Owner’s Manual

Designer Series Blanket Warmer

DC150
DC250
DC350
DC400
DC750

(owner with optional timer)

(owner with optional timer)

(owner with optional timer)
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Wiring Diagrams Refer to the wire diagram located under the lid of the appliance.

Authorized Representative:
MDSS GmbH
Schiffgraben 41
30175 Hannover
Germany
Delivery

Environmental Conditions

Transport and storage environmental conditions (not to exceed 15 days)
- Ambient temperature range of -40°C to +70°C (-40°F to +159°F)
- Relative humidity range of 10% to 95%, non-condensing
- Atmospheric pressure range of 50kPa to 106kPa

Operational environmental conditions
- The warmer must acclimate to the room temperature in the environment it will be placed—24 hours is recommended.
- The recommended environmental temperature range is 15°C to 32°C (60°F to 90°F).
- The recommended relative humidity is above 20%, non-condensing.

Receipt of Warmer

The warmer has been thoroughly tested and inspected to ensure only the highest quality warmer is provided. Upon receipt, inspect for any possible shipping damage and report it at once to the delivering carrier. See Transportation Damage and Claims section.

This warmer, complete with unattached items and accessories, may be delivered in one or more packages. Confirm that all standard items and options have been received with each warmer as ordered. Save all the information packed with the warmer.

Register the warmer online to assure prompt service in the event of a warranty parts and labor claim.

http://www.enthermics.com/warranty-registration

Environmental Conditions

Transport and storage environmental conditions (not to exceed 15 days)
- Ambient temperature range of -40°C to +70°C (-40°F to +159°F)
- Relative humidity range of 10% to 95%, non-condensing
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- The warmer must acclimate to the room temperature in the environment it will be placed—24 hours is recommended.
- The recommended environmental temperature range is 15°C to 32°C (60°F to 90°F).
- The recommended relative humidity is above 20%, non-condensing.

Receipt of Warmer

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http://www.enthermics.com/warranty-registration

Transportation Damage and Claims

- Indicates that the package contents should not be used if the package has been damaged or opened.

All Enthermics Medical Systems warmers are sold Free on Board (F.O.B.) shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, do not put the warmer into service until the damage has been inspected by an authorized service provider.

Should damage occur in shipment, it is a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Conduct an immediate inspection while the warmer is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the warmer is moved to a storage area.
2. Do not sign a delivery receipt or a freight bill until a proper count has been made and inspection of all warmers are received.
3. Note all damage to packages directly on the carrier’s delivery receipt.
4. Have the driver sign the delivery receipt. If the driver refuses to sign, make a notation of this refusal on the receipt.
5. If the driver refuses to allow inspection, write the following on the delivery receipt: Driver refuses to allow inspection of containers for visible damage.
6. Contact the carrier’s office immediately upon finding damage and request an inspection. Mail a written confirmation to the carrier’s office with the time, date, and the person called.
7. Save any packages and packing material for further inspection by the carrier.
8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

Enthermics will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. Enthermics cannot, however, file any damage claims, assume the responsibility of any claims, or accept deductions in payment for such claims.
Unpacking

1. Carefully remove the appliance from the carton or crate.
   
   **NOTE:** Do not discard the carton and other packaging material until the appliance has been inspected for hidden damage and tested for proper operation.

2. Read all instructions in this manual carefully before initiating the installation of this appliance, using the appliance or performing routine maintenance. Following procedures other than those indicated in this guide to use and clean the appliance is considered inappropriate and may cause damage, injury or fatal accidents, in addition to invalidating the guarantee and relieving the manufacturer of all liability.

3. **Do not discard this manual.** This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. Additional manuals are available from the service department.

4. Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.
Knowledge of proper procedures is essential to the safe operation of electrically energized appliances. The following hazard signal words and symbols may be used throughout this manual.

**DANGER**
Used to indicate the presence of a hazard that will cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.

**WARNING**
Used to indicate the presence of a hazard that CAN cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.

**CAUTION**
Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.

Used to indicate that referral to operating instructions is a mandatory action. If not followed, the operator or patient could suffer personal injury.

Used to indicate that referral to operating instructions is recommended to understand operation of the appliance.

**NOTE**
Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.

**NOTICE**
A temporary odor may be noticeable upon initial start-up of the warmer. Contact manufacturer if the odor persists after a day or more of continuous use.

- The blanket chamber is intended for warming **dry**, cotton blankets or towels **only**. The blanket chamber is designed to elevate blanket temperatures to a level which will increase patient comfort.
- This warmer is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. The warmer can be used wherever there is appropriate space and electrical source including patient support areas, ER, ICU, PACU, surgical suites, patient rooms, and nursing stations. **Do not** use the warmer in the presence of flammable anesthetic mixtures (with air, oxygen, or nitrous oxide).
- Operating instructions and warnings must be read and understood by all operators and users.
- Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified and trained technicians.
- This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

**CAUTION**
Appliance and accessories may be heavy. To prevent serious injury, **always** use a sufficient number of trained and experienced workers when moving or leveling appliance and handling accessories.

**CAUTION**
The door may swing during transport. Only transport the appliance when the door is closed and secure.

**NOTE**
For equipment delivered for use in any location regulated by the following directive:

**DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.**

**NOTICE** Due to the energy efficient design of the appliance and tight seal around the door, water vapor from moist or damp blankets placed in the appliance may cause condensation to collect on interior surfaces. To avoid this accumulation, use **dry** blankets or towels.
Preparation Before Operating the Appliance

1. Clean the interior and exterior with a damp cloth and mild soap solution.
2. Wipe with an appropriate disinfectant.
3. Wipe dry with a clean cloth or air dry.

General Information

Specifications:
- Single-chamber warming cabinet.
- White epoxy-coated steel exterior casing and interior insert.
- Single pane, energy-efficient, e-coated glass window in door allows for inventory observation.
- Easy push-button door for hands-free operation.
- Door is fully gasketed and hinged on the right side of the unit.
- WarmSafe™ incorporates a multiple zone warming technology (Patent No: US 8,217,316; US 8,581,152) that heats where and when it is needed. All chamber surface temperatures are monitored, providing an efficient balance of heat, low-energy consumption and minimal heat loss.
- DC350 & DC750 include a heated center shelf to further optimize heat distribution throughout the cavity.
- Four (4) non-skid rubber feet are standard.

Control:
- Adjustable temperature range of 32° - 71°C (90° - 160°F)
- Operates in Celsius or Fahrenheit.
- Four digit L.E.D. display.
- On/off button.
- Up and down adjustment buttons.
- Actual temperature button.
- Interior light button.
- Built-in speaker for audible feedback.
- Integrated control lockout feature.

Additional features:
- L.E.D. interior lighting casts a comforting blue glow with two (2) different intensity settings and off mode.
- Safety: In the event of a power failure the cabinet will retain its programming and operates as previously set when power is restored.
- Safety: A warming shut-off system, separate from the electronic control, prevents overheating.
- Convenience: Access point and removable cover has been added to the back panel that allows the addition of data logging or temperature management hardware.
- Convenience: Stackable configurations are available for additional capacity or to pair with fluid warmers.

Clearance requirements:
- 3" (76mm) from rear
- 1" (25mm) from top and sides
- 3/4" (19mm) from bottom
### Dimensions

#### DC150

<table>
<thead>
<tr>
<th>Dimensions (H x W x D)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>With feet (standard):</td>
<td>17.0&quot; x 18.5&quot; x 20&quot; (432mm x 470mm x 508mm)</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>1.5 ft³</td>
</tr>
<tr>
<td><strong>Weight</strong> (est.)</td>
<td>Net: 56 lbs (25 kg) Ship: 98 lbs (44 kg)</td>
</tr>
</tbody>
</table>

**Electrical**

#### DC250

<table>
<thead>
<tr>
<th>Dimensions (H x W x D)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>With feet (standard):</td>
<td>22&quot; x 18.5&quot; x 23&quot; (559mm x 470mm x 584mm)</td>
</tr>
<tr>
<td>With plate and casters (optional):</td>
<td>26.25&quot; x 18.5&quot; x 23&quot; (667mm x 470mm x 584mm)</td>
</tr>
<tr>
<td>With bumper and casters (optional):</td>
<td>26.25&quot; x 21.25&quot; x 25&quot; (667mm x 540mm x 635mm)</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>2.5 ft³</td>
</tr>
<tr>
<td><strong>Weight</strong> (est.)</td>
<td>Net: 67 lbs (30 kg) Ship: 118 lbs (54 kg)</td>
</tr>
</tbody>
</table>

#### DC350

<table>
<thead>
<tr>
<th>Dimensions (H x W x D)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>With feet (standard):</td>
<td>28&quot; x 18.5&quot; x 23&quot; (711mm x 470mm x 584mm)</td>
</tr>
<tr>
<td>With plate and casters (optional):</td>
<td>32.25&quot; x 18.5&quot; x 23&quot; (819mm x 470mm x 584mm)</td>
</tr>
<tr>
<td>With bumper and casters (optional):</td>
<td>32.25&quot; x 21.25&quot; x 25.25&quot; (819mm x 540mm x 641mm)</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>3.5 ft³</td>
</tr>
<tr>
<td><strong>Weight</strong> (est.)</td>
<td>Net: 91 lbs (41 kg) Ship: 146 lbs (66 kg)</td>
</tr>
</tbody>
</table>

#### DC400

<table>
<thead>
<tr>
<th>Dimensions (H x W x D)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>With feet (standard):</td>
<td>22&quot; x 24.0&quot; x 25.0&quot; (559mm x 610mm x 635mm)</td>
</tr>
<tr>
<td>With plate and casters (optional):</td>
<td>26.25&quot; x 24.0&quot; x 25.0&quot; (667mm x 610mm x 635mm)</td>
</tr>
<tr>
<td>With bumper and casters (optional):</td>
<td>26.5&quot; x 26.75&quot; x 27.5&quot; (673mm x 679mm x 699mm)</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>4.0 ft³</td>
</tr>
<tr>
<td><strong>Weight</strong> (est.)</td>
<td>Net: 85-1/2 lbs (439 kg) Ship: 160 lbs (73 kg)</td>
</tr>
</tbody>
</table>

#### DC750

<table>
<thead>
<tr>
<th>Dimensions (H x W x D)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>With feet (standard):</td>
<td>35.5&quot; x 24.0&quot; x 25.25&quot; (902mm x 610mm x 641mm)</td>
</tr>
<tr>
<td>With bumper and casters (optional):</td>
<td>39.25&quot; x 24.0&quot; x 25.25&quot; (997mm x 610mm x 641mm)</td>
</tr>
<tr>
<td>With casters (optional):</td>
<td>39.25&quot; x 26.75&quot; x 27.5&quot; (997mm x 680mm x 699mm)</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>7.5 ft³</td>
</tr>
<tr>
<td><strong>Weight</strong> (est.)</td>
<td>Net: 134 lbs (61 kg) Ship: 196 lbs (89 kg)</td>
</tr>
</tbody>
</table>

**Domestic ground shipping information. Contact factory for export weight and dimensions.**
**Electrical Information**

**Danger**

To prevent serious personal injury, death, or property damage:

Do not use this warmer in the presence of flammable anesthetic mixtures (with air or with oxygen or nitrous oxide).

Not category AP or APG equipment

**Locate the Rating Tag**

Verify the power requirements for the appliance. The power specification is located on the appliance identification rating tag. This tag is permanently attached to the appliance.

**Power Requirements**

**DC150**

- **120 V.A.C. — 60 Hz, 1 ph**
  - 0.6 kW, 5.0 Amps
  - Safety Class I Equipment
  - Mode of Operation: Continuous

- **220 V.A.C. — 50Hz, 1 ph**
  - 0.6 kW, 2.7 Amps
  - Type B Equipment

- **230 V.A.C. — 50 Hz, 1 ph**
  - 0.6 kW, 2.6 Amps
  - Type B Equipment

**DC350**

- **120 V.A.C. — 60 Hz, 1 ph**
  - 0.8 kW, 6.7 Amps
  - Safety Class I Equipment
  - Mode of Operation: Continuous

- **220 V.A.C. — 50Hz, 1 ph**
  - 0.8 kW, 3.6 Amps
  - Type B Equipment

- **230 V.A.C. — 50 Hz, 1 ph**
  - 0.8 kW, 3.5 Amps
  - Type B Equipment

**DC350**

- **120 V.A.C. — 60 Hz, 1 ph**
  - 0.6 kW, 5.0 Amps
  - Safety Class I Equipment
  - Mode of Operation: Continuous

- **220 V.A.C. — 50Hz, 1 ph**
  - 0.6 kW, 2.7 Amps
  - Type B Equipment

- **230 V.A.C. — 50 Hz, 1 ph**
  - 0.6 kW, 2.6 Amps
  - Type B Equipment

**DC400**

- **120 V.A.C. — 60 Hz, 1 ph**
  - 0.8 kW, 6.7 Amps
  - Safety Class I Equipment
  - Mode of Operation: Continuous

- **220 V.A.C. — 50Hz, 1 ph**
  - 0.8 kW, 3.6 Amps
  - Type B Equipment

- **230 V.A.C. — 50 Hz, 1 ph**
  - 0.8 kW, 3.5 Amps
  - Type B Equipment

**DC750**

- **120 V.A.C. — 60 Hz, 1 ph**
  - 0.8 kW, 6.7 Amps
  - Safety Class I Equipment
  - Mode of Operation: Continuous

- **220 V.A.C. — 50Hz, 1 ph**
  - 0.8 kW, 3.6 Amps
  - Type B Equipment

- **230 V.A.C. — 50 Hz, 1 ph**
  - 0.8 kW, 3.5 Amps
  - Type B Equipment

**Wire diagram is located under top lid of appliance.**

Grounding reliability can only be achieved when appliance is connected to an equivalent receptacle marked “Hospital Grade.”

Medical Equipment classified by Underwriters Laboratories with Respect to Electrical Shock, Fire and Mechanical Hazards only, in Accordance with UL 61010–1 and CAN/CSA C22.2 No. 61010–1.

**WARNING**

For CE approved appliances: To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization-bonding lead must be connected to this stud and the other appliances/metal parts to provide sufficient protection against potential difference.

The terminal is marked with the following symbol.

*Other international plugs are available, contact the manufacturer for more information.
**Electrical Information**

**Guidance and Manufacturer’s Declaration**

The warmer requires special precautions regarding EMC (Electromagnetic Compatibility) and needs to be installed and put into service according to the EMC information provided in the accompanying documents.

Portable and mobile RF communications equipment can affect medical electrical equipment.

A risk of increased emissions or decreased immunity may result if the power cord attached is altered or a manufacturer supplied power cable is not used.

The warmer should not be used adjacent to or stacked with other equipment.

Observe to verify normal operation if it is necessary to use adjacent to or stacked with other equipment.

The essential performance of the warmer is to not exceed an internal temperature of 180°F / 82°C (+10%) for blanket warmers or 150°F / 66°C (+10%) for fluid warmers.

**Electromagnetic Emissions**

The warmers are intended for use in the electromagnetic environment specified below. The customer or the end user of this warmer should assure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Emissions test</th>
<th>Compliance</th>
<th>Electromagnetic environment - guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF emissions; CISPR 11</td>
<td>Group 1</td>
<td>The warmer uses RF energy only for internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.</td>
</tr>
<tr>
<td>RF emissions; CISPR 11</td>
<td>Class B</td>
<td>The warmer is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.</td>
</tr>
<tr>
<td>Harmonic emissions; IEC 61000-3-2</td>
<td>Class A</td>
<td></td>
</tr>
<tr>
<td>Voltage fluctuations/Flicker emissions; IEC 61000-3-3</td>
<td>Complies</td>
<td></td>
</tr>
</tbody>
</table>

**Electromagnetic Immunity**

The warmer is intended for use in the electromagnetic environment specified below. The customer or the end user of this warmer should assure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity test</th>
<th>IEC 60601 test level</th>
<th>Compliance level</th>
<th>Electromagnetic environment - guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electromagnetic discharge (ESD)</td>
<td>±6 kV contact</td>
<td>±6 kV contact</td>
<td>Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.</td>
</tr>
<tr>
<td>IEC 61000-4-2</td>
<td>±8 kV air</td>
<td>±8 kV air</td>
<td></td>
</tr>
<tr>
<td>Electrical fast transient/burst</td>
<td>±2 kV for power</td>
<td>+2 kV for power</td>
<td>Main power quality should be that of a typical commercial or hospital environment. The warmer does not have any input/output lines.</td>
</tr>
<tr>
<td>IEC 61000-4-4</td>
<td>supply lines; ±1 kV</td>
<td>supply lines</td>
<td></td>
</tr>
<tr>
<td>for input/output lines</td>
<td>for input/output lines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surge</td>
<td>±1 kV differential</td>
<td>±1 kV differential</td>
<td>Mains power quality should be that of a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>IEC 61000-4-5</td>
<td>mode; ±2 kV common mode</td>
<td>mode; ±2 kV</td>
<td></td>
</tr>
<tr>
<td>common mode</td>
<td></td>
<td>common mode</td>
<td></td>
</tr>
<tr>
<td>Voltage dips, short interruptions and</td>
<td>&lt;5 % UT (&gt;95 % dip in</td>
<td>&lt;5 % UT (&gt;95 % dip in</td>
<td>Mains power quality should be that of a typical commercial or hospital environment. If the user of the warmer requires continued operation during power mains interruptions, it is recommended that the warmer be powered from an uninterrupted power supply or a battery.</td>
</tr>
<tr>
<td>voltage variations on power supply</td>
<td>UT) for 0.5 cycle</td>
<td>UT) for 0.5 cycle</td>
<td></td>
</tr>
<tr>
<td>input lines</td>
<td>40 % UT (60 % dip in</td>
<td>40 % UT (60 % dip in</td>
<td></td>
</tr>
<tr>
<td>IEC 61000-4-11</td>
<td>UT) for 5 cycles</td>
<td>UT) for 5 cycles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>70 % UT (30 % dip in</td>
<td>70 % UT (30 % dip in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UT) for 25 cycles</td>
<td>UT) for 25 cycles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;5 % UT (&gt;95 % dip in</td>
<td>&lt;5 % UT (&gt;95 % dip in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UT) for 5 sec</td>
<td>UT) for 5 sec</td>
<td></td>
</tr>
<tr>
<td>Power frequency (50/60 Hz) magnetic</td>
<td>3 A/m</td>
<td>3 A/m</td>
<td>Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>field</td>
<td>IEC 61000-4-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** UT is the a.c. mains voltage prior to application of the test level.
Electrical Information

Electromagnetic Emissions

The warmer is intended for use in the electromagnetic environment specified below. The customer or the end user of this warmer should assure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity test</th>
<th>IEC 60601 test level</th>
<th>Compliance level</th>
<th>Electromagnetic environment - guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted RF</td>
<td>IEC 61000-4-6</td>
<td>3 V/m</td>
<td>Portable and mobile RF communications equipment should be used no closer to any part of the warmer, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</td>
</tr>
<tr>
<td>Radiated RF</td>
<td>IEC 61000-4-3</td>
<td>3 V/m</td>
<td>Recommended separation distance</td>
</tr>
<tr>
<td></td>
<td>150 kHz to 80 MHz</td>
<td>3 V/m</td>
<td>d = ( \frac{3.5}{3} \sqrt{P} )</td>
</tr>
<tr>
<td></td>
<td>80 MHz to 2.5 GHz</td>
<td>3 V/m</td>
<td>d = ( \frac{3.5}{3} \sqrt{P} )</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>80 MHz to 800 MHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>d = ( \frac{7}{3} \sqrt{P} )</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>800 MHz to 2.5 GHz</td>
</tr>
</tbody>
</table>

Where \( P \) is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and \( d \) is the recommended separation distance in meters (m).

Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range.

Interference may occur in the vicinity of equipment marked with the following symbol: ⚠️

**NOTE:**
1. At 80 MHz and 800 MHz, the higher frequency range applies. 2. These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Electromagnetic Immunity Recommended Separation Distance Between Portable And Mobile RF Communications Equipment And This Warmer

The warmer is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the warmer can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the warmer as recommended below, according to the maximum output power of the communications equipment.

<table>
<thead>
<tr>
<th>Rated maximum output power of transmitter</th>
<th>Separation distance according to frequency of transmitter</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>150 kHz to 80 MHz</td>
</tr>
<tr>
<td>0.01</td>
<td>( \frac{3.5}{3} \sqrt{P} )</td>
</tr>
<tr>
<td>0.1</td>
<td>0.117</td>
</tr>
<tr>
<td>1</td>
<td>0.369</td>
</tr>
<tr>
<td>10</td>
<td>1.167</td>
</tr>
<tr>
<td>100</td>
<td>3.689</td>
</tr>
<tr>
<td>110</td>
<td>11.667</td>
</tr>
</tbody>
</table>

For transmitters rated at a maximum output power not listed above, the recommended separation distance \( d \) in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where \( P \) is the maximum output rating of the transmitter in watts (W) according to the transmitter manufacturer.

**NOTE:**
1. At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. 2. These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.
Blanket Electronic Control Features
The following refers to features that are available when the electronic control is powered on.

Electronic Control Panel

**On/Off Button**
- Press the **On/Off** button to power on the electronic control. Press and hold the **On/Off** button for three (3) seconds to power the electronic control off.

**Interior Light Button**
- Press the **Interior Light** button to toggle blue interior LED light intensity to high, low, or off.

**Up Arrow/Down Arrow Buttons**
- Used to increase or decrease the temperature set-point. Additionally used to set the current to increase or decrease time, date, auto-start, and auto-stop times.

**Temperature Recall Button**
- Press the **Temperature Recall** button to view the actual temperature captured with the cavity sensor. The display will show the actual cavity temperature for five (5) seconds before reverting back to displaying the current temperature set-point.

**LED Digital Display**
- The control has a four-digit LED display.

LED Display Status Indicators

**Error Indicator Light**
- This indicator will illuminate and an alarm will sound if the electronic control senses an error has occurred (see troubleshooting guide). The alarm can be muted by pressing the on button.

**Error Acknowledgement**
- To clear or acknowledge an error, press the **On/Off** button. Press the **On/Off** button to acknowledge the periodic alarm. If the alarm continues or returns, the appliance is still experiencing an error and may need service.

**Button Lockout Indicator Light**
- The electronic control can be locked so that no changes can be made to the temperature set-point or the mode selection. Press and hold the **On/Off** button and the **Up Arrow** button at the same time. The lock indicator will illuminate. Attempts to operate the on/off button, or to change the temperature set-point will be unsuccessful. To unlock the electronic control, press and hold the **On/Off** button and the **Down Arrow** button at the same time. The electronic control will unlock, and the lock indicator will go out.

**Power Fail Detection**
- If the power were to fail for any reason while electronic control is powered on, the electronic control will retain in memory its current operating state. When the power is restored, the electronic control alarms once and resumes operating in its previously set mode. The on/off status indicator will blink, alerting the operator that such an event has occurred. Press the **On/Off** button once to acknowledge that the power has been restored.

**NOTE:** If the timer option is installed, the appliance must be off for more than 60 seconds to signal a power failure alarm. When acknowledging a power interruption, the display will show the length of time in hours and minutes that the control has been off due to the power outage.
Operation Instructions

Blanket Electronic Control Features  (continued)

Temperature Range:
32°C-71°C (90°F-160°F)

Electronic Control and LED Display

Temperature Format Selection

While the electronic control is in off state, press and hold the Temperature Recall button for four (4) seconds to display the current temperature scale. Press the Up Arrow or Down Arrow buttons to switch between °F (fahrenheit) or °C (celsius).

Sound Function

(Prior to September 2015)
The sound function can be turned on or off.

1. While the appliance is off, press and hold the Down Arrow button for four (4) seconds.
2. The display will indicate the current sound status, 0 (off) or 1 (on). Press the Up Arrow or Down Arrow button to toggle between the two choices.

(After September 2015)
The sound volume can be changed:

1. While the appliance is on, press the Temperature Recall button and the Down Arrow button to display the current volume setting. Release.
2. Press the Up Arrow or Down Arrow button to adjust the volume. Volume settings range from 0 (mute) to 12 (loud).

NOTE: The alarm volume is set at the maximum (12) and cannot be disabled.
Optional Timer Control Feature

NOTE: If the appliance is not equipped with this optional automated timer feature or it is not in use this section can be skipped.

The appliance time must be manually reset for daylight saving time.

The times are displayed in 24-hour format (hh:mm). Midnight is 00:00. Noon is 12:00. 1:00 P.M. is 13:00.

If the display has changed due to user interaction, the display will reset after five (5) seconds of inactivity.

If the start and stop times are the same, the appliance will recognize the off time only and will not turn on without user intervention. This is the best way to set the warmer for the days when it is not needed.

The timer option must be off to reset the appliance time.

An E-60 error is displayed if the clock is not set or the control has been off too long and the memory has become corrupted.

Timer Control Panel

Press the Timer On/Off button to initiate the automatic start/stop timer operation. The on/off indicator light next to this button will illuminate when the timer is turned on.

Press the Time button to view the current time, date, and day and initiate changes to the settings.

Press the Start Time button to view the current automatic start time and initiate changes to the set time.

Press the Stop Time button to view the current automatic stop time and initiate changes to the set time.

Resetting the Time

1. **Acknowledge E-60 error**
   a. Press the Time button to acknowledge the E-60 error displayed when the control has been inactive.

2. **View and adjust time**
   a. Press and hold the Time button for four (4) seconds until the auto-timer on/off indicator light blinks slowly and the display shows the current set time.
   b. Press the Up Arrow or Down Arrow button to adjust the time in increments of one (1) minute or press and hold the Up Arrow or Down Arrow button to adjust the minutes more quickly.

3. **View and adjust year**
   a. Press the Time button again to view or set the year.
   b. Press the Up Arrow or Down Arrow button to adjust the year. The year will always adjust by one (1).

4. **View and adjust date**
   a. Press the Time button again to view or set the date.
   b. Press the Up Arrow or Down Arrow button to adjust the date.

5. **View and adjust day code (optional)**
   a. Press the Time button again to set the day code (d1-d7).
   b. Press the Up Arrow or Down Arrow button to adjust the day code.

NOTE: Setting the day code is optional unless the user configures the auto-timer to start or stop at a different time for each day of the week. Typically Monday=d1, Tuesday=d2, etc.
Optional Timer Control Feature  (continued)

Same Start and Stop Times for the Week

**Note:** The timer option must be off to set the start time. Activating this mode overrides all individual day programming.

1. **View and adjust start time**
   a. Press the **Start Time** button to view the start time for that day.
   b. Press and hold the **Start Time** button for four (4) seconds to set the current day’s start time as the same time for every day of the week. The on/off indicator light will blink slowly.
   c. Press the **Up Arrow** or **Down Arrow** button to change the default start time minutes. Press and hold the **Up Arrow** or **Down Arrow** button to adjust the hour.

2. **View and adjust stop time**
   a. Press the **Stop Time** button to view the stop time for that day.
   b. Press and hold the **Stop Time** button for four (4) seconds to set the current day’s stop time as the same time for every day of the week. The on/off indicator light will blink slowly.
   c. Press the **Up Arrow** or **Down Arrow** button to change stop time. Press and hold the **Up Arrow** or **Down Arrow** button to adjust the hour.

3. When both times are set, allow the on/off indicator light to extinguish and then press and hold the **Timer On/Off** button until the on/off indicator light stays on steadily.

Different Start and Stop Times for Each Day of the Week

1. **View and adjust specific day**
   a. Press and hold the **Time** button for eight (8) seconds. The on/off indicator light will blink rapidly. The display will show the current day.
   b. Adjust the day by pressing the **Up Arrow** or **Down Arrow** button.

2. **View and adjust start time for that day**
   a. Press the **Stop Time** button to display the start time for that day.
   b. Press the **Up Arrow** or **Down Arrow** button to adjust the automatic start time.

3. **View and adjust stop time for that day**
   a. Press the **Stop Time** button to display the start time for that day.
   b. Press the **Up Arrow** or **Down Arrow** button to adjust the automatic stop time.

4. **Repeat steps 1-3 for each day of the week**

5. When all days and times are set, allow the on/off indicator light to extinguish and then press and hold the **Timer On/Off** button until the on/off indicator light stays on steadily.
**WARNING**

To prevent personal injury or property damage: Blanket support assembly and shelf must be in place to prevent the blankets from being scorched or discolored.

**NOTICE:** The blanket support assembly and shelf must be installed to prevent blankets from scorching or discoloring.

Do not use blanket cleaning agents that cause fabric to become brittle over time.

To enable the warmer to function properly, do not overload the interior. Blankets must not exceed the height of the support assembly. Allow 1" (25mm) gap between the top interior walls or shelf and the blankets.

A temporary odor may be noticeable upon initial start-up. Contact the manufacturer if the odor persists after a day or more of continuous use.

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1. **Plug appliance in with supplied cord.** The appliance must be plugged into an appropriate hospital grade receptacle as specified on the electrical information page.
2. **Push the power circuit breaker switch to the on (I) position.** The rocker-type switch is located at the back of the appliance.
3. **Activate the control** by pressing the **On/Off** button on the control panel on the front of the appliance. The digital display indicates the last temperature set-point of compartment.
4. **Set the desired temperature.** Press and hold the **Up Arrow** or **Down Arrow** button to change the value shown in the display. The temperature set-point range is 32°C - 71°C (90°F - 160°F).
   
   **NOTE:** Switching from a higher temperature setting to a lower setting may cause an unwanted alarm.
5. **Push the door latch on the control interface to open the door.**
6. **Load the chamber with dry, cotton blankets.** Do not warm items containing plastic, rubber or metal snaps, studs, hooks, etc. Check that the epoxy-coated blanket support assembly and shelf is in place. This blanket support assembly and shelf must be used to hold blankets. A full load of blankets takes two to three hours to reach optimum temperature. Make sure that the appliance door is securely closed during use.
7. **Rotate load of blankets daily.** Rotate the blankets at the bottom of the load to the top to ensure equal usage. Failure to rotate the blankets can cause the blankets to discolor.
Cleaning and Preventative Maintenance

### WARNING

> To prevent serious personal injury, death, or property damage:
> **Do not** steam clean, hose down or flood the interior or exterior with water or liquid solution of any kind. **Do not** use water jet to clean. Failure to observe this precaution will void the warranty.

(IXP-0 - Listed as Ordinary)

### WARNING

> Electric shock hazard. Perform lockout/tagout procedures before cleaning or servicing this appliance.

### CAUTION

> Fire hazard.
> **Do not** use flammable cleaning agents on the appliance.

### NOTICE:

*To protect surfaces, **never** use abrasive cleaning compounds, chloride based cleaners, or cleaners containing quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel. Never use wire brushes, metal scouring pads or scrapers. Failure to observe this precaution will void the warranty.*

Protecting Stainless Steel
It is important to guard against corrosion in the care of stainless steel surfaces. Harsh, corrosive, or inappropriate chemicals can completely destroy the protective surface layer of stainless steel, epoxy or plastic. Abrasive pads, steel wool, or metal implements abrade surfaces causing damage to this protective coating and eventually result in areas of corrosion. Water can contain high to moderate concentrations of chloride, causing oxidation and pitting that results in rust and corrosion. In addition, acidic spills that remain on metal surfaces are contributing factors in corroded surfaces.

Proper cleaning agents, materials, and methods are vital to maintaining the appearance and life of this warmer. Spilled items should be removed and the area wiped as soon as possible but at the very least, a minimum of once per day. Always wipe standing water as quickly as possible.

Cleaning Agents
Always use the proper cleaning agent at the manufacturer's recommended strength. Contact a local cleaning supplier for product recommendations.

Cleaning Materials
Cleaning can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods are needed, use a non-abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of the surface metal to avoid surface scratches.

How to Clean the Warmer
1. Disconnect the warmer from the power source.
2. Remove and wash any detachable items such as the support assembly with hot, soapy water. Dry with a clean, lint-free cloth.
3. Clean the interior and exterior of the warmer with a mild soap and water solution. Apply the solution with a clean, damp cloth. Do not use commercial or household cleaners that contain ammonia.
   **NOTE:** Make sure to wipe the control panel, door vents, door handle or door button, and door gaskets.
4. Remove all detergent residue from the interior and exterior of the warmer with a clean, damp cloth.
5. Dry the interior and exterior of the warmer with a clean, lint-free cloth. Leave the door open until the interior is completely dry.
6. Sanitize the interior of the warmer with a sanitizing solution. This solution must be approved for use on stainless steel surfaces.
7. Clean the warmer glass with glass cleaner or distilled vinegar.
8. Replace the support assembly.
### Preventative Maintenance Checklist

#### Daily Checklist:
- Is the operation and care manual available?
- Has everyone been properly trained in the operation and safety instructions of this appliance?
- Is the appliance properly loaded? Blankets must not exceed the height of the support assembly. Allow 1" (25mm) gap between the top interior walls or shelf and the blankets.

#### Weekly Checklist:
- Inspect the condition of the plug and cord and replace if damaged.
- Remove the inserts and wash separately, set aside to dry before placing back into the appliance.
- Blow dust from the interior, the outer vents and around the top of the appliance.
- Wipe down the interior.
- Check that the electronic controller LEDs illuminate.*
- Check that the interior LED illuminates (if applicable).*
- Check the insert assembly. Check the blanket support assembly and the shelf. Is the assembly in place? Are any pieces missing?*

#### Monthly Checklist:
- Check the integrity of the door gasket. Are there any tears? Is the gasket worn or loose? Ensure that the seal is tight to the body. Replace the gasket if the integrity is compromised.*
- Check the air temperature sensor mounted in the interior of chamber. Is the sensor guard in place and fully secured to the appliance?
- Check the condition of the casters or feet. Are the components secure and tightly threaded?
- Check the condition of the control panel overlay. Are there any tears or excessive wear on the graphic? Does the control work properly when the buttons are pushed?*
- Check the condition of the stacking hardware (if applicable), making sure the mounting bolts and the hardware are secure.

#### Six-month Checklist:
- Is the set-point temperature comparable to the actual temperature displayed? Check cavity air temperature with a quality thermocouple placed 1" (25mm) from the cavity sensor – not allowing it to touch any surface. Monitor for approximately one hour in an empty interior.

**NOTE:** Blanket warmer temperature may fluctuate ±10°F (6°C) from set point.

*Contact service for immediate repair.
Dimension Drawings

DC150 with standard feet

Dimensions (H x W x D)

With feet (standard): 17.0" x 18.5" x 20" (432mm x 470mm x 508mm)

Capacity 1.5 ft³

Weight** (est.) Net: 56 lbs (25 kg) Ship: 98 lbs (44 kg)

Electrical

*Other international plugs are available, contact the manufacturer for more information.

**Domestic ground shipping information. Contact factory for export weight and dimensions.

Clearance requirements:

3" (76mm) from rear
1" (25mm) from top and sides
3/4" (19mm) from bottom
DC250 with standard feet

**Dimensions (H x W x D)**

- With feet (standard): 22" x 18.5" x 23" (559mm x 470mm x 584mm)
- With plate and casters (optional): 26.25" x 18.5" x 23" (667mm x 470mm x 584mm)
- With bumper and casters (optional): 26.25" x 21.25" x 25" (667mm x 540mm x 635mm)

**Capacity**

2.5 ft³

**Weight**

- Net: 67 lbs (30 kg)  
- Ship: 118 lbs (54 kg)  

**Electrical**

- 120 V.A.C. — 60 Hz, 1 ph  
  - 0.6 kW, 5.0 Amps  
  - Safety Class I Equipment  
  - No Applied Parts  
  - Mode of Operation: Continuous  
  - NEMA 5-15P  
  - 15A - 125V Plug  
  - Hospital Grade  
  - IPX-0  

- 220 V.A.C. — 50 Hz, 1 ph  
  - 0.6 kW, 2.7 Amps  
  - Type B Equipment  
  - BS 1363 Plug* (UK only)  
  - CEE 7/7*  
  - 220-230V Plug  
  - IPX-0  

- 230 V.A.C. — 50 Hz, 1 ph  
  - 0.6 kW, 2.6 Amps  
  - Type B Equipment  
  - CEE 7/7*  
  - 220-230V Plug  

**Clearance requirements:**

- 3" (76mm) from rear  
- 1" (25mm) from top and sides  
- 3/4" (19mm) from bottom

**Domestic ground shipping information. Contact factory for export weight and dimensions.**
DC250 with optional plate and casters

#5017542 (white epoxy coated) – 3” (76mm) casters (2 rigid, 2 swivel with brake)
#5017544 (stainless steel) – 3” (76mm) casters (2 rigid, 2 swivel with brake)

Clearance requirements:
3" (76mm) from rear
1" (25mm) from top and sides
3/4" (19mm) from bottom
DC250 with optional bumpers and casters

- #5017546 (white epoxy coated) – 3" (76mm) casters (2 rigid, 2 swivel with brake)
- #5017548 (stainless steel) – 3" (76mm) casters (2 rigid, 2 swivel with brake)

**Clearance requirements:**
- 3" (76mm) from rear
- 1" (25mm) from top and sides
- 3/4" (19mm) from bottom

**Dimension Drawings**

CORD LENGTH: 6 ft (1.83m) (est.)
DC350 with standard feet

**Dimensions** (H x W x D)

- With feet (standard): 28” x 18.5” x 23” (711mm x 470mm x 584mm)
- With plate and casters (optional): 32.25” x 18.5” x 23” (819mm x 470mm x 584mm)
- With bumper and casters (optional): 32.25” x 21.25 x 25.25” (819mm x 540mm x 641mm)

**Capacity** 3.5 ft³

**Weight** (est.)

- Net: 91 lbs (41 kg)
- Ship: 146 lbs (66 kg)

**Clearance requirements:**

- 3” (76mm) from rear
- 1” (25mm) from top and sides
- 3/4” (19mm) from bottom

**Domestic ground shipping information. Contact factory for export weight and dimensions.**
DC350 with optional plate and casters

- #5017542 (white epoxy coated) – 3" (76mm) casters (2 rigid, 2 swivel with brake)
- #5017544 (stainless steel) – 3" (76mm) casters (2 rigid, 2 swivel with brake)

Clearance requirements:
- 3" (76mm) from rear
- 1" (25mm) from top and sides
- 3/4" (19mm) from bottom

Cord length: 6 ft (1.83m) (est.)
DC350 with optional bumpers and casters

- #5017546 (white epoxy coated) – 3” (76mm) casters (2 rigid, 2 swivel with brake)
- #5017548 (stainless steel) – 3” (76mm) casters (2 rigid, 2 swivel with brake)

**Clearance requirements:**

- 3” (76mm) from rear
- 1” (25mm) from top and sides
- 3/4” (19mm) from bottom

**Dimensions:**

- 10.6” (270mm) IEC Cord Inlet
- Cord length: 6 ft (1.83m) (est.)

![Dimension Drawings](image-url)
DC400 with standard feet

**Dimensions (H x W x D)**
- With feet (standard): 22" x 24.0" x 25.0" (559mm x 610mm x 635mm)
- With plate and casters (optional): 26.25" x 24.0" x 25.0" (667mm x 610mm x 635mm)
- With bumper and casters (optional): 26.5" x 26.75" x 27.5" (673mm x 679mm x 699mm)

**Capacity**
- 4.0 ft³

**Weight**
- Net: 85-1/2 lbs (439 kg)
- Ship: 160 lbs (73 kg)

**Clearance requirements:**
- 3" (76mm) from rear
- 1" (25mm) from top and sides
- 3/4" (19mm) from bottom

**Domestic ground shipping information. Contact factory for export weight and dimensions.**
DC400 with optional plate and casters

#5017543 (white epoxy coated) – 3" (76mm) casters (2 rigid, 2 swivel with brake)
#5017545 (stainless steel) – 3" (76mm) casters (2 rigid, 2 swivel with brake)

Clearance requirements:
3" (76mm) from rear
1" (25mm) from top and sides
3/4" (19mm) from bottom
DC400 with optional bumpers and casters

#5017547 (white epoxy coated) – 3" (76mm) casters (2 rigid, 2 swivel with brake)
#5017549 (stainless steel) – 3" (76mm) casters (2 rigid, 2 swivel with brake)

Clearance requirements:
3" (76mm) from rear
1" (25mm) from top and sides
3/4" (19mm) from bottom

Cord length: 6 ft (1.83m) (est.)
**DC750 with standard feet**

**Dimensions (H x W x D)**

- With feet (standard): 35.5" x 24.0" x 25.25" (902mm x 610mm x 641mm)
- With bumper and casters (optional): 39.25" x 24.0" x 25.25" (997mm x 610mm x 641mm)
- With casters (optional): 39.25" x 26.75" x 27.5" (997mm x 680mm x 699mm)

**Capacity**

- 7.5 ft³

**Weight** (est.)

- Net: 134 lbs (61 kg)
- Ship: 196 lbs (89 kg)

**Clearance requirements:**

- 3" (76mm) from rear
- 1" (25mm) from top and sides
- 3/4" (19mm) from bottom

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**Electrical**

- **120 V.A.C. — 60 Hz, 1 ph**
  - 0.8 kW, 6.7 Amps
  - Safety Class I Equipment
  - No Applied Parts
  - Mode of Operation: Continuous
  - NEMA 5-15P
  - 15A - 125V Plug
  - Hospital Grade
  - IPX-0

- **220 V.A.C. — 50Hz, 1 ph**
  - 0.8 kW, 3.6 Amps
  - Type B Equipment
  - CEE 7/7*
  - 220-230V Plug
  - IPX-0

- **230 V.A.C. — 50 Hz, 1 ph**
  - 0.8 kW, 3.5 Amps
  - Type B Equipment
  - BS 1363 Plug*
  - (UK only)
  - CEE 7/7*
  - 220-230V Plug

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**Other international plugs are available, contact the manufacturer for more information.**

**Domestic ground shipping information. Contact factory for export weight and dimensions.**
DC750 with optional bumpers and casters

#5017547 (white epoxy coated) – 3" (76mm) casters (2 rigid, 2 swivel with brake)
#5017549 (stainless steel) – 3" (76mm) casters (2 rigid, 2 swivel with brake)

Clearance requirements:
3" (76mm) from rear
1" (25mm) from top and sides
3/4" (19mm) from bottom

Cord length: 6 ft (1.83m) (est.)
DC750 with optional casters
#5018646 – 3” (76mm) casters (2 swivel, 2 swivel with brake)

Clearance requirements:
3” (76mm) from rear
1” (25mm) from top and sides
3/4” (19mm) from bottom

Cord length: 6 ft (1.83m) (est.)
**NOTE:** If the appliance is not operating properly, check the following before calling an authorized service agent:

- Verify that the power to the appliance is on.
- Ensure the female end of plug is securely seated in appliance and that the male end of plug is in an appropriate, functioning outlet.
- Examine the fuses. See fuse replacement instructions.

### Troubleshooting Guide

<table>
<thead>
<tr>
<th>Code</th>
<th>Refers to</th>
<th>Action Required</th>
</tr>
</thead>
</table>
| Display flashes set point | Cavity temperature higher than set point | Cavity temperature is higher than the set point temperature.  
  - Allow cavity to cool to set point temperature. |
| E-10 | Cavity sensor Sensor 1 | Sensor is shorted. Software disengages heating pads. Acknowledge error by pressing the ON/OFF button. If error persists, a qualified service technician should test the sensor.  
  - Test the sensor. Detach the sensor from the warmer. Use an Ohm meter to measure the resistance of the sensor. Check the sensor at 25°C (77°F). If the reading is 10 KOhm ±1.5 KOhm, replace the display. If the reading is ±2 KOhm, replace the sensor.  
  - Check the wires for integrity. Inspect the connections at the control and terminal block to ensure proper and secure connections. If necessary, re-secure the faulty connections.  
  - Call service if error persists. |
| ES10 | Sensor 2 |  |
| ES20 | Sensor 3 |  |
| ES30 | Sensor 4 |  |
| ES40 | Sensor 5 |  |
| ES50 | Sensor 6 |  |
| ES60 | Sensor 7 |  |
| ES70 |  |  |
| E-11 | Cavity sensor Sensor 1 | Sensor is open. Software disengages heating pads. Acknowledge error by pressing the ON/OFF button. If error persists, a qualified service technician should test the sensor.  
  - Test the sensor. Detach the sensor from the warmer. Use an Ohm meter to measure the resistance of the sensor. Check the sensor at 25°C (77°F). If the reading is 10 KOhm ±1.5 KOhm, replace the display. If the reading is ±2 KOhm, replace sensor.  
  - Check the wires for integrity. Check for proper and secure connections at the control and terminal block. If necessary, re-secure the faulty connections.  
  - Call service if error persists. |
| ES11 | Pad sensor 1 |  |
| ES21 | Pad sensor 2 |  |
| ES31 | Pad sensor 3 |  |
| ES41 | Pad sensor 4 |  |
| ES51 | Pad sensor 5 |  |
| ES61 | Pad sensor 6 |  |
| ES71 | Pad sensor 7 |  |
| *E-31 | Cavity sensor | The sensor reading is above the temperature set-point. [Blanket warmer triggers at 15° over set-point. Fluid warmer triggers at 5° over set-point.]  
  - The difference between the room temperature and the fluid set-point temperature must be greater than 11°C (20°F).  
  - Call service. |
| P131 | Pad sensor 1 | Heater pad over-temp error  
  - Software disengages heating pads.  
  - Acknowledge error by pressing the ON/OFF button.  
  - Allow the warmer to cool.  
  - Call service if the error persists. |
| P231 | Pad sensor 2 |  |
| P331 | Pad sensor 3 |  |
| P431 | Pad sensor 4 |  |
| P531 | Pad sensor 5 |  |
| P631 | Pad sensor 6 |  |
| P731 | Pad sensor 7 |  |
| *E-33 | Cavity sensor | Sensor reading is above maximum allowable temperature set-point and over temp value. [Blanket warmers trigger at 82°C (180°F). Fluid warmers trigger at 71°C (160°F).]  
  - Contact service |

* All non-critical codes can be cleared using the on/off button. Critical errors (marked with a *) can only be cleared by turning the power switch at the rear of the appliance off and allowing the appliance to cool.

**NOTE:** The Blanket warmer temperature may fluctuate ±10° from the set point.

All non-critical codes can be cleared using the ON/OFF button. Critical errors (marked with a *) can only be cleared by turning the power switch at the rear of the appliance off and allowing the appliance to cool.

Notice: Do not attempt to repair or service the appliance beyond this point. Contact the manufacturer for the nearest authorized service agent. Repairs made by any other service agent without prior authorization by the manufacturer will void the warranty.

The serial number is required for all inquiries.
## Troubleshooting

### Code | Refers to | Action Required
--- | --- | ---
*E-50 | Analog to Digital Converter Error | - Remove inventory, discard if necessary, and allow the warmer to cool down.
- If error persists after cool down and reset, the control assembly should be replaced by a qualified service technician. Contact service.

E-60 | Real Time Clock Checksum Error (Blanket warmers only) | Real time clock rechargeable battery backup has discharged.
- Plug the warmer into the outlet for 30 minutes.
- See Timer Control Feature section in the blanket manual to reset the clock.

*E-61 | Real Time Clock (Blanket warmers only) | Real time clock not responding. Call service if error persists.

E-62 | Real Time Clock (Blanket warmers only) | Timer overlay is present, but no real time clock is detected. Call service.

*E-70 | Pad Count Error | More heater pads detected than set for. Hold the ON/OFF button for 12 seconds until display shows "PAd#" (# = number of pads selected [3-7]). Press up or down arrow to adjust to correct number of pads. [Blanket warmers: 1.5ft³, 2.5ft³ = 3 pads, 3.5ft³, 4.0ft³: 7.5ft³ = 4 pads. Fluid warmers: 2.5ft³ & 4.0ft³ = 3 pads]

*E-71 | Personality Error | Call service

E-80 | EEPROM Error | EEPROM not responding. Call service if error persists.

*E-81 | Calibration not locked | Call service

*E-83 | EEPROM Error | Call service for help resetting the control.

E-87 | EEPROM Error | Stored offsets corrupted. Offsets reset to 0.
- Control may need to be recalibrated.
- Possible bad EEPROM.
- Call service if error persists.

E-90 | Button stuck | A button has been held down for >60 seconds. Adjust control. Error will reset when the problem has been resolved.

E-95 | Factory Test pin short detected. | Ensure that debris is not causing a short between the test pins. If the pins are clean, replace the control.

*E-98 | Temperature Delta Error | Temperature of the cavity sensors 1 and 2 differ by more than 1.7°C (3°F).
- Remove product and allow the warmer to cool down.
- Verify that the product sensor is clean and operating correctly.
- Press the power button to clear error code.
- If error persists, the sensor switch assembly should be replaced by a qualified service technician. Contact service.

E-99 | Hardware Over Temp | Inspect the connections and condition of high limit bimetal thermostat.
- If error continues call service.

*EFAn | Fan or Fan Sensor Failure (Fluid warmers only) | Check to make sure the fan sensor wires did not disconnect from the fan or the control board.
- If the error persists after checking the wires, replace the fan.

---

The serial number is required for all inquiries.

MN-37072  •  Rev 5  •  12/18  •  Designer Series Blanket Warmer
Fuse Replacement

WARNING

For protection against fire and electrical shock use only UL listed 10A, 250V fast acting fuses, 5mm x 20mm (F1, F2). Access should be made by qualified service technicians only.

Hospital grade cord must be used. Refer to operation and care manual or contact manufacturer for acceptable cords. Equipment must be connected to an equivalent receptacle marked “hospital grade”.

1. Unplug the power cord from the wall outlet and the power switch assembly.
2. Using a thin implement, open the fuse compartment door.
3. Using a thin implement, pull the fuse drawer out from the compartment.
4. Using a thin implement, push the fuses up and out of the drawer.
5. Replace with a new fuse.
6. Push the drawer back into the compartment.
7. Close the compartment door.

Zone Heating Element Locations

Zone 2 (left side)

Zone 1 (right side)

Zone 3 (bottom)

Zone 4 (shelf) {3.5ft³/7.5ft³ appliances only}

The serial number is required for all inquiries.
### Options and Accessories Parts List

#### CAUTION

To prevent injury or property damage:
- **Always** apply both caster brakes on mobile carts, appliances, or accessories when stationary.
- Appliances on casters can move or roll on uneven floors.

---

| Part numbers and drawings are subject to change without notice. |

#### DC150 on 5018614 Cart

#### DC400 over DC750

---

#### Bumper & Caster Assembly
- 3" (76mm) caster (2 rigid, 2 swivel with brake); overall height increases by 5" (127mm)
- **White Epoxy Coated**
- 5017546
- 5017547
- 5017547
- 5017547

#### Plate & Caster Assembly
- 3" (76mm) caster (2 rigid, 2 swivel with brake); overall height increases by 5" (127mm)
- **White Epoxy Coated**
- 5017542
- 5017543
- 5017543
- 5017543

#### Caster Assembly
- 5" (127mm) caster (2 swivel, 2 swivel with brake);
  - overall height increases by 6.5" (165mm)
- **White Epoxy Coated**
- —
- 5017542
- 5017543
- 5017543

#### Cart
- Overall dimensions 36-1/2" (927mm) H x 26" (660mm) W x 26" (660mm) D

#### Caution: Tipping hazard. To reduce the risk of personal injury place appliance on cart, centered front to rear, and centered side to side.

| 5024661 | 5024661 | 5024661 | 5024661 | — |

#### Door, Right or Left Hinged
- Blue epoxy coated door without manual door lock
  - 5018245
  - 5018246
  - 5018247
  - 5018248
  - 5018249
- Blue epoxy coated door with manual door lock
  - 5018255
  - 5018256
  - 5018257
  - 5018258
  - 5018259

#### Seismic Mounting Brackets

**Note:** special installation requirements apply

| 1014403 | 1014403 | 1014403 | 1014403 | 1017494 |

#### Stacking Hardware - DC250 or DC350 double stacked
- White Epoxy Coated
- —
- 5013021
- 5013021
- —

#### Stacking Hardware - DC400 or DC750 double stacked
- White Epoxy Coated
- —
- —
- —
- 5013024
- 5013024

#### Service Kits for Heat Pad Replacement
- Service Kit for EL-36692
  - —
  - 5027888
  - 5027888
  - 5027888
  - 5027888
- Service Kit for EL-39472
  - 5027940
  - —
  - 5027940
  - —
  - —

---

* not shown
Full Assembly A

The serial number is required for all inquiries.

Item Description | Part | Qty
--- | --- | ---
1 Side cover, 1.5 ft | 1011024 | 2
1a Side cover, stainless steel, 1.5 ft | 1014261 | 2
1b Side cover, 2.5 ft | 1011269 | 2
1c Side cover, stainless steel, 2.5 ft | 1014268 | 2
1d Side cover, 3.5 ft | 1011288 | 2
1e Side cover, stainless steel, 3.5 ft | 1014275 | 2
1f Side cover, 4.0 ft | 1011472 | 2
1g Side cover, stainless steel, 4.0 ft | 1014282 | 2
1h Side cover, 7.5 ft | 1011588 | 2
2 Side cover, stainless steel, 7.5 ft | 1014289 | 2
2 Top cover, 1.5 ft | 1011029 | 1
2a Top cover, stainless steel, 1.5 ft | 1014264 | 1
2b Top cover, 2.5 ft/3.5 ft | 1011266 | 1
2c Top cover, stainless steel, 2.5 ft/3.5 ft | 1014271 | 1
2d Top cover, 4.0 ft/7.5 ft | 1011475 | 1
2e Top cover, stainless steel, 4.0 ft/7.5 ft | 1014285 | 1
3 Rear cover, 1.5 ft | 1011588 | 1
3a Rear cover, stainless steel, 1.5 ft | 1014262 | 1
3b Rear cover, 2.5 ft | 5013521 | 1
3c Rear cover, stainless steel, 2.5 ft | 1014269 | 1
3d Rear cover, 3.5 ft | 5013522 | 1
3e Rear cover, stainless steel, 3.5 ft | 1014276 | 1
3f Rear cover, 4.0 ft | 5013643 | 1
3g Rear cover, stainless steel, 4.0 ft | 1014283 | 1
3h Rear cover, 7.5 ft | 5018517 | 1
3i Rear cover, stainless steel, 7.5 ft | 1014290 | 1
4 Bottom cover, 1.5 ft | 5013523 | 1
4a Bottom cover, stainless steel, 1.5 ft | 1014263 | 1
4b Bottom cover, 2.5 ft/3.5 ft | 5013524 | 1
4c Bottom cover, stainless steel, 2.5 ft/3.5 ft | 1014270 | 1
4d Bottom cover, 4.0 ft/7.5 ft | 5013644 | 1
4e Bottom cover, stainless steel, 4.0 ft/7.5 ft | 1014284 | 1

Part numbers and drawings are subject to change without notice.

The serial number is required for all inquiries.

Model: ______________________________________________
Serial number: ______________________________________________
Purchased from: ______________________________________________
Date installed: ____________________ Voltage: ____________
Full Assembly B

The serial number is required for all inquiries.
Part numbers and drawings are subject to change without notice.

**Full Assembly C**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Part</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Chassis, 3-zone, 120V, 1.5/2.5ft³</td>
<td>5017792</td>
<td>1</td>
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<tr>
<td>9a</td>
<td>Chassis, 3-zone, 230V, 1.5/2.5ft³</td>
<td>5017795</td>
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<tr>
<td>9b</td>
<td>Chassis, 4-zone, 120V, 3.5/4.0/4.0ft³/7.5ft³</td>
<td>5017793</td>
<td>1</td>
</tr>
<tr>
<td>9c</td>
<td>Chassis, 4-zone, 230V, 3.5/4.0/4.0ft³/7.5ft³</td>
<td>5017796</td>
<td>1</td>
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<tr>
<td>10</td>
<td>Bumper feet, rubber, 1.5/2.5/3.5/4.0/4.0ft³</td>
<td>FE-29203</td>
<td>4</td>
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<tr>
<td>10a</td>
<td>Bumper feet, rubber, 7.5ft³</td>
<td>BM-22606</td>
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<tr>
<td>11</td>
<td>Heater pad, with pad sensor and pad hi-limit, 1.5/3.5ft³</td>
<td>EL-39472</td>
<td>*</td>
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<tr>
<td>11a</td>
<td>Heater pad, with pad sensor and pad hi-limit, 2.5/3.5/4.0/7.5ft³</td>
<td>EL-36692</td>
<td>+</td>
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<td>12</td>
<td>Insulation kit, 1.5ft³</td>
<td>5018010</td>
<td>1</td>
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<tr>
<td>12a</td>
<td>Insulation kit, 2.5/3.5ft³</td>
<td>5018011</td>
<td>1</td>
</tr>
<tr>
<td>12b</td>
<td>Insulation kit, 4.0/7.5ft³</td>
<td>5018012</td>
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*Quantity varies per model*

<table>
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<th>Description</th>
<th>Part</th>
<th>Qty</th>
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<tbody>
<tr>
<td>13</td>
<td>Spring, door, 1.5ft³</td>
<td>SD-29340</td>
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<td>13a</td>
<td>Spring, door, 2.5/3.5/4.0/7.5ft³</td>
<td>SD-29467</td>
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<td>14</td>
<td>Service kit, upper hinge, RH</td>
<td>SO15522</td>
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<td>15</td>
<td>Service kit, lower hinge, RH</td>
<td>SO15523</td>
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<td>16</td>
<td>Screw, M8 x 1.25 x 20mm hex flange</td>
<td>SC-27046</td>
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<td>17</td>
<td>Plug, 1/2&quot; hole</td>
<td>PG-3344</td>
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<td>18</td>
<td>Power, switch, assembly</td>
<td>SW-34911</td>
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<td>19</td>
<td>Fuse, (F1, F2) fast acting</td>
<td>FU-34951</td>
<td>2</td>
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<td>20</td>
<td>Power cord, NEMA 5-15P, 120V</td>
<td>CD-35030</td>
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<tr>
<td>20a</td>
<td>Power cord, CEE 7/7, 220/230V</td>
<td>CD-3984</td>
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<tr>
<td>20b</td>
<td>Power cord, BS 1363, 230V</td>
<td>CD-29714</td>
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<td>21</td>
<td>Clip, panel retainer</td>
<td>CL-29193</td>
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<td>22</td>
<td>Plug, .519&quot; liquid tight (not shown)</td>
<td>PG-39530</td>
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<td>23</td>
<td>Plug, 5&quot; pry out (not shown)</td>
<td>PG-39535</td>
<td>1</td>
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</tbody>
</table>
The serial number is required for all inquiries.
Door Latch & Sensor

<table>
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<th>Description</th>
<th>Part</th>
<th>Qty</th>
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<tbody>
<tr>
<td>1</td>
<td>Plate, latch pull, 1.5ft²</td>
<td>1011197</td>
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<tr>
<td>1a</td>
<td>Plate, latch pull, 2.5ft²/4.0ft²</td>
<td>1011263</td>
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<tr>
<td>1b</td>
<td>Plate, latch pull, 3.5ft²</td>
<td>1011295</td>
<td>1</td>
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<tr>
<td>1c</td>
<td>Plate, latch pull, 7.5ft²</td>
<td>1011850</td>
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<td>2</td>
<td>Guide, low profile rail, 1.5ft²</td>
<td>GI-29204</td>
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<tr>
<td>2a</td>
<td>Guide, low profile rail, 2.5ft²/3.5ft²</td>
<td>GI-29254</td>
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<tr>
<td>2b</td>
<td>Guide, low profile rail, 7.5ft²</td>
<td>GI-29409</td>
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<tr>
<td>3</td>
<td>Service kit, door button latch pivot assembly</td>
<td>5013640</td>
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<td>4</td>
<td>LED assembly</td>
<td>5014852</td>
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<td>5</td>
<td>Bushing</td>
<td>BU-29206</td>
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<td>6</td>
<td>Screw, M4 x 0.7 x 10mm pan</td>
<td>SC-22273</td>
<td>1</td>
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<tr>
<td>7</td>
<td>Block, sensor mount</td>
<td>BK-29882</td>
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<td>8</td>
<td>Cavity sensor</td>
<td>PR-37140</td>
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<td>9</td>
<td>Screw, M4 x 0.7 x 6mm pan</td>
<td>SC-22271</td>
<td>8</td>
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<td>10</td>
<td>Washer, M4 split lock</td>
<td>WS-22300</td>
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<td>11</td>
<td>Clip</td>
<td>CL-29257</td>
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<td>12</td>
<td>Guide, low profile carriage</td>
<td>GI-29205</td>
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<td>13</td>
<td>Latch, hook</td>
<td>LT-29174</td>
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<tr>
<td>14</td>
<td>Spring, extension</td>
<td>SD-28513</td>
<td>1</td>
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<td>15</td>
<td>Washer, flat M4 18-8 s/s</td>
<td>WS-22294</td>
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<tr>
<td>16</td>
<td>Housing, latch spring support</td>
<td>1011163</td>
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</tr>
</tbody>
</table>
### Control Interface

**Item** | **Description** | **Part** | **Qty**  
--- | --- | --- | ---  
1 | Panel, interface mount, 18.5", 1.5ft²/2.5ft²/3.5ft² | 1011336 | 1  
1a | Panel, interface mount, 24", 4.0ft²/7.5ft² | 1011482 | 1  
2 | Panel, front top trim, painted, 18.5", 1.5ft²/2.5ft²/3.5ft² | 1011032 | 1  
2a | Panel, front top trim, painted, 24", 4.0ft²/7.5ft² | 1011481 | 1  
2b | Panel, front top trim, stainless steel, 18.5", 1.5ft²/2.5ft²/3.5ft² | 1014265 | 1  
2c | Panel, front top trim, stainless steel, 24", 4.0ft²/7.5ft² | 1014296 | 1  
3 | Control, assembly service kit | 5015524 | 1  
4 | Cover button, 18.5", 1.5ft²/2.5ft²/3.5ft² | CV-29256 | 1  
4a | Cover button, 24", 4.0ft²/7.5ft² | CV-29345 | 1  
4b | Cover button, with timer, 18.5", 1.5ft²/2.5ft²/3.5ft² | CV-29434 | 1  
4c | Cover button, with timer, 24", 4.0ft²/7.5ft² | CV-35433 | 1  
5 | Plate, button retainer | 1011149 | 1  
6 | Control, service kit | 5018020 | 1  
7 | Circuit board, display | BA-34968 | 1  
8 | Cable, 3.5" display | CB-35192 | 1  
9 | Latch, button | LT-29176 | 1  
10 | Screw, pan head phillips, M3 x 8 | SC-29332 | 4  
11 | Screw, pan head phillips, M4 x 12 | SC-29333 | 15  
12 | Spring, compression | SD-29371 | 1  
13 | Washer, flat | WS-22323 | 1  
14 | Washer, flat | WS-23991 | 1  
15 | Washer, flat | WS-25056 | 1  
16 | Overlay, auto timer (optional) | PE-34864 | 1  

---

**The serial number is required for all inquiries.**
Part numbers and drawings are subject to change without notice.

Shelf (DC350/DC750 only)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Part</th>
<th>Qty</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Panel, heat shelf, top, 3.5ft³</td>
<td>1023672</td>
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<tr>
<td>1a</td>
<td>Panel, heated shelf, top, 7.5ft³</td>
<td>1014609</td>
<td>1</td>
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<td>2</td>
<td>Shelf insulation, 3.5ft³</td>
<td>1025092</td>
<td>1</td>
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<tr>
<td>2a</td>
<td>Shelf insulation, 7.5ft³</td>
<td>1017637</td>
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<tr>
<td>3</td>
<td>Heater pad, 3.5ft³</td>
<td>EL-39472</td>
<td>1</td>
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<tr>
<td></td>
<td>Heater pad, 7.5ft³</td>
<td>EL-36692</td>
<td>1</td>
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<tr>
<td>4</td>
<td>Panel, heat pad mount, 3.5ft³</td>
<td>1023663</td>
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<tr>
<td>4a</td>
<td>Panel, heat pad mount, 7.5ft³</td>
<td>1016316</td>
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<td>5</td>
<td>Panel, heated shelf bottom, 3.5ft³</td>
<td>1011230</td>
<td>1</td>
</tr>
<tr>
<td>5a</td>
<td>Panel, heated shelf bottom, 7.5ft³</td>
<td>1011597</td>
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<tr>
<td>6</td>
<td>Bushing, 1/2” hole</td>
<td>BU-3006</td>
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<td>7</td>
<td>Grommet, neoprene, black</td>
<td>BU-36408</td>
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<td>8</td>
<td>Screw, M4 x 0.7 x 10mm pan</td>
<td>SC-22273</td>
<td>17</td>
</tr>
</tbody>
</table>

The serial number is required for all inquiries.
Refer to wire diagram included with the unit.