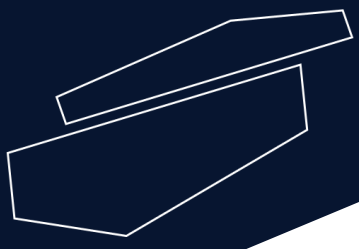
letslab®

DELIVERING LAB SOLUTIONS



H04X10 Multi-position magnetic stirrer with heating -10 positions

Please read the User Manual carefully before use, and follow all operating and safety instructions!



user manual

english

User Manual

EN

S04X10 Multi-position magnetic stirrer without heating - 10 positions

Preface

Users should read this Manual carefully, follow the instructions and procedures, and beware of all the cautions when using this instrument.

Service

When help is needed, you can always contact the Service Department of manufacturer for technical support in the following ways:

www.letslab.com e-mail: info@letslab.com

Please provide the customer care representative with the following information:
- Serial number
- Description of problem
- Your contact information

Warranty

This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 24 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation.
For claim under the warranty please contact your supplier.

1. Safety Instructions

	**Warning!** Read the operating instructions carefully before use. Ensure that only trained staff works with the instrument.
	Risk of burn! • Caution when touching the housing parts and the heating plate. The heating plate can reach temperatures of 120 °C. • Pay attention to the residual heat after switching OFF the instrument.
	**Protective ground contact!** • Make sure that socket must be grounded (protective ground contact) before use.

Table 1

• When working wear personal safety guards to avoid the risk from:
- Splashing and evaporation of liquids
- Release of toxic or combustible gases

• Set up the instrument in a spacious are on a stable, clean, non-slip, dry and fireproof surface. Do not operate the instrument in explosive atmospheres, with hazardous substances or under water.

• Gradually increase the speed, reduce the speed if:
- Stirring bar breaks away due to high speed
- The instrument is not running smoothly, or container moves on the base plate

• Temperature must always to be set to at least 25 ℃ lower than the burning point of the media used.

• Be aware of hazards due to:
- Overfilling of media
- Unsafe container

• Process pathogenic materials only in closed vessels.

• If the case of the stirrer bar is PTFE, please note:
- Elemental fluorine, three fluoride and alkali metals will corrode the PTFE and Halogen alkanes make it expansion at room temperature.
- Molten alkali, alkaline earth metals or their solution, as well as the powder in second and third ethnic of the Periodic Table of Elements will have chemical reaction with PTFE when temperature reaches 300 ~ 400 ℃.

• The instrument can only be disconnected from the main power supply by pulling out the main or the connector plug.

• The voltage stated on the label must correspond to the main power supply.

• Do not cover the device.

• The instrument may only be opened by experts.

• Keep away from high magnetic field.

• Observe the minimum distances between the devices, between the device and the wall and above the assembly (min. 100 mm)

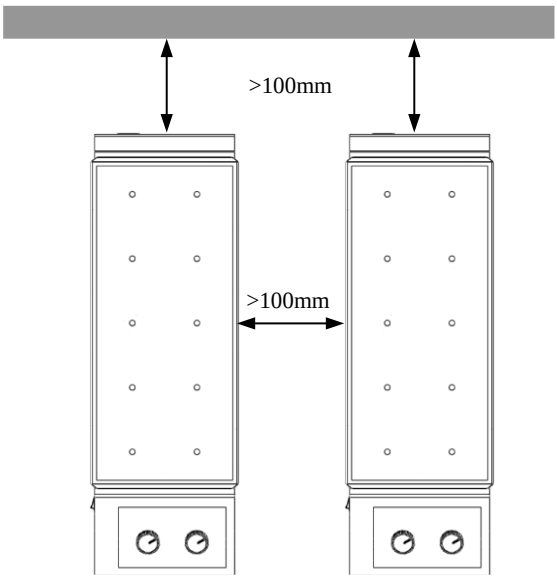


Figure 1

2. Proper Use

The instrument is designed for mixing liquids in schools, laboratories, or factories.
This device is not suitable for using in residential areas or other constraints mentioned in Chapter 1.

3. Inspection

3.1 Receiving Inspection

Unpack the equipment carefully and check for any damages which may have arisen during transport. Please contact manufacturer/supplier for technical support.

	**Note:** If there is any apparent damage to the system, please do not plug it into the power line.

3.2 Listing of Items

The package includes the following items:

Items	**Qty**
Main unit	1
Power cable	1
Stirrer bar	2
User Manual	1

Table 2

4. Control

4.1 Control elements

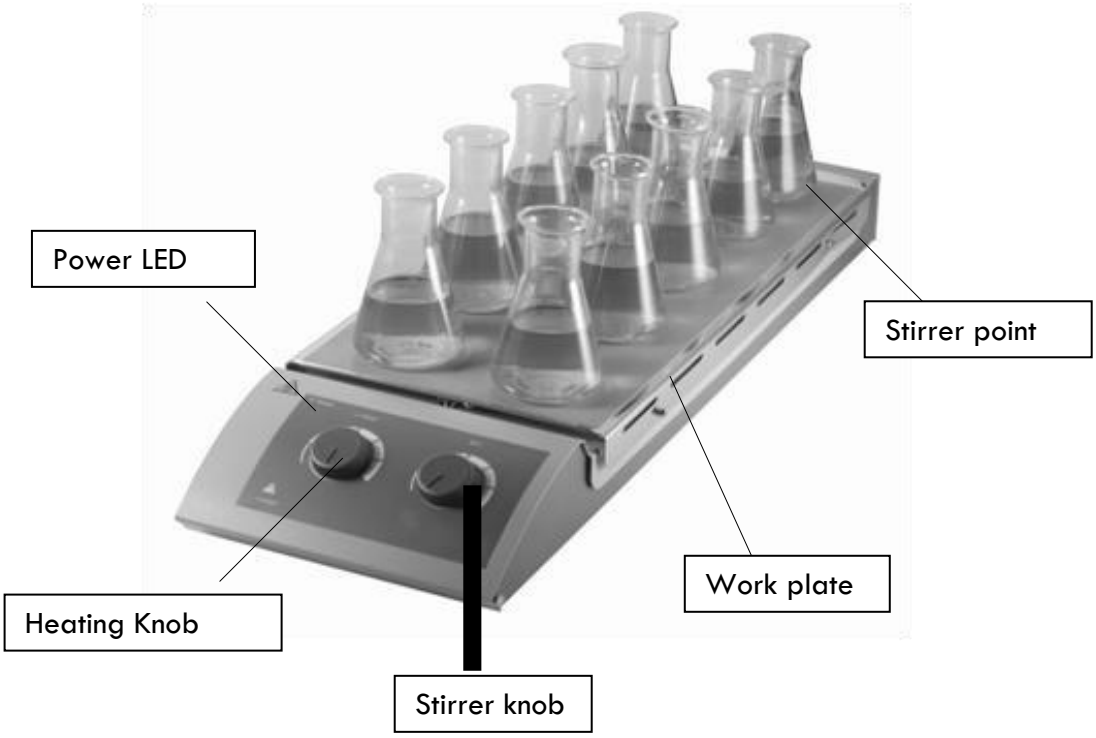


Figure 2

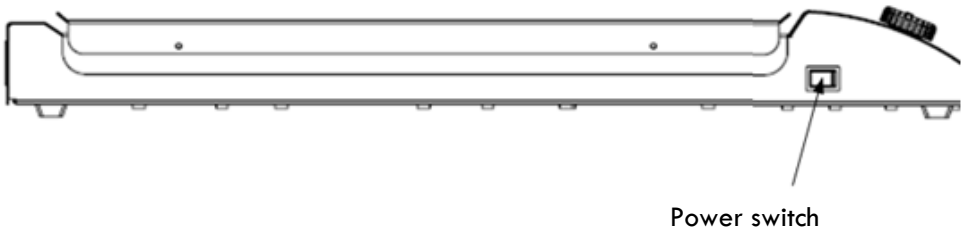


Figure 3

Items	Descriptions
Speed/temperature control knobs	-Set the rated rotary speed in the safe stirring range from 0 to 1100 rpm. -Set the rated temperature from RT to 120 °C. -The function "Stirring", and "Heating" is switched ON or OFF via the knobs. -To increase the value, turn the knob in the direction of clockwise. To stop the function, turn the knob fully anticlockwise.
LED **"Power"**	When the device is switched ON, the LED power is lit.
Power Switch **I/O**	Switch ON or OFF the instrument.

Table 3

5. Trial Run / Operation

- Put the device on the stable and safe place.
- Make sure that the required operating voltage and power supply voltage match.
- Ensure that socket must be earthed.
- Plug in the power cable, ensure the power is on.
- Ensure the speed control knob at the lowest position.
- Add the medium into the vessel with appropriate stirring bars.
- Power ON the instrument by pressing the power switch I/O, the LED power is lit.
- Put the vessel above spots on the plate (see figure 2).
- Set the rated stirring speed and the device begins to work. Turn the speed control knob to set the rated rotary speed in the safe speed limit from 0 to 1100 rpm.
- Set the rated temperature and the device begins to work. Turn the temperature control knob to set the rated temperature in the safe speed limit from room temperature to 120°C.
- Observe the stirring bars.
- Stop the stirring function.
- Switch OFF the instrument by pressing the power switch I/O.

If these operations above are normal, the device is ready to operate. If these operations are not normal, the device may be damaged during transportation, please contact manufacturer/supplier for technical support.



Warning!
Forbid to transfer the vessel when the instrument working.

6. Faults

- If a unit fault happens, please power down the instrument.
  - Switch ON the unit again.
  - The stirring function will continue to operate at the speed set point before the fault took place.
  - The heating function will continue to operate at the speed set point before the fault took place.

- Instruments cannot be power ON.
  - Check whether the power cable is plugged in.
  - Check whether the fuse is broken or loose.

- Stir speed cannot reach set point.
  - Excessive medium viscosity may cause abnormal speed reduction of the motor.

If these faults are not resolved, please contact manufacturer/supplier.

7. Maintenance and Cleaning

- Proper maintenance can keep instruments working properly and lengthen its lifetime.
- Do not spray cleanser into the instrument when cleaning.
- Unplug the power line when cleaning.
- Only use recommended cleansers:

Dyes	Isopropyl alcohol
Construction materials	Water containing tenside / Isopropyl alcohol
Cosmetics	Water containing tenside / Isopropyl alcohol
Foodstuffs	Water containing tenside
Fuels	Water containing tenside

Table 4

- Before using other method for cleaning or decontamination, the user must ascertain with the manufacturer that this method will not harm the instrument.
- Wear the proper protective gloves during cleaning of the instrument.
- Send in the case of service the instrument back in the packaging carton. Storage packing is not sufficient for the back dispatch. Use additionally a suitable transportation packing.



Note:

- Electronic device cannot clean with cleanser.
- If you require maintenance service, must be cleaned the instrument in advance to avoid pollution of hazardous substances, and to send back into original packing.
- If the instrument will not use for a long time, please switch off and place in a dry, clean, room temperature and stable location.

8. Associated Standards and Regulations

Construction in accordance with the following safety standards:
EN 61010-1 UL 3101-1 CAN/CSA C22.2(1010-1) EN 61010-2-10
Construction in accordance with the following EMC standards:
EN 61326-1
Associated EU guidelines:
EMC-guidelines: 2004/108/CE Instrument guidelines: 73/023/EWG

9. Technical data

Items	Parameters
Voltage [VAC]	200-240/100-120
Frequency [Hz]	50/60
Power [W]	20
Stirring point position quantity	10
Max. stirring quantity of single stirring position (H_2O) [l]	0.4
Stirring position interval [mm]	90
Single stirring position speed error [%]	5
Max. stirring quantity (H_2O) [l]	4
Max. magnetic bar [mm]	30
Motor type	External rotor brushless motor
Motor rating input [W]	12
Motor rating output [W]	4
Speed range [rpm]	0 – 1100
Speed display	Scale
Material of Plate	Stainless steel
Dimension of Plate [mm]	180×450
Dimensions (W×D×H) [mm]	182×552×65
Weight [kg]	3.2
Permitted ambient temperature[°C]	5 - 40
Permitted relative humidity	80%
Protection class acc. to DIN 60529	IP42

Table 5

10.Accessories

Please get in touch with our company to order the following accessories available for these devices: magnetic stirring bars.

Nota importante para los aparatos electrónicos vendidos en España

Instrucciones sobre la protección del medio ambiente y la eliminación de aparatos electrónicos:



Los aparatos eléctricos y electrónicos marcados con este símbolo no pueden ser eliminados en forma de residuos urbanos.

De conformidad con la Directiva 2012/19/UE, los usuarios de la Unión Europea de aparatos eléctricos y electrónicos, tienen la posibilidad de devolver sus RAEE para su eliminación al distribuidor o fabricante del equipo después de la compra de uno nuevo. La eliminación ilegal de aparatos eléctricos y electrónicos es castigada con multa administrativa.

Remarque importante pour les appareils électroniques vendus en France

Informations sur la protection du milieu environnemental et élimination des déchets électroniques :



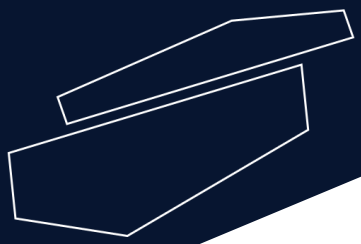
Les appareils électriques et électroniques portant ce symbole ne peuvent pas être jetés dans les décharges.
En réponse à la règlementation, Labbox remplit ses obligations relatives à la fin de vie des équipements électriques de laboratoire qu'il met sur le marché en finançant la filière de recyclage de ecosystem dédiée aux DEEE Pro qui les reprend gratuitement (plus d'informations sur www.ecosystem.eco).
L'élimination illégale d'appareils électriques et électroniques est punie d'amende administrative.

Nota importante per le apparecchiature elettroniche vendute in Italia

Istruzioni sulla protezione ambientale e sullo smaltimento dei dispositivi elettronici:



Le apparecchiature elettriche ed elettroniche contrassegnate con questo simbolo non possono essere smaltite come rifiuti urbani.
In conformità con la Direttiva 2012/19 / UE, gli utenti dell'Unione Europea di apparecchiature elettriche ed elettroniche hanno la possibilità di restituire i propri RAEE per lo smaltimento al distributore o al produttore di apparecchiature dopo averne acquistato uno nuovo. La rimozione illegale di apparecchiature elettriche ed elettroniche è punibile con una sanzione amministrativa.



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