-ability or of fitness for any intended purpose and there are no other remedies or warranties, implied, which extend beyond the description on the face of the agreement. This warranty is only applicable to the original purchaser.

Product received without proper authorization will not be processed for warranty or

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11. WARRANTY STATEMENT

service. All items returned for service should be sent with postage prepaid in the original packaging or other suitable packaging, padded to avoid damage. We will not be responsible for damage incurred by improper packaging.

NOTE: *This warranty is valid only if the warranty is registered with the supplier within 30 days from the date of purchase.*

For you reference, make a note of serial number, date of purchase and supplier here.	
Serial No.:	Purchase Date:
Supplier:	

12. PRODUCT DISPOSAL

In case the product is to be disposed of, the relevant legal regulations are to be observed.

Information on the disposal of electrical and electronic devices in the European Community

The disposal of electrical devices is regulated within the European Community by national regulations based on EU Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). According to these regulations, any devices supplied after 13.06.05 in the business to business sphere, to which this product is assigned, may no longer be disposed off in municipal or domestic waste. They are marked with the following symbol to indicate this.

As disposal regulations within the EU may vary from country to country, please contact your supplier if necessary.



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