

Analog 7" Square (Hotplate) Magnetic Stirrer

User Manual



MS7-S Analog 7" Square Plate Magnetic Stirrer

MS7-H550-S Analog 7" Square Hotplate Magnetic Stirrer

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

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Preface

Welcome to the “Analog 7” Square (Hotplate) Magnetic Stirrer” . Users should read this Manual carefully, follow the instructions and procedures, and be aware of all the cautions when using this instrument.

Service

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

SCIOGEX, LLC

500 Four Rod Road

Suite 122

Berlin, CT 06037

USA

Tel: 1- (860) 828-5614

Fax: 1- (860) 828-5389

E-mail: info@scilogex.com

Website: [Http://www.scilogex.com](http://www.scilogex.com)

Please provide the customer care representative with the following information:




- Serial number (on the rear panel)
- Description of problem (i.e., hardware or software)
- Methods and procedures adopted to resolve the problems
- Your contact information

Warranty

You have purchased a Scilogex instrument. 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 claims under the warranty please contact your local supplier. You may also send the instrument directly to manufacturer, enclosing the invoice copy and by giving reasons for the claim.

1. Safety Instructions

	<p>Warning!</p> <ul style="list-style-type: none"> • Read the operating instructions carefully before use. • Ensure that only trained staff works with the instrument.
	<p>Risk of burn!</p> <ul style="list-style-type: none"> • Caution when touch the housing parts and the hotplate which can reach temperature of 550°C. • Pay attention to the residual heat after switching off.
	<p>Protective ground contact!</p> <ul style="list-style-type: none"> • Make sure that socket must be grounded (protective ground contact) before use.

- 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 area 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 be set to at least 50°C lower than the fire point of the media used.
- Be aware of hazards due to:
 - Flammable materials or media with a low boiling temperature
 - Overfilling of media
 - Unsafe container
- Process pathogenic materials only in closed vessels.
- Check the instrument and accessories prior to each use. Do not use damaged components. Safe operation is only guaranteed with the accessories described in the “Accessories” chapter. Accessories must be securely attached to the device and can not come off by themselves. Always disconnect the plug before fitting accessories.
- Ensure that the external temperature sensor is inserted in the media to a depth of at least 20 mm.
- When using metal vessels, do not place the temperature sensors on the bottom of the vessel. This can cause media

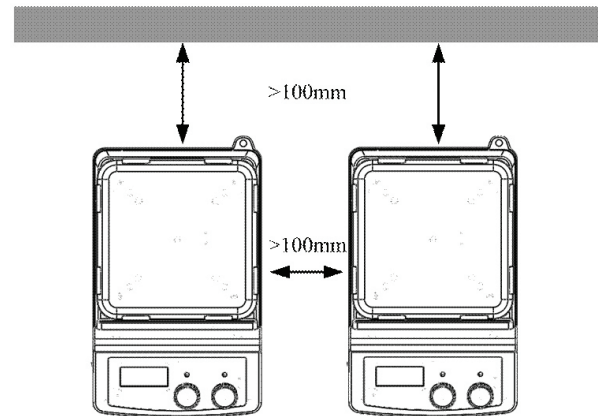
excessively high temperatures to be measured especially in with poor conductivity.

- The tip of the measuring sensor must be at least 5 mm from vessel bottom; a distance of 10 mm is ideal.
- 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.
- Ensure that the main power supply cable does not touch the hotplate. Do not cover the device.
- The instrument may only be opened by experts.
- Keep away from high magnetic field.

2. Proper use

The instrument is designed for mixing and/or heating liquids in schools, laboratories or factories.

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



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:

Item	Qty
Main unit	1
Power cable	1
User Manual	1

Table 1

4. Control

4.1 Control elements

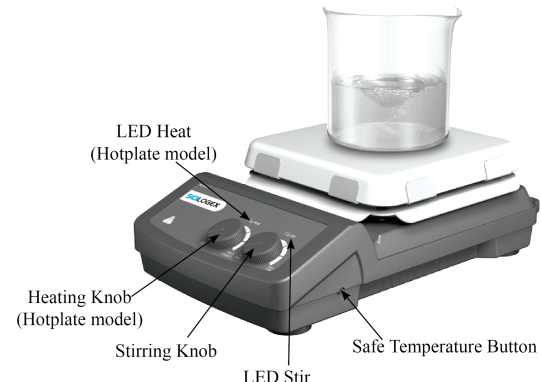


Figure 1

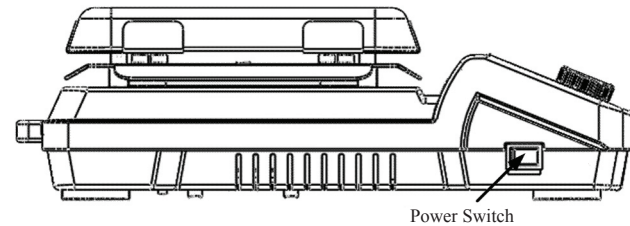


Figure 2

Items	Default settings
Speed control Knob Stir	Set the rated rotary speed. The stirring function is switched ON or OFF by pushing the knob.
Temperature control knob Heat (Hotplate)	Set the rated temperature. The heating function is switched ON or OFF by pushing the knob.
LED Heat (Hotplate)	When the heating function is switched ON, the LED Heat is lit.
LED Stir	When the stirring function is switched ON, the LED Stir is lit.
Safe temperature control Knob	Set safety temperature, stop heating when exceed secure temperature.
Power Switch	Switch ON or OFF the instrument.

Table 2

5. Trial run

- Make sure the required operating voltage and power supply voltage match.
- Ensure the socket must be properly grounded.
- Plug in the power cable, ensure the power is on and begin initializing.
- Add the medium into the vessel with a stirring bar.
- Place vessel on the work plate.
- Set the rated stirring speed and begin.
- Set the rated temperature and start heating.
- Begin the heating and stirring functions.

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 for technical support.

6. Faults

- Instruments can not be power ON
 - Check whether the power cable is plugged in.
 - Check whether the fuse is broken or loose.
- Fault in power on self test
 - Switch OFF the unit, then switch ON and reset the instruments to factory default setting.
- Temperature can switched on not reach set point
 - Check whether the safety temperature value is set too low.
- Stir speed can not reach set point
 - Check whether the stirring bar breakaway monitoring is ON.
 - Excessive medium viscosity may cause abnormal speed reduction of the motor.
- Heating or stirring function do not start when knob is pressed
 - Check whether the unit is in the mode setting program.
 - Exit from the mode setting and restart the heating/ stirring functions.

If these faults are not resolved, please set the instruments to factory default setting or take the unit to technical service center.

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

- Wear the proper protective gloves during cleaning of the instrument.
- Before using other method for cleaning or decontamination, the user must ascertain with the manufacturer that this method will not harm 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.
- The enamel makes the hotplate easier to care for and more resistant to acids and bases. Because of it, however, the hotplate is also more susceptible to extreme fluctuations in temperature and the force of impact. This can result in cracks forming or the coating flaking off.



Warning!
Cut off power when maintenance and cleaning.

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: 89/336/EWG
Instrument guidelines: 73/023/EWG

- The above standards will be available from July 2011.

9. Technical data

Voltage [VAC]	100-120/200-240
Frequency [Hz]	50/60
Power [W]	1050(hotplate model) 50
Stirring point position quantity	1
Max. stirring quantity (H ₂ O) [l]	20
Max. magnetic bar [L × Ø, mm]	80 × 10
Motor type	Brushless motor
Max. power input of motor [W]	18
Max. power output of motor [W]	10

Speed range[rpm]	0-1500
Rotary speed display	Scale
Speed display accuracy [rpm]	1
Hotplate material	Glass ceramic
Dimensions of workplate (mm)	184 × 184
Dimensions of heating (mm)	176 × 176
Heating power[W]	1000(Hotplate model)
Temperature range [°C]	RT-550(Hotplate model)
Temperature display[°C]	Scale(Hotplate model)
The safety temperature range of the hotplate [°C]	100-580(Hotplate model)

Dimensions (mm)	215 × 360 × 112
Weight [kg]	5.3
Permitted ambient temperature [°C]	5-40
Permitted relative humidity	80%
Stection class acc. to DIN 60529	IP21
RS232 interface	Yes

Table 3

10. Ordering information

Cat No.	Descriptions
813221009999	MS7-H550-S Analog 7" Square Hotplate Magnetic Stirrer, glass ceramics hotplate, USA plug, 110V/50Hz/60Hz
813221019999	MS7-H550-S Analog 7" Square Hotplate Magnetic Stirrer, glass ceramics hotplate, Cn plug, 220V/50Hz/60Hz
813221029999	MS7-H550-S Analog 7" Square Hotplate Magnetic Stirrer, glass ceramics hotplate, Euro plug, 220V/50Hz/60Hz
813221039999	MS7-H550-S Analog 7" Square Hotplate Magnetic Stirrer, glass ceramics hotplate, UK plug, 220V/50Hz/60Hz
813211009999	MS7-S Analog 7" Square Plate Magnetic Stirrer, glass ceramics plate, USA plug, 110V/50Hz/60Hz

813211019999	MS7-S Analog 7" Square Plate Magnetic Stirrer, glass ceramics plate, Cn plug, 220V/50Hz/60Hz	18900005	MS135.5 Black quarter pie, 4 holes, 40 ml reaction vessel, Ø28mm, 43mm depth
813211029999	MS7-S Analog 7" Square Plate Magnetic Stirrer, glass ceramics plate, Euro plug, 220V/50Hz/60Hz	18900048	MS135.6 Green quarter pie, 6 holes, 8ml reaction vessel, Ø17.75mm, 26mm depth
813211039999	MS7-S Analog 7" Square Plate Magnetic Stirrer, glass ceramics plate, UK plug, 220V/50Hz/60Hz	18900049	MS135.7 Golden quarter pie, 4 holes, 16ml reaction vessel, Ø21.6mm, 31.7mm depth
Table 4			
Accessories			
18900002	MS135.2 Red quarter pie, 11 holes, 4 ml reaction vessel, Ø15.2mm, 20mm depth		
18900003	MS135.3 Purple quarter pie, 4 holes, 20 ml reaction vessel, Ø28mm, 24mm depth		
18900004	MS135.4 Blue quarter pie, 4 holes, 30 ml reaction vessel, Ø28mm, 30mm depth		

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