



Ceramic Top Hot Plate Stirrers, Stirrers, and Hot Plates

OPERATION MANUAL AND PARTS LIST

Model #	Voltage	Ceramic Top Plates Size - Inches (cm)
<i>Hot Plate Stirrers</i>		
1151016SHQ	120	4x4 (10x10)
1151049SHQ	120	7x7 (18x18)
<i>Stirrers</i>		
1151016SQ	120	4x4 (10x10)
1151049SQ	120	7x7 (18x18)
<i>Hot Plates</i>		
1151016HQ	120	4x4 (10x10)
1151049HQ	120	7x7 (18x18)

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Safety Information

Alert Signals



Warning

Warnings alert you to a possibility of personal injury.



Caution

Cautions alert you to a possibility of damage to the equipment.



Note

Notes alert you to pertinent facts and conditions.



Hot Surface

Hot surfaces alert you to a possibility of personal injury if you come in contact with a surface during use or for a period of time after use.

Your Fisher Hot Plate, Stirrer or Hot Plate Stirrer has been designed with function, reliability, and safety in mind. It is your responsibility to install it in conformance with local electrical codes. This manual contains important operating and safety information. You must carefully read and understand the contents of this manual prior to the use of this equipment. For safe operation, please pay attention to the alert boxes throughout the manual.

Warnings

Please note the following WARNINGS:

1. Do not immerse unit for cleaning.
2. As with all laboratory equipment, appropriate safety clothing, glasses, gloves and coats should be worn when operating hot plates. Always use appropriate hand and eye protection when handling hazardous chemicals.
3. DO NOT remove or modify grounded power plug. Use only properly grounded outlets to avoid shock hazard. Not rated for use in hazardous atmospheres.
4. Do not use in the presence of flammable or combustible chemicals; top surface and element can reach the "Flash Point Temperature" of many chemicals. THESE HOT PLATES ARE NOT EXPLOSION PROOF. Fire or explosion may result. Unit contains components which may ignite such materials.
5. "Caution: Hot Surface. Avoid Contact." The top plate will remain hot without visual indication for some time after the unit has been turned off.
6. Keep top surface clean. Use a non-abrasive cleaner. Alkali spills, hydrofluoric acid spills or phosphoric acid spills may damage top and lead to thermal failure. Unplug unit and remove spills promptly. Do not immerse unit for cleaning.
7. Replace the top immediately if damaged by etching, scratching or chipping. A damaged top can break in use.

SAFETY INFORMATION

8. Do not use metal foil on hot plate. Do not use metal containers, sand bath or other insulating material on the hot plate or stirring hot plate — Top plate can be damaged and shock hazard can exist.
9. Do not use in highly corrosive atmospheres; corrosive fumes and spill may damage top and internal components, creating shock hazard.

To avoid electrical shock:

10. Always use a properly grounded electrical outlet with correct voltage and current handling capacity.
11. Always disconnect the unit from the power supply before servicing.
12. Refer servicing to qualified personnel.

Warning

THIS PRODUCT CONTAINS REFRACTORY CERAMIC, REFRACTORY CERAMIC FIBER OR FIBER-GLASS (GLASS WOOL) INSULATION WHICH CAN PRODUCE RESPIRABLE FIBERS AND DUST WHEN HANDLED. THESE FIBERS OR DUSTS CAN CAUSE IRRITATION AND CAN AGGRAVATE PRE—EXISTING RESPIRATORY DISEASE. REFRACTORY CERAMIC INSULATIONS MAY CONTAIN OR MAY FORM CRYSTALLINE SILICA (CRYSTOBALITE) WHICH MAY CAUSE LUNG DAMAGE (SILICOSIS). THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED REFRACTORY CERAMIC FIBER AND FIBERGLASS AS (2B) POSSIBLY CARCINOGENIC. IARC HAS CLASSIFIED CRYSTALLINE SILICA AS (2A) PROBABLY CARCINOGENIC.

The insulating materials are located in the door, the hearth collar, in the chamber of the product or the top plate assembly. Tests performed by the manufacturer indicate that there is no significant risk of exposure to dust or respirable fibers resulting from operation of this equipment under normal conditions. However, there may be a risk of exposure to respirable dusts or fibers when repairing or maintaining the insulating materials, or when otherwise disturbing the materials in a manner which causes release of dust or fibers therefrom.

Through the use of proper handling procedures you can work safely with these insulating materials and minimize any exposure. Accordingly, before you repair or replace any insulating materials, or perform any other servicing on this product which could disturb or cause exposure to dust from insulating materials, you should consult the appropriate Material Safety Data Sheets (MSDS's) for such products with respect to proper handling and appropriate protective equipment. For additional MSDS's, or additional information concerning the handling of refractory ceramic products, please contact the Customer Service Department of Fisher Scientific Products.

REFER SERVICING TO QUALIFIED PERSONNEL.

1-800-926-0505

Operation

Introduction

Your Fisher hot plate, stirrer and hot plate stirrer are general purpose heating and/or stirring devices intended for general laboratory procedures. A vessel with a flat bottom is recommended on the hot plate and stirring hot plate for ideal heat transfer. Avoid metal containers, sandbaths or vessels with a rim around the bottom as these could cause damage to the hot plate and stirring hot plate.

Both the temperature and speed controls are combination on/off switches and setting selectors.

Setting Heating Temperature

The unit's temperature range is approximately 150°C - 540°C (300°F - 1000°F) on all 4" X 4" and 7" X 7" units. To select a temperature, turn the control clockwise to the desired setting. The lighted "heat" indicator shows when the unit is operating. The control maintains a set temperature of the hot plate by turning the power on and off over short time intervals. The greater the percentage of time the power is on, the higher the temperature. At the high position, power is on continuously and maximum temperature is obtained. From the "Off" position, the knob may be turned to either the right or the left. For fast heat up, turn the knob to the high position. When the desired temperature is reached, reduce the setting to the point where the temperature will be maintained.

Setting Stirring Speed

The unit's stirring capability is approximately 100 to 1000 RPM. To select a speed, turn the speed control clockwise until the desired mixing action is achieved. The lighted "stir" indicator shows when the unit is stirring. The unit comes complete with a stir bar that is coated with Teflon® Fluorocarbon Resin.

® Teflon Fluorocarbon Resin is a trademark of E.I. DuPont de Nemours and Company.

Specifications

4" x 4" Models

Model:	1151016HQ	1151016SQ	1151016SHQ
Overall Dimensions - In. (cm)	6-1/4"W x 4-7/8"H x 6-1/2"D (15.9 x 12.4 x 16.5)	6-1/4"W x 4-7/8"H x 6-1/2"D (15.9 x 12.4 x 16.5)	6-1/4"W x 4-7/8"H x 6-1/2"D (15.9 x 12.4 x 16.5)
Top Plate Dimensions - In. (cm)	4-1/4 x 4-1/4 (11 x 11)	4-1/4 x 4-1/4 (11 x 11)	4-1/4 x 4-1/4 (11 x 11)
Weight - Lbs. (kg)	3.5 (1.6)	4.5 (2.0)	4.75 (2.2)
Volts	120	120	120
Amps	3.1	0.23	3.3
Watts	375	20	395
Freq.	60	60	60
Phase	1	1	1
Operating Temp. Max - °C (°F)	538° (1000°)	N/A	538° (1000°)
Operating Speed Max. - RPM	N/A	1000	1000

SPECIFICATIONS

7" x 7" Models

Model:	<u>1151049HQ</u>	<u>1151049SQ</u>	<u>1151049SHQ</u>
Overall Dimensions - In. (cm)	9"W x 5"H x 9-5/8"D (22.9 x 12.7 x 24.4)	9"W x 5"H x 9-5/8"D (22.9 x 12.7 x 24.4)	9"W x 5"H x 9-5/8"D (22.9 x 12.7 x 24.4)
Top Plate Dimensions - In. (cm)	7-3/8 x 7-3/8 (18.7 x 18.7)	7-3/8 x 7-3/8 (18.7 x 18.7)	7-3/8 x 7-3/8 (18.7 x 18.7)
Weight - Lbs. (kg)	6.2 (2.8)	7.1 (3.2)	8.0 (3.6)
Volts	120	120	120
Amps	9.2	0.27	9.5
Watts	1100	18	1118
Freq.	60	60	60
Phase	1	1	1
Operating Temp. Max - °C (°F)	538° (1000°)	N/A	538° (1000°)
Operating Speed Max. - RPM	N/A	1000	1000

Replacement Parts Listings

Hot Plates

<u>1151016HQ</u>	<u>1151049HQ</u>	<u>Description</u>
PT464X1	PT467X1	Top plate only
EL691X1	EL694X1	Element, 120 volt
CNX60	CNX60	Control, 120 volt
PLX108	PLX018	Pilot light, 120 volt
CR640X1A	CR640X1A	Cord set, 120 volt
–	–	Cord set, 120 volt, 15 amp.

Magnetic Stirrers

<u>11510165SQ</u>	<u>1151049SQ</u>	<u>Description</u>
PT464X1	PT467X1	Top plate only
MT691X1A	MTX98	Motor, 120 volt
RS691X1A	RS771X1A	Rheostat, 120 volt
PLX108	PLX108	Pilot light, 120 volt
CR640X1A	CR640X1A	Cord set, 120 volt

Hot Plate Stirrers

<u>1151016SHQ</u>	<u>1151049SHQ</u>	<u>Description</u>
PT464X1	PT467X1	Top plate only
EL691X1	EL694X1	Element, 120 volt
CNX60	CNX60	Control, 120 volt, heat
MT691X1A	MTX98	Motor, 120 volt
RS691X1A	RS771X1A	Rheostat, 120 volt
PLX108	PLX018	Pilot light, 120 volt
CR640X1A	CR640X1A	Cord set, 120 volt
–	–	Cord set, 120 volt, 15 amp.

Warranty

Laboratory instruments and equipment manufactured by Fisher Scientific Company L.L.C. – Laboratory Equipment Division (hereinafter called “the Company”) are warranted only as stated below.

Subject to the exceptions and upon the conditions specified below, the Company agrees, at its election, to correct by repair, by replacement, or by credit to the purchaser, any defect of materials or workmanship which develops within one year (13 months for refrigerator and freezer products) from the date of purchase by the original purchaser by the Company or by an authorized dealer of the Company provided that investigation or factory inspection by the Company discloses that such defect developed under normal and proper use

The exceptions and conditions mentioned above are the following:

- a. The Company makes no warranty concerning components or accessories not manufactured by it, such as tubes, batteries, etc. However, in the event of the failure of any component or accessory not manufactured by the Company, the Company will give reasonable assistance to the purchaser in obtaining from the respective manufacturer whatever adjustment is reasonable in the light of the manufacturer’s own warranty.
- b. The Company shall be released from all obligations under its warranty in the event repairs or modifications are made by persons other than its own service personnel or authorized dealer personnel unless such repairs by others are made with the written consent of the Company.
- c. **THE COMPANY MAKES NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EITHER IN FACT OF BY OPERATION OF LAW,...STATUTORY OR OTHERWISE.**
- d. The above warranty and the above obligations to repair, replace, or credit are complete and exclusive and the Company expressly disclaims liability for lost profits or for special, indirect, incidental, consequential, or exemplary damages of any nature whether attributable to contract, warranty, negligence, strict liability, or otherwise even if the Company has been advised of the possibility of such damages.
- e. Representations and warranties made by any person, including dealers and representatives of the Company, which are inconsistent or in conflict with the foregoing warranty shall not be binding upon the Company unless reduced to writing and signed by an officer of the Company.



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