NEUATION
TECHNOLOGIES

iSTIR QUATTRO

PRODUCT USER MANUAL

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1. PRODUCT DESCRIPTION

This magnetic stirrer is a 4 position electromagnetic stirrer designed to give synchronous stirring. The modern magnetic coil technology provides noiseless and consistent stirring. It provides high IP protection class (IP 65) with no moving parts attached to it. The setting of speed and time is simple & easy with a digital display. For better mixing, pulse mode is provided in which the stirring bar can rotate clockwise & counter-clockwise for every 30 seconds.

2. INTENDED USE

This magnetic stirrer is designed for use in laboratories, pharmacies, & schools for mixing liquids.

3. FEATURES

1. 4 stirring position with synchronous & consistent stirring
2. Slim profile with unique flat surface design
3. Pulse function of 30 seconds for better mixing
4. Variable speed setting from 15 to 1200 RPM
5. Variable time setting from 1 minute to 99 minutes, along with an infinite mode
6. Digital display for accurate setting of speed and time
7. Mixing capacity of 400 mL per position with 25mm stirring bar
8. Anti - skid pads
9. Water spill resistant design
10. Manufactured to IP65 standard
11. Wear-free drive without any moving parts

4. ACCESSORIES

Stirrer Bar (set of 4) PTFE coated.

Power Adapter : Input voltage - 100-240 VAC 50/60 Hz

Output Voltage: 9VDC ⎓ 2A

5. TECHNICAL SPECIFICATIONS

Stirred Quantity (Max) (Tested in H2O)	400 ml
Number of Stirring positions	4
Speed Range	15 - 1200 RPM
Time Range	1 to 99 mins
Auto Direction Change/Pulse Mode	Yes
Auto Direction Change Time Interval	30 seconds
Digital Display	Yes
Recommended Stirring Bar Length	25 mm
Set-up Plate Material	Stainless Steel
Set-up Dimensions (L x W)	385 x 122 mm
Dimensions (W x D x H)	457 x 126 x 13.4 mm
Distance Between Two Stirring Points	95 mm
Protection Class According to DIN EN 60529	IP 65
Permissible Ambient Temperature	5 - 40°C
Weight	1.9 Kg
Input Voltage	9V ⎓ 2A
Power Consumption	13W

6. MAINTENANCE & SAFETY PRECAUTION

Read the following safety instruction before using this magnetic stirrer for your safety & the safety of the equipment.

1. Do not place any steel or magnetic material on the base plate except the recommended magnetic stirring bar with a beaker or flask in between. Doing this can affect the magnetism of the device.
2. Place the device on a flat, stable, clean, non-slippery and fire-proof surface.
3. The base plate must be clean and intact.
4. Do not try to mix liquid more then 400 ml with 25 mm magnetic stirring bar on a single stirring position. It may lead to improper mixing.
5. Wear 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.
   - ☞Release of toxic or combustible gases.
6. Do not lift or hold the device from the power cable.
7. Do not use a damaged beaker, flask, stirring bar or any other component for operation. It may affect the efficiency of the device.
8. Reduce the speed:
   - ☞If the medium splashes out of the vessel
   - ☞If the appliance is not running smoothly.
   - ☞If the container moves on the base plate.
9. Wear protective gloves while cleaning the device.

6. MAINTENANCE & SAFETY PRECAUTION

10. Do not touch the base plate immediately after operation. The base plate may get warm after continuous usage.

11. Process pathogenic materials only in a closed vessel under a suitable extractor hood. Do not operate the appliance in explosive atmospheres, with hazardous substances or under water.
12. Only use liquid for mixing that will not react dangerously to the extra energy produced through processing. This also applies to any extra energy produced in other ways. Examples included: through light irradiation, through surrounding temperature etc.

13. Abrasion of the dispersion equipment or the rotating accessories can get into the medium you are working on.
14. Chemical reaction of PTFE can occur when in contact with molten or dissolved alkaline earth metals, as well as with fine powders of metals from the 2^{nd} 3^{rd} group of the periodic table at temperatures above 300-400 °C. Only elementary fluorine, chorine trifluoride, and alkaline metals attack PTFE. Halogen hydrocarbons have a reversible swelling effect.
15. The temperature of the stirring media in the beaker and beaker itself should not be more than 45° C.
16. The equipment will not restart, both in case of power interruption and in the case of any fault or mechanical interruption.

17. Care should be taken based on the sample used for mixing.

7. INSTALLATION & OPERATION

Open the box, then remove the packaging and gently place the device on a firm and leveled surface. Gently unpack and do not pull the AC power adaptor as it is attached with the device. The user manual should be kept near the device. Please keep all packaging in safe storage for at least two years for warranty purpose.

Below table shows the function of user interface buttons.

Buttons	Buttons Name	Function
	ON/OFF Button	Press button to turn ON and turn OFF the unit.
	Pulse & Time Mode Button	Single press button to activate pulse mode. LED blinks to indicate. Long press button to activate time mode. “T” will show on display.
	Increment Button	Press button to increase speed/time value.
	Decrement Button	Press button to decrease speed/time value.

7. INSTALLATION & OPERATION

1. Connect the AC power adaptor to the main power supply.
2. Fill the beaker or vessel with the medium or liquids to be processed. Then place the magnetic stirring bar in the beaker, or vessel.
3. Place the vessel or beaker on the center of the base plate.
4. Turn on the electromagnetic stirrer by pressing ON/OFF button.
5. Set the speed at which the medium or liquids need to be processed. Minimum speed is 15 RPM and maximum speed is 1200 RPM.
6. Set the time if required. Minimum time is 1 minute & maximum time is 99 minutes. By default time is always infinite.

SPEED SETTING

- Press increment (+) & decrement (-) button to modify & set speed value.
- Single press increment (+) or decrement (-) button to increase or decrease the speed value by 50 RPM on each press.
- Continuous press increment (+) or decrement (-) button to increase or decrease the speed value at faster pace.
- Speed value is seen in the digital display and is set after 3 blinks.
- At any point of time, users can modify the speed using increment (+) or decrement (-) button.
- On every restart, the stirrer will start with the last run speed.

7. INSTALLATION & OPERATION

TIME SETTING

- The default timer is set as infinite when stirrer starts. Long press the PULSE/TIME" button, to activate time mode. By default the timer will be infinite and will be seen as " t ∞ " in display.
- Once activated, single press increment (+) or decrement (-) button to increase or decrease time value by 1 minute on each press.
- Once activated, continuous press increment (+) or decrement (-) button to increase or decrease time value as faster pace.
- After modifying, wait for 3 blinks to set time.
- Speed can be modified at any point of time. The speed modified between on-going time will not affect the time & timer continuous to be countdown. Speed and time will display alternatively when speed reaches the set RPM.
- When the timer goes to zero (0), the stirring stops. The display will show "t 00" & "0000" alternatively indicating time for stirring is over.
- Press any button except the power button to start the stirring operation with last run speed and time.

Note: *Timer will be set to default (infinite) once the magnetic stirrer is restarted .*

7. INSTALLATION & OPERATION

PULSE MODE

- In pulse mode, the stirring direction will be reversed every 30 seconds.
- In order to select the pulse mode press the pulse mode once.
- First set the required speed & then single press the pulse button to start the stirring process in pulse mode. LED adjacent to pulse button will blink to indicate activation of pulse mode.
- You can also set a time in pulse mode. Set speed and time, then single press the pulse button to start stirring in pulse mode. Pulse stirring mode will end when time goes to zero (0).

7. Press the ON/OFF button again to stop the ongoing operation as well as to switch OFF the electromagnetic stirrer.
8. After every restart (ON/OFF), stirrer will start operating at last run speed & infinite time.

NOTE: *In case of slippage, first turn OFF and turn ON again. If slippage still occurs, then reduce the speed for efficient operation.*

8. 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 :

• This warranty is valid only if the product is used for its intended purpose and within the guidelines specified in this instruction manual. This warranty does not cover damage caused by accident, neglect, misuse, improper service, natural forces or other causes not arising from defects in original material or workmanship. This warranty does not cover any incidental or consequential damages, commercial loss or any other damages from the use of this product.

• 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 warranties or 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 merchantability or of fitness for any intended purpose and there are no other remedies or

8. WARRANTY STATEMENT

warranties, implied, which extend beyond the description on the face of the agreement. This warranty is only applicable to the original purchaser.

• Products received without proper authorization will not be processed for warranty or 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.*

9. 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.

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

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