

USER MANUAL

MAGNETIC STIRRER

PCE-MSR 40

ENGLISH



User manuals in various languages (français, italiano, español, português, nederlands, türk, polski) can be found via our product search on:
www.pce-instruments.com

PREFACE

Thank you for choosing the PCE-MSR 40 Large Capacity Magnetic Stirrer. In order to get a better experience, please read this manual carefully and abide by the safety operation regulations! Please keep this instruction manual for reference when needed!

Notes:

- » Protective clothing must be worn to prevent the splashing of mixing liquid and the breakage of glass containers.
- » It is strictly prohibited to use the instrument in inflammable, explosive or underwater environment, and it is strictly prohibited to use the instrument to deal with dangerous media.
- » If resonance or displacement occurs during the operation of the instrument, please stop the operation immediately or reduce the speed of operation.
- » Do not place it in the sun directly, or place it in high temperature and high humidity.
- » Do not use the power supply voltage that does not match the specified operating voltage.
- » The preparation of flammable samples is strictly prohibited. Stir only samples that will not produce a dangerous reaction during the stirring process.
- » Please be careful when touching the base of the instrument and the heating plate. The maximum temperature of the heating plate of the instrument is 300°C. Be careful of scalding.
- » Please ensure that only trained personnel can operate the instrument.
- » Please comply with safety regulations, personal safety and accident prevention regulations.
- » Do not operate the instrument or plug or remove the power supply of the instrument under wet hands.
- » To ensure safety, please make sure that the power socket is properly grounded before using the instrument.
- » Please place the instrument in a spacious and ventilated area, and ensure that the workbench is smooth, clean, dry, flame retardant and has a certain friction.
- » Disconnect the power supply before cleaning the instrument!
- » Do not remove or adjust the parts of the instrument at will. If the parts are damaged, replace them with the original ones.
- » It is strictly prohibited to use the instrument in the area of strong magnetic field.
- » Do not cover the instrument in the process of use, to prevent impact and extrusion of the instrument and accessories.
- » This series of magnetic stirrers need to be combined with non-iron containers for stirring.
- » The stirred liquid level is 70% of the height of the container.
- » Mixing speed should not be too fast, to prevent liquid splash caused and damage to the machine.
- » Place the container containing the liquid and the mixer in the middle of the mixer and slowly turn the speed control knob to the desired mixing speed, so that the mixer is not synchronized and causes a jump. The shape and size of the agitator should match the size of the container and the amount of solution.

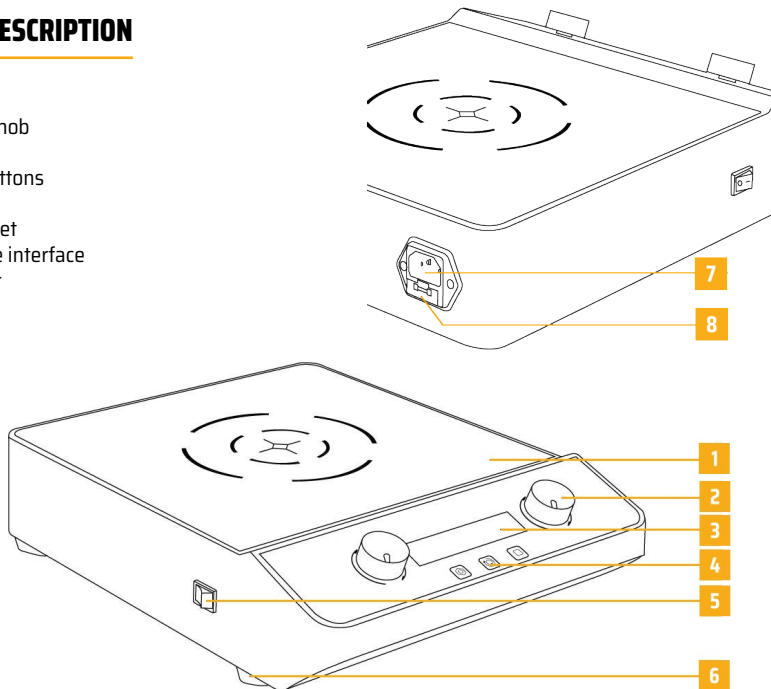
- » Use time generally should not be too long, intermittent use to extend life.
- » The instrument should be kept clean and dry, the solution is strictly prohibited to flow into the machine, so as not to damage the machine, the power should be cut off when not working.
- » If leakage phenomenon is found after a long time of use, please check whether the power adapter is damaged, because the input voltage of the adapter is straight through, or check whether the collision caused by line collision and insulation tube off, do not understand the electrical principle of the absolute prohibition of disassembly and repair.
- » If you find any malfunction, peculiar smell or abnormal noise in the process of using the equipment, you should immediately cut off the power supply, and then contact our after-sales service department in the first time.

PRODUCT OVERVIEW

The large capacity magnetic stirrer is characterized by small size, mixing fast, thorough, liquid vortex can be attached to the wall of the test liquid all mixed evenly, suitable for general test tube, centrifugal tube, liquid, funnel liquid mixing evenly, widely used in biochemistry, genetic engineering, medical and other experimental needs.

PRODUCT DESCRIPTION

- 1 - Board
- 2 - Adjusting knob
- 3 - LCD screen
- 4 - Physical buttons
- 5 - Power
- 6 - Damping feet
- 7 - Power cable interface
- 8 - Fuse holder



PRODUCT FEATURE

- » LCD screen display, adjustable speed, time and other parameters, intuitive and clear;
- » Brushless DC motor, low noise, maintenance-free, stable operation;
- » Equipped with positive and negative rotation function, positive and negative rotation can stop in the middle, slow start;
- » Equipped with program control mode, up to 6 groups of running programs can be set to meet the needs of the experimental stage;
- » Automatic memory function for setting working parameters;
- » Selection of strong magnetic high temperature resistant magnetic steel, ensure enough suction and torque, effectively prevent jumping, stirring effect is remarkable.
- » Specially coated disk surface, anti slip, anti scratch, corrosion resistance

TECHNICAL PARAMETER

Voltage V	AC100-240
Frequency Hz	50/60
Power W	60
Display	LCD screen
Motor Type	DC brushless motor
Maximum Stirring Volume (H2O) L	50
Speed Range rpm	50 ... 1000
Speed Control Accuracy rpm	±10
Timing Range	0 ... 99h 59min
Working Plate Material	PC
Working Plate Size mm	396x396
Net Weight Kg	5.6
Product Dimension mm	490x400x90

INSTRUMENT USE ENVIRONMENT

The selection of the working environment should be selected according to the following requirements:

- » Workrooms should be kept clean and dry;
- » The instrument should be placed on a horizontal, smooth, flame retardant table with a certain friction;
- » The workbench should be set in the place where there is less vibration disturbance;
- » Keep the instrument away from objects and equipment with magnetism or which can generate magnetic field;
- » Do not use the instrument in areas with explosive danger;
- » Do not use the instrument in high humidity or high dust environment for a long time

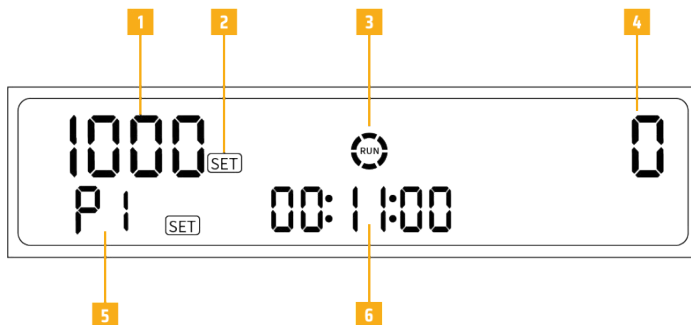
Equipment installation

- » After unpacking, remove all packaging, remove the buffer sponge;
- » Place the agitator on a stable, vibration-free workbench as level as possible. Insert the power cord plug into the power socket at the back of the instrument.

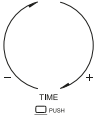
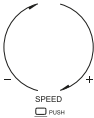
PRODUCT USAGE

Operation interface

- 1 - Set speed value display
- 2 - Set the status icon display
- 3 - Running direction icon is displayed
- 4 - The current speed is displayed
- 5 - Set time/run time display
- 6 - Program controlled serial number display



Key Function

PROG 	PROG key: Press the key to enter the program control mode.
SWITCH 	SWITCH key: Press this key to set the magneton clockwise and counterclockwise operation mode.
START / STOP 	START/STOP key: Press this button to Start/Stop the operation of the instrument.
	Time adjustment knob: Short press to set the running time, counterclockwise value decreases, clockwise value increases.
	Speed adjustment knob: Short press to set the running speed, counterclockwise value decreases, clockwise value increases.

Operation

- » Place the magnetic stirrer in the container of the solution to be stirred, and place the container on the magnetic stirrer plate
- » Confirm that the magnetic stirrer is in the center of the bottom of the container;
- » Short press the left knob, set the time, rotate the left knob, can adjust the timing time. If the timing is 00:00, the instrument runs normally and enters the positive timing mode. Set flashing will stop automatically if no operation is performed for three seconds.
- » Short press the right knob, set the speed, rotate the right knob, can adjust the set speed. Short press the right knob during operation, can adjust the speed online.
- » Press the SWITCH key to Switch the running direction of the magneton. Short press SWITCH button during operation to Switch the running direction of magnetron online
- » Short press START/STOP button, the instrument will Start running according to the set parameters, press again to Stop running

Program control function:

- » Short press PROG to enter the program control mode, short press PROG again to enter the next program control setting, a maximum of 6 groups of running programs can be set, that is, P1-P6 displays P1 by default;
- » Short press the left knob, set the time, rotate the left knob, can adjust the timing time. If the time is 00:00, the current program runs for a long time;
- » Short press the right knob, set speed, rotate the right knob, can adjust the set speed;
- » Short press SWITCH key to Switch the running direction of magneton in program-controlled mode;
- » After completing the 6-section program control data setting, press the START/STOP button, and the instrument will start to run according to the set program. Press again to stop running.

MAINTAINING

- » Do not put electronic devices in detergent while cleaning.
- » When cleaning the machine, do not handle hard objects to prevent damage to the surface of the machine.
- » Unplug the power cord if it is not used for a long time, and place the instrument in a cool and dry place, and cover with dust bag.
- » If the machine is not used for a long time, it should check whether all functions are normal before it is restarted.

FAULT ANALYSIS

Fault	Possible cause	Solution
Unable to start normally	The power cable is not tightly connected	Check whether the power cable is tightly connected or connected to another power socket
Instrument does not stir/stir when jumpers	» Motor fault » The bottom of the beaker is uneven and out of position » Wrong speed adjustment step » The actual voltage is within the rated voltage range	» Check the motor wiring or replace the motor » Lay the bottom of the container flat, reposition the beaker and start again » Gradually adjust from low speed to high speed » Adjust voltage to rated voltage range
There is no vortex in the liquid after operation	» The rotational speed is improperly set » The viscosity of the stirred mixture was too high	» Resetting speed » Reduce the viscosity of the mixture

DISPOSAL

For the disposal of batteries in the EU, the (EU) 2023/1542 directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose. In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law. For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations. If you have any questions, please contact PCE Instruments.

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