# Isotemp Hotplates, Stirrers and Stirring Hotplates

**OPERATION MANUAL**

**AND PARTS LIST**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Type</th>
<th>Top Plate Size and Material</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>11100100H</td>
<td>Hotplate</td>
<td>10x10 Ceramic</td>
<td>120</td>
</tr>
<tr>
<td>11100100S</td>
<td>Stirrer</td>
<td>10x10 Ceramic</td>
<td>120</td>
</tr>
<tr>
<td>11100100SH</td>
<td>Stirring Hotplate</td>
<td>10x10 Ceramic</td>
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<tr>
<td>1110016H</td>
<td>Hotplate</td>
<td>4x4 Ceramic</td>
<td>120</td>
</tr>
<tr>
<td>1110016S</td>
<td>Stirrer</td>
<td>4x4 Ceramic</td>
<td>120</td>
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<td>4x4 Ceramic</td>
<td>120</td>
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<td>Stirrer</td>
<td>7x7 Ceramic</td>
<td>120</td>
</tr>
<tr>
<td>1110049SH</td>
<td>Stirring Hotplate</td>
<td>7x7 Ceramic</td>
<td>120</td>
</tr>
<tr>
<td>1120049H</td>
<td>Hotplate</td>
<td>7x7 Aluminum</td>
<td>120</td>
</tr>
<tr>
<td>1120049S</td>
<td>Stirrer</td>
<td>7x7 Aluminum</td>
<td>120</td>
</tr>
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<td>1120049SH</td>
<td>Stirring Hotplate</td>
<td>7x7 Aluminum</td>
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<tr>
<td>1110116H</td>
<td>Hotplate</td>
<td>4x4 Ceramic</td>
<td>100</td>
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<td>Hotplate</td>
<td>7x7 Ceramic</td>
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<td>7x7 Ceramic</td>
<td>100</td>
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<td>Stirring Hotplate</td>
<td>7x7 Ceramic</td>
<td>100</td>
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<td>Hotplate</td>
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<td>230</td>
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<tr>
<td>1110216S</td>
<td>Stirrer</td>
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<td>230</td>
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<td>7x7 Ceramic</td>
<td>230</td>
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<td>7x7 Ceramic</td>
<td>230</td>
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<tr>
<td>1120249H</td>
<td>Hotplate</td>
<td>7x7 Aluminum</td>
<td>230</td>
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<td>Stirrer</td>
<td>7x7 Aluminum</td>
<td>230</td>
</tr>
<tr>
<td>1120249SH</td>
<td>Stirring Hotplate</td>
<td>7x7 Aluminum</td>
<td>230</td>
</tr>
<tr>
<td>11102100H</td>
<td>Hotplate</td>
<td>10x10 Ceramic</td>
<td>230</td>
</tr>
<tr>
<td>11102100S</td>
<td>Stirrer</td>
<td>10x10 Ceramic</td>
<td>230</td>
</tr>
<tr>
<td>11102100SH</td>
<td>Stirring Hotplate</td>
<td>10x10 Ceramic</td>
<td>230</td>
</tr>
</tbody>
</table>

*LT1892X1 • 12/28/06*
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Safety Information

Alert Signals

⚠️ Warning
Warnings alert you to a possibility of personal injury.

Your Fisher Isotemp Hotplate, Stirrers or Stirring Hotplate has been designed with function, reliability, and safety in mind. It is your responsibility to install it in conformance with local electrical codes. For safe operation, please pay attention to the alert signals throughout the manual.

This manual contains important operating and safety information. The user must carefully read and understand the contents of this manual prior to the use of this equipment.

Warnings
To avoid electrical shock, always:
1. Use a properly grounded electrical outlet of correct voltage and current handling capacity.

2. Disconnect from the power supply prior to maintenance and servicing.

To avoid personal injury:
1. Do not use in the presence of flammable or combustible materials — fire or explosion may result. This device contains components which may ignite such materials. Not rated for use in hazardous atmospheres.

2. Use caution when heating volatile materials; top surface and element can reach the "Flash Point Temperature" of many chemicals. These stirring hotplates are not explosion proof. Fire or explosion may result. Unit contains components which may ignite such materials.

3. 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.

4. Replace the top immediately if damaged by etching, scratching or chipping. A damaged top can break in use.
5. Do not use metal foil on hotplate which may block air flow. Overheating will result.

6. Check and tighten the removable cord periodically making sure it is secure. If loosened, the cord could become hot and/or spark and be a potential fire hazard. If cord appears damaged, replace immediately.

7. Do not remove or modify grounded power plug. Use only properly grounded outlets to avoid shock hazard.

8. Use appropriate hand and eye protection when handling hazardous chemicals.

9. Gross weight of items placed on top of stirring hotplates should not exceed 35 lbs. (15.9 kg.) on the 10" x 10" models, 25 lbs. (11.3 kg) on the 7" x 7" models, and 15 lbs. (6.8 kg.) on the 4" x 4" models.

10. The top plate of the unit can remain hot for some time after use. A "CAUTION - HOT TOP" light will remain on until top plate temperature cools to below 50°C.

11. Note that the exterior housing will be hot during and for a period of time after use.

12. Refer servicing to qualified personnel.
## Specifications

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>Electrical (Volts/Amps/Watts/Freq./Phase)</th>
<th>Temperature Range*</th>
<th>Speed Range (rpm)</th>
<th>Top Plate Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>11100100H</td>
<td>120/11.7/1410/60/1</td>
<td>5 - 400° C</td>
<td>N/A</td>
<td>6L flask / 35 lbs.</td>
</tr>
<tr>
<td>11100100S</td>
<td>120/0.37/20/60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>6L flask / 35 lbs.</td>
</tr>
<tr>
<td>11100100SH</td>
<td>120/12/1440/60/1</td>
<td>5 - 400° C</td>
<td>60-1200 rpm</td>
<td>6L flask / 35 lbs.</td>
</tr>
<tr>
<td>1110016H</td>
<td>120/3.2/385/60/1</td>
<td>5 - 540° C</td>
<td>N/A</td>
<td>1L flask / 15 lbs.</td>
</tr>
<tr>
<td>1110016S</td>
<td>120/0.37/20/60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>1L flask / 15 lbs.</td>
</tr>
<tr>
<td>1110016SH</td>
<td>120/3.3/395/60/1</td>
<td>5 - 540° C</td>
<td>60-1200 rpm</td>
<td>1L flask / 15 lbs.</td>
</tr>
<tr>
<td>1110049H</td>
<td>120/8.8/1060/60/1</td>
<td>5 - 540° C</td>
<td>N/A</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1110049S</td>
<td>120/0.37/20/60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1110049SH</td>
<td>120/8.9/1070/60/1</td>
<td>5 - 540° C</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1120049H</td>
<td>120/5.5/660/60/1</td>
<td>5 - 300° C</td>
<td>N/A</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1120049S</td>
<td>120/5.3/35/60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1120049SH</td>
<td>120/5.7/860/60/1</td>
<td>5 - 300° C</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1110116H</td>
<td>100/3.8/365/50-60/1</td>
<td>5 - 540° C</td>
<td>N/A</td>
<td>1L flask / 15 lbs.</td>
</tr>
<tr>
<td>1110149H</td>
<td>100/10.7/1070/50-60/1</td>
<td>5 - 540° C</td>
<td>N/A</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1110149S</td>
<td>100/0.47/25/50-60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
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<td>100/11.0/1095/50-60/1</td>
<td>5 - 540° C</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1120149S</td>
<td>100/0.6/35/50-60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1120149SH</td>
<td>100/6.6/660/50-60/1</td>
<td>5 - 300° C</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>11101100H</td>
<td>100/11.2/1125/50-60/1</td>
<td>5 - 400° C</td>
<td>N/A</td>
<td>6L flask / 35 lbs.</td>
</tr>
<tr>
<td>11101100S</td>
<td>100/0.47/25/50-60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>6L flask / 35 lbs.</td>
</tr>
<tr>
<td>11101100SH</td>
<td>100/11.5/1150/50-60/1</td>
<td>5 - 400° C</td>
<td>60-1200 rpm</td>
<td>6L flask / 35 lbs.</td>
</tr>
<tr>
<td>1110216H</td>
<td>230/1.7/420/50-60/1</td>
<td>5 - 540° C</td>
<td>N/A</td>
<td>1L flask / 15 lbs.</td>
</tr>
<tr>
<td>1110216S</td>
<td>230/0.17/20/50-60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>1L flask / 15 lbs.</td>
</tr>
<tr>
<td>1110216SH</td>
<td>230/1.8/440/50-60/1</td>
<td>5 - 540° C</td>
<td>60-1200 rpm</td>
<td>1L flask / 15 lbs.</td>
</tr>
<tr>
<td>1110249H</td>
<td>230/4.8/1150/50-60/1</td>
<td>5 - 540° C</td>
<td>N/A</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1110249S</td>
<td>230/0.17/20/50-60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1110249SH</td>
<td>230/4.9/1170/50-60/1</td>
<td>5 - 540° C</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1110249H</td>
<td>230/2.9/690/50-60/1</td>
<td>5 - 300° C</td>
<td>N/A</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>1110249S</td>
<td>230/0.3/35/50-60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
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<td>1110249SH</td>
<td>230/3.0/720/50-60/1</td>
<td>5 - 300° C</td>
<td>60-1200 rpm</td>
<td>4L flask / 25 lbs.</td>
</tr>
<tr>
<td>11102100H</td>
<td>230/6.4/1530/50-60/1</td>
<td>5 - 400° C</td>
<td>N/A</td>
<td>6L flask / 35 lbs.</td>
</tr>
<tr>
<td>11102100S</td>
<td>230/0.17/20/50-60/1</td>
<td>N/A</td>
<td>60-1200 rpm</td>
<td>6L flask / 35 lbs.</td>
</tr>
<tr>
<td>11102100SH</td>
<td>230/6.5/1550/50-60/1</td>
<td>5 - 400° C</td>
<td>60-1200 rpm</td>
<td>6L flask / 35 lbs.</td>
</tr>
</tbody>
</table>

*This stirring hotplate does not cool. The minimum temperature is 5°C if used in a cold room.*
SPECIFICATIONS

Environmental Conditions
Operating:  17°C to 27°C; 20% to 80% relative humidity, non-condensing. Installation category II (overvoltage) in accordance with IEC 664. Pollution degree 2 in accordance with IEC 664. Altitude Limit: 2,000 meters.
Storage:  -25°C to 65°C  10% to 85% relative humidity

Declaration of Conformity
(for 230 volt)
We hereby declare under our sole responsibility that this product conforms with the technical requirements of the following standards:

EMC:  EN 61000-3-2  Limits for harmonic current emissions
       EN 61000-3-3  Limits for voltage fluctuations and flicker
       EN 61326-1  Electrical equipment for measurement, control, and laboratory use; Part I: General Requirements

Safety:  EN 61010-1  Safety requirements for electrical equipment for measurement, control, and laboratory use; Part I: General Requirements
         EN 61010-2-010  Part II: Particular requirements for laboratory equipment for the heating of materials (Hotplates and Stirring Hotplates)
         EN 61010-2-051  Part II: Particular requirements for laboratory equipment for mixing and stirring (Stirrers and Stirring Hotplates)


The authorized representative located within the European Community is:

Thermo Fisher Scientific
419 Sutton Road
Southend On Sea
Essex SS2 5PH
United Kingdom

Copies of the Declaration of Conformity are available upon request.
Unpacking and Installation

General Usage
Do not use this product for anything other than its intended usage.

Unpacking
Remove your IsoTemp hotplate, stirrer or stirring hotplate from the carton. Inspect to ensure that the unit has not been damaged during shipment. If the unit appears to have sustained shipping damage contact Fisher Scientific at 800-926-0505.

The following items are included in the shipment:
- IsoTemp Hotplate, Stirrer or Stirring Hotplate
- Cord
- Stir Bar (Stirring models only)
- Adapter (100V models only)
- Knob
- Operator's Manual

Installation
Set the unit on a flat stable surface at least 12" away from combustible materials, and plug the cordset into a properly grounded electrical outlet of correct voltage and current handling capacity.

Warning
Use a properly grounded electrical outlet of correct voltage and current handling capacity.
Operation

Warning
Use caution when heating volatile materials; top surface and element can reach the "Flash Point Temperature" of many chemicals. These hotplates and stirring hotplates are not explosion proof. Fire or explosion may result. Unit contains components which may ignite such materials.

Use appropriate hand and eye protection when handling hazardous chemicals.

"Caution: Hot Top. Avoid Contact." The top plate of the unit can remain hot for some time after use. A "CAUTION - HOT TOP" light will remain on until top plate temperature cools to below 50°C.

Setting the Stirring Speed
To set the speed, turn the STIR knob to the desired setting. Turn the knob clockwise to increase the speed or counter-clockwise to decrease the speed. To discontinue stirring, turn knob counter-clockwise to OFF.

Setting the Temperature
To set the temperature, turn the HEAT knob to the desired setting. Turn the knob clockwise to increase the temperature or counter-clockwise to decrease the temperature. To discontinue heating, turn knob counter-clockwise to OFF.

The temperature will display in °C. When choosing a setpoint, the display will indicate the setpoint for 5 seconds, after which the display will flash until the desired setpoint is reached.

The "CAUTION - HOT TOP" indicator illuminates when the plate reaches 50°C. When the heating is turned off, the indicator will continue to flash until the plate temperature drops below 50°C.

Heating Metal Vessels and Sand Baths
Metal vessels and sand baths may be heated safely without the danger of the ceramic top breaking. Use the lowest temperature setting possible for applications to limit thermal stress to the ceramic top. Using a metal vessel or sand bath may reduce the life of the stirring hotplate.
# Maintenance and Troubleshooting

## General Cleaning Instructions
Wipe exterior surfaces with lightly dampened cloth containing mild soap solution.

## Error Codes - Hotplates and Stirring Hotplates only
The following errors should not be addressed by the user. If any of the errors appear, contact Fisher Scientific Technical Service at 800-926-0505.

<table>
<thead>
<tr>
<th>Displayed Message</th>
<th>Intended to Detect</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>E01 Call Tech. Service</td>
<td>Thermocouple out of range.</td>
<td>Thermocouple not connected.</td>
<td>Replace element assembly (attached to thermocouple).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thermocouple open circuit.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure of element.</td>
<td>Replace element assembly (attached to thermocouple).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure of element circuit.</td>
<td>Replace Element.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Replace Control Board.</td>
</tr>
<tr>
<td>E11 Call Tech. Service</td>
<td>Alternating current measurement failure.</td>
<td>Failure to detect alternating current.</td>
<td>Replace Control Board.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure of motor.</td>
<td>Replace motor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure of motor circuit.</td>
<td>Replace Control Board.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure of motor sensor.</td>
<td>Replace motor sensor.</td>
</tr>
</tbody>
</table>

**Notes:**
Errors E01 and E02 are heating errors. Heating functions will be locked out. Stirring functionality is unaffected.

Errors E11 and E12 are stirring errors. Stirring functions will be locked out. Heating functionality is unaffected.
Replacement Parts

4x4 Ceramic
Part No. 261575
         PCX118
         PCX119
         PC1887X1
         PC1887X2
         PC1886X1
         PC1886X2
         266058
         PCX113
         PC1363X3
         KBX111
         CRX106
         CRX104
         KBX78
         ZSX122A
         MT1313X3
         MT1313X4
         ELX41
         ELX42
         ELX43
         540-0033
         EL1310X1
         EL1310X2
         EL1310X3
         ----

7x7 Ceramic
Part No. 261575
         PCX118
         PCX119
         PC1887X1
         PC1887X2
         PC1886X1
         PC1886X2
         266058
         PCX113
         PC1363X3
         KBX111
         CRX106
         CRX104
         KBX78
         ZSX122A
         MT1313X3
         MT1313X4
         ELX41
         ELX42
         ELX43
         540-0033
         EL1310X1
         EL1310X2
         EL1310X3
         ----

7x7 Aluminum
Part No. 261575
         PC1895X1
         PC1895X2
         PC1893X1
         PC1893X2
         PC1888X1
         PC1888X2
         266058
         PCX113
         PC1363X3
         KBX111
         CRX106
         CRX104
         KBX78
         ZSX122A
         MT1313X3
         MT1313X4
         ELX41
         ELX42
         ELX43
         540-0033
         EL1310X1
         EL1310X2
         EL1310X3
         ----

10x10 Ceramic
Part No. 261575
         PC1886X1
         PC1886X2
         PC1884X1
         PC1884X2
         PC1885X1
         PC1885X2
         266058
         PCX113
         PC1363X3
         KBX111
         CRX106
         CRX104
         KBX78
         ZSX122A
         MT1316X3
         MT1316X4
         ELX41
         ELX42
         ELX43
         540-0033
         EL1310X1
         EL1310X2
         EL1310X3
         ----

Description
PC Board Fuse - 220-240V
Control Board - 100V, 120V (SHP)
Control Board - 220-240V (SHP)
Control Board - 100V, 120V (HP)
Control Board - 220-240V (HP)
Control Board - 100V, 120V (S)
Control Board - 220-240V (S)
PC Board Fuse - 100V, 120V
Display Board
Speed/Heat Adjustment Board (2)
Knob (2)
Cord Set - 100V, 120V
Cord Set - 220-240V
Knob
Stir Bar
Motor - 120V, 100V
Motor - 220-240V
Heating Element - 120V - w/thermocouple
Heating Element - 100V - w/thermocouple
Heating Element - 220-240V - w/thermocouple
Ceramic or Aluminum Top
Hot Plate Top Assembly - 120V
Hot Plate Top Assembly - 100V
Hot Plate Top Assembly - 220-240V
Thermocouple

Accessories

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-666-10AQ</td>
<td>Support Rod - 12&quot;</td>
</tr>
<tr>
<td>14-666-10BQ</td>
<td>Support Rod - 18&quot;</td>
</tr>
<tr>
<td>14-666-10CQ</td>
<td>Support Rod - 24&quot;</td>
</tr>
</tbody>
</table>

Please refer to the Specification Plate for the complete model number, serial number, and series number when requesting service, replacement parts or in any correspondence concerning this unit.

All parts listed herein may be ordered from Fisher Scientific by calling 800-926-0505
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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:

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