ivNow® Fluid Warmer
Owner’s Manual

ivNow-1
ivNow-2
ivNow-3
ivNow-4
ivNow-5
ivNow-6

ivNow-1 countertop module

ivNow-3 with 3-Liter Bag Tilt kit, countertop module

ivNow-6 with Vertical Wall Mount Bracket Kit

Enthermics Medical Systems
An ISO 13485:2003 certified company
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**Authorized Representative:**  
MDSS GmbH  
Schiffgraben 41  
30175 Hannover  
Germany
**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 appliance 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 Appliance**

The appliance has been thoroughly tested and inspected to ensure only the highest quality appliance 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 appliance, 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 appliance as ordered. Save all the information packed with the appliance.

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

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

<table>
<thead>
<tr>
<th>The serial number is required for all inquiries.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always include both model and serial number(s) in any correspondence regarding the appliance.</td>
</tr>
</tbody>
</table>

- Model: ______________________________________________
- Serial number: ______________________________________________
- Purchased from: ______________________________________________
- Date installed: ________________ Voltage: _____________

**Transportation Damage and Claims**

All Enthermics Medical Systems appliances 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 appliance 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 appliance is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the appliance 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 appliances 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.
1. 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.

   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.

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 manual to use and clean the appliance is considered inappropriate and may cause damage, injury or fatal accidents, in addition to invalidating the warranty and relieving the manufacturer of all liability.

3. 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.

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**Dimensions and Weights**

<table>
<thead>
<tr>
<th></th>
<th>ivNow-1</th>
<th>ivNow-2</th>
<th>ivNow-3</th>
<th>ivNow-4</th>
<th>ivNow-5</th>
<th>ivNow-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>8.0&quot; (203.1mm)</td>
<td>13.4&quot; (340.5mm)</td>
<td>18.9&quot; (478.8mm)</td>
<td>24.2&quot; (615.3mm)</td>
<td>29.6&quot; (752.7mm)</td>
<td>35&quot; (890.1mm)</td>
</tr>
<tr>
<td>Width</td>
<td>14.5&quot; (368.7mm)</td>
<td>14.5&quot; (368.7mm)</td>
<td>14.5&quot; (368.7mm)</td>
<td>14.5&quot; (368.7mm)</td>
<td>14.5&quot; (368.7mm)</td>
<td>14.5&quot; (368.7mm)</td>
</tr>
<tr>
<td>Depth</td>
<td>6.74&quot; (171.2mm)</td>
<td>6.74&quot; (171.2mm)</td>
<td>6.74&quot; (171.2mm)</td>
<td>6.74&quot; (171.2mm)</td>
<td>6.74&quot; (171.2mm)</td>
<td>6.74&quot; (171.2mm)</td>
</tr>
<tr>
<td>Net Weight**</td>
<td>8 lbs (4 kg)</td>
<td>14 lbs (6 kg)</td>
<td>20 lbs (9 kg)</td>
<td>25 lbs (11 kg)</td>
<td>31 lbs (14 kg)</td>
<td>37 lbs (17 kg)</td>
</tr>
<tr>
<td>Ship Weight**</td>
<td>11 lbs (5 kg)</td>
<td>16 lbs (7 kg)</td>
<td>23 lbs (10 kg)</td>
<td>28 lbs (13 kg)</td>
<td>34 lbs (16 kg)</td>
<td>40 lbs (18 kg)</td>
</tr>
</tbody>
</table>

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

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⚠️ **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.
Safety Procedures

- Fluid warmers are **only** intended for warming medical solutions for irrigation and injection prior to use. Refer to the labeling of the manufacturer of the products to be warmed regarding the recommended temperature and the duration of warming. No other use for this warmer is authorized or recommended.

- This fluid warmer is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this device. The fluid 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 fluid warming cabinet 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 service 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 device if the item is sold or moved to another location.

Knowledge of proper procedures is essential to the safe operation of electrically energized equipment. The following signal words and symbols may be used throughout this manual.

### DANGER
Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

### WARNING
Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

### CAUTION
Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

### NOTICE
Indicates information considered important, but not hazard-related (e.g., messages relating to property damage).

---

**NOTICE:** Indicates referral to operating instructions is a mandatory action. If not followed the operator could suffer personal injury.

**NOTICE:** Indicates referral to operating instructions is recommended to understand operation of equipment.

**NOTICE:** For equipment delivered for use in any location regulated by the following directive: 2012/95/EC WEEE

**NOTICE:** Do not dispose of electrical or electronic equipment with other municipal waste.
**Installation/Mounting**

ivNow modular warmers can be installed in a variety of ways.

- A single or double warmer (ivNow-1 or ivNow-2) can be used on a countertop without any special mounting hardware.
- One, two, or three module warmers (ivNow-1, ivNow-2 or ivNow-3) can be placed on a three-liter bag tilt stand (Figure 1).
- One, two, or three module warmers (ivNow-1, ivNow-2 or ivNow-3) can be wall-mounted with the three-liter bag tilt stand (Figure 2).
- All warmers can be wall-mounted using wall mount hardware (Figure 3).
- A single warmer (ivNow-1) can also be mounted on a mobile equipment pole.

**NOTE:** Individual ivNow warmers cannot be stacked. Warmers with multiple stacked module configurations are available from the manufacturer only.

See the separate instructions provided with the mobile equipment pole or wall mounting kit for installation guidance.

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**Figure 1** - 3-liter Bag Tilt Kit (countertop)

**Figure 2** - 3-liter Bag Tilt Kit (wall mounted)

**Figure 3** - Wall Mounting Options
**ivNow Configurations**

**NOTE:** Individual ivNow warmers cannot be stacked in the field. Multiple cavity warmers are available from the manufacturer in the configurations listed below. 3-liter bag capacity is available on ivNow-1, ivNow-2, and ivNow-3 with an additional adapter.

**ivNow-1** (one (1) bag capacity) can be placed directly on a countertop, mounted on a mobile equipment pole stand, mounted on a wall using brackets, or mounted to a 3-liter bag tilt kit*.

**ivNow-2** (two (2) bag capacity) can be placed directly on a countertop, mounted on a wall using mounting brackets, or mounted to a 3-liter bag tilt kit*.

**ivNow-3** (three (3) bag capacity) must be mounted on a heavy-duty mobile equipment pole stand, on a wall using mounting brackets, or mounted to a 3-liter bag tilt kit*.

**ivNow-4** (four (4) bag capacity) must be mounted on a wall using mounting brackets*.

**ivNow-5** (five (5) bag capacity) must be mounted on a wall using mounting brackets*.

**ivNow-6** (six (6) bag capacity) must be mounted on a wall using mounting brackets*.

*Mounting hardware sold separately.
### Electrical Information

#### DANGER

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

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

Not category AP or APG equipment

#### CAUTION

Power source must match voltage identified on appliance rating tag. The rating tag provides essential technical information required for any appliance installation, maintenance or repairs. Do not remove, damage or modify the rating tag.

Grounding reliability can only be achieved when equipment 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 60601-1 and CAN/CSA C22.2 No. 601.1.

UL File No. E201645

#### Hazardous Voltage Present

#### 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.

#### ivNow-1 Power Requirements

<table>
<thead>
<tr>
<th>Voltage</th>
<th>120 V.A.C. — 60 Hz, 1 ph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.15 kW, 1.3 Amps</td>
</tr>
<tr>
<td>Safety Class</td>
<td>Class I</td>
</tr>
<tr>
<td>Applied Parts</td>
<td>No</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Continuous</td>
</tr>
</tbody>
</table>

NEMA 5-15P 15A - 125V Plug Hospital Grade

#### ivNow-2 Power Requirements

<table>
<thead>
<tr>
<th>Voltage</th>
<th>120 V.A.C. — 60 Hz, 1 ph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.3 kW, 2.5 Amps</td>
</tr>
<tr>
<td>Safety Class</td>
<td>Class I</td>
</tr>
<tr>
<td>Applied Parts</td>
<td>No</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Continuous</td>
</tr>
</tbody>
</table>

NEMA 5-15P 15A - 125V Plug Hospital Grade

#### ivNow-3 Power Requirements

<table>
<thead>
<tr>
<th>Voltage</th>
<th>120 V.A.C. — 60 Hz, 1 ph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.45 kW, 3.8 Amps</td>
</tr>
<tr>
<td>Safety Class</td>
<td>Class I</td>
</tr>
<tr>
<td>Applied Parts</td>
<td>No</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Continuous</td>
</tr>
</tbody>
</table>

NEMA 5-15P 15A - 125V Plug Hospital Grade

#### ivNow-4 Power Requirements

<table>
<thead>
<tr>
<th>Voltage</th>
<th>120 V.A.C. — 60 Hz, 1 ph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.6 kW, 5.0 Amps</td>
</tr>
<tr>
<td>Safety Class</td>
<td>Class I</td>
</tr>
<tr>
<td>Applied Parts</td>
<td>No</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Continuous</td>
</tr>
</tbody>
</table>

NEMA 5-15P 15A - 125V Plug Hospital Grade

#### ivNow-5 Power Requirements

<table>
<thead>
<tr>
<th>Voltage</th>
<th>120 V.A.C. — 60 Hz, 1 ph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.75 kW, 6.3 Amps</td>
</tr>
<tr>
<td>Safety Class</td>
<td>Class I</td>
</tr>
<tr>
<td>Applied Parts</td>
<td>No</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Continuous</td>
</tr>
</tbody>
</table>

NEMA 5-15P 15A - 125V Plug Hospital Grade

#### ivNow-6 Power Requirements

<table>
<thead>
<tr>
<th>Voltage</th>
<th>120 V.A.C. — 60 Hz, 1 ph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>0.9 kW, 7.5 Amps</td>
</tr>
<tr>
<td>Safety Class</td>
<td>Class I</td>
</tr>
<tr>
<td>Applied Parts</td>
<td>No</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Continuous</td>
</tr>
</tbody>
</table>

NEMA 5-15P 15A - 125V Plug Hospital Grade
Electrical Information

DANGER

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

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

Not category AP or APG equipment

CAUTION

Power source must match voltage identified on appliance rating tag. The rating tag provides essential technical information required for any appliance installation, maintenance or repairs. Do not remove, damage or modify the rating tag.

Grounding reliability can only be achieved when equipment 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 60601-1 and CAN/CSA C22.2 No. 601.1.

CAUTION

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.

Hazardous Voltage Present

ivNow-1 Power Requirements

230 V.A.C. — 50/60 Hz, 1 ph
0.15 kW, 0.7 Amps
Type B Equipment

BS 1363 Plug*
(UK only)

CEE 7/7*
220-230V Plug

ivNow-2 Power Requirements

230 V.A.C. — 50/60 Hz, 1 ph
0.3 kW, 1.3 Amps
Type B Equipment

BS 1363 Plug*
(UK only)

CEE 7/7*
220-230V Plug

ivNow-3 Power Requirements

230 V.A.C. — 50/60 Hz, 1 ph
0.45 kW, 2.0 Amps
Type B Equipment

BS 1363 Plug*
(UK only)

CEE 7/7*
220-230V Plug

ivNow-4 Power Requirements

230 V.A.C. — 50/60 Hz, 1 ph
0.6 kW, 2.6 Amps
Type B Equipment

BS 1363 Plug*
(UK only)

CEE 7/7*
220-230V Plug

ivNow-5 Power Requirements

230 V.A.C. — 50/60 Hz, 1 ph
0.75 kW, 3.2 Amps
Type B Equipment

BS 1363 Plug*
(UK only)

CEE 7/7*
220-230V Plug

ivNow-6 Power Requirements

230 V.A.C. — 50/60 Hz, 1 ph
0.9 kW, 3.9 Amps
Type B Equipment

BS 1363 Plug*
(UK only)

CEE 7/7*
220-230V Plug

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

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

Preparation Before Operating the Warmer
1. Remove and wash any detachable items such as the tilt assembly with hot, soapy water. Dry the items with a clean, lint-free cloth.
2. Wipe the metal, plastic, control surfaces, and sensor switch of each module with a cloth dampened with a 10% bleach solution to clean and disinfect the fluid warmer.
   
   **NOTE:** Avoid contact with the electrical connections and electrical components.

3. Clean the 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.

4. Remove all detergent residue from the contoured warming module and exterior of the warmer with a clean, damp cloth.

5. Dry the contoured warming module and exterior of the warmer with a clean, lint-free cloth.

6. Sanitize the contoured warming module of the warmer with a sanitizing solution. This solution must be approved for use on stainless steel, aluminum, and plastic surfaces.

    ![CAUTION]
    
    **CAUTION**
    
    This appliance is not approved for warming blood or blood products.

Specifications and Features
- Contoured warming module cradles a bag of fluid in 0.5-, 1-, 2- and 3-liter sizes
- Three-liter bag capacity is available on ivNow-1, ivNow-2, and ivNow-3 with an additional adapter
- Multiple cavity warmers are available from the manufacturer
- One (1) power switch provides power to the fluid warmer
- Each contoured cradle includes an individual controller with LED display
- A sensor in the heating plate detects the presence of a bag of fluids to engage the heating mechanism to begin warming the bag of fluid
- Two (2) temperature sensors work together to precisely and continuously read the temperature of the bag of fluid and another sensor monitors the heating plate temperature
- A green status indicator light illuminates when the bag of fluid is within +0/-2°C (+0/-3ºF) of the set-point temperature
- The heating mechanism reengages as necessary to maintain the temperature within +0/-2°C (+0/-3ºF) of the set-point
   
   **NOTE:** Individual ivNow warmers cannot be stacked.

Safety Features
- The ivNow controller is designed to display an error message (E-31) and stop heating if the temperature at the dual sensor switch is above 40°C (104°F).
- The controller monitors the temperature of the aluminum plate that the heating element is attached to and limits the temperature to a maximum of 54°C (130°F).
- Two thermostats are wired in series with the heating pad element: an automatic cutout thermostat and a manual-reset cutout thermostat. Both thermostats disconnect the power to the heating pad element at 60°C (140°F).

| enthermics® |
Operation Instructions

Using the Fluid Controller

1. Connect the fluid warmer to an appropriate hospital grade receptacle — specified on the electrical information page.
2. Locate the power switch on the side of the fluid warmer.
3. Push the power switch to the ON (I) position.
4. Four dashes (----) display.

How to Start the ivNow Fluid Warmer
1. Connect the fluid warmer to an appropriate hospital grade receptacle — specified on the electrical information page.
2. Locate the power switch on the side of the fluid warmer.
3. Push the power switch to the ON (I) position.
4. Four dashes (----) display.

How to Set the Temperature Scale
1. While the fluid controller is on and product is not loaded into the contoured warming module, press and hold the status button for five (5) seconds to display the current temperature scale (°C/°F).
2. While the temperature scale is displayed, press the status button to select the desired temperature scale.

NOTE: To save the selected temperature scale, wait until four dashes (----) display before placing a bag of fluids in the contoured warming module.

How to Display the Set Temperature
1. Press the status button.

What is the Temperature of the Bag of Fluid?
When a bag of fluid is first detected in the contoured warming module, a single dash will scroll on the display for five (5) seconds while the module is sensing the product temperature.
During normal operation, the actual temperature of the bag of fluid displays.
As the bag of fluid continues to warm, the status indicator light illuminates when the bag of fluid reaches the set-point temperature (+0/-2°C [+0/-3°F]).

NOTE: The display flashes whenever a warmed bag of fluid with a temperature greater than the set-point of the fluid warmer is placed in the contoured warming module. The display continues flashing until the temperature is less than the set-point. Do not use the bag of fluid until the display stops flashing.

Factory default temperature:
- Injection (INJ) temperature: 40°C (104°F)

How to Display the Length of Time the Fluid has been at Set Temperature.
1. Press the status button for two (2) seconds.
2. The length of time displays.

First Hour = (MM:SS) minutes and seconds
First 24 hours after the first hour = (HH:MM) hours and minutes
More than 24 hours = (DD.DD) days and fraction of day
14 days or longer = “dAtE”
The timer stops after 30.0 days.

NOTE: The length of time that a bag of fluid is held at temperature will remain in memory until a new bag is placed in the module. Remove the bag of fluid from the contoured warming module and review the expiration date. Discard the bag of fluid if the date has expired.
### Warning

To prevent an electrical shock hazard:
Unplug the warmer if fluid spills inside the contoured warming module.

Instructions:
1. Wipe the excess fluid from the module.
2. Contact qualified service personnel to remove the module control and remove any remaining liquid.
3. Perform necessary hospital electrical safety checks before returning the warmer to operation.

### Warning

Verify the fluid temperature prior to using the fluid. Refer to fluid manufacturer’s labeling for recommended warming procedures.

Injection fluid manufacturer suggests not to warm injection fluids above 40°C (104°F). If fluids are warmed above the suggested temperature, the fluids should be discarded.

### 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.

### Notice

This warmer should not be left unattended for periods of more than 24 hours. In case of absences longer than 24 hours, disconnect the warmer from its power source.

### 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.

### Notice

Do not operate an ivNow fluid warmer above a warm surface, appliance, or heat source.

The ambient temperature should not be higher than 6°C (10°F) below the set-point temperature.

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### Operating the Fluid Controller

#### Operating the ivNow Fluid Warmer

1. Connect the fluid warmer to an appropriate hospital grade receptacle — specified on the electrical information page.

2. Locate the power switch on the left side of the fluid warmer.

3. Push the power switch to the ON (I) position.

4. Four dashes (----) display 2.

   **NOTE:** The plate will not begin to heat until a bag of fluid is placed in the contoured warming module.

5. Place a bag of fluid slightly off center and to the right inside the contoured warming module.

6. The bag of fluid must rest on top of the sensor in the middle of the heating plate.

   **NOTE:** Improper placement of the bag of fluid can cause the manual reset to trip.

When a bag of fluid is first detected in the contoured warming module, a single dash will scroll on the display 2 for five (5) seconds while the module is sensing the product temperature.

During normal operation, the actual temperature of the bag of fluid displays 2.

As the bag of fluid continues to warm, the status indicator light 3 illuminates when the bag of fluid reaches the set-point temperature (+0/-2°C [+0/-3°F])

**NOTE:** The warm-up stabilization time will vary slightly depending on the fluid bag temperature and ambient room temperature. The chart on the next page indicates the heating of a 1-liter bag starting at 21°C (70°F) warmed to a set-point of 40°C (104°F) in a room with 21°C (70°F) ambient temperature.

If the fluid warmer has failed to heat, is ON but the LED display and indicator light does not illuminate, or if error messages are displayed, see the troubleshooting guide in this manual. Inspect the bag of fluid and discard if necessary.
Warm-up Stabilization

**ivNow Temperature Profile (Set Point = 104°F)**

- **1L Bag Fluid Temp**
- **Ambient Temp**

**Bag of fluid does not rest on the sensor**

**Bag of fluid is not centered**
Cleaning and Preventative Maintenance

**Cleaning and Preventative Maintenance**

**Protecting Stainless Steel, Aluminum and Plastic Surfaces**

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 the ivNow fluid warmer.

*Notice:* Always follow appropriate state or local health (hygiene) regulations regarding all applicable cleaning and sanitation requirements.

**How to Clean the Fluid Warmer**

1. Press the power switch on the left side of the fluid warmer to the OFF (O) position.
2. Disconnect the fluid warmer from the power source.
3. Wipe the metal, plastic, control surfaces, and sensor switch of each module with a cloth dampened with a 10% bleach solution to clean and disinfect the fluid warmer.

*Note:* Avoid contact with the electrical connections and electrical components.

4. Remove all detergent residue from the contoured warming module and exterior of the fluid warmer with a clean, damp cloth.
5. Dry the contoured warming module and exterior of the fluid warmer with a clean, lint-free cloth.
# Cleaning and Preventative Maintenance

## Preventative Maintenance Checklist

<table>
<thead>
<tr>
<th><strong>Daily Checklist:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>❑ Is the operation and care manual available?</td>
</tr>
<tr>
<td>❑ Has everyone been trained in the operation and safety instructions of this appliance?</td>
</tr>
<tr>
<td>❑ Do not exceed the capacity of the ivNow fluid warmer.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Weekly Checklist:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>❑ Inspect the condition of the plug and cord and replace if damaged.</td>
</tr>
<tr>
<td>❑ Clean dust from the fluid warmer.</td>
</tr>
<tr>
<td>❑ Clean the dust from the back of the fluid warmer.</td>
</tr>
<tr>
<td>❑ Inspect the condition of the wall mounting hardware. Make sure the mounting screws and assembly are secure.</td>
</tr>
<tr>
<td>❑ Make sure the controller LEDs illuminate.*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Monthly Checklist:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>❑ Inspect the controller panel overlay for any tears or excessive wear on the graphic.</td>
</tr>
<tr>
<td>❑ Confirm that the controller works properly when the status button is pushed.*</td>
</tr>
<tr>
<td>❑ Press the power switch OFF and then ON. All LEDs illuminate for one (1) second upon start-up. Make sure the controller LEDs illuminate.*</td>
</tr>
</tbody>
</table>

*Contact service for immediate repair.*
## Accessories Parts List

<table>
<thead>
<tr>
<th>Accessories</th>
<th>ivNow-1</th>
<th>ivNow-2</th>
<th>ivNow-3</th>
<th>ivNow-4, -5, -6</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Liter bag tilt kit</td>
<td>(cord exits back of unit) 5014126</td>
<td>(cord exits back of unit) 5014127</td>
<td>(cord exits back of unit) 5014128*</td>
<td>—</td>
</tr>
<tr>
<td>Countertop</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wall mounted</td>
<td>(cord exits back of unit) 5014129</td>
<td>(cord exits back of unit) 5014130</td>
<td>(cord exits back of unit) 5014131*</td>
<td>—</td>
</tr>
<tr>
<td>Wall mounted OPA-0698-10</td>
<td>(cord exits back of unit) 5017700</td>
<td>(cord exits back of unit) 5017701</td>
<td>(cord exits back of unit) 5017702*</td>
<td>—</td>
</tr>
<tr>
<td>GCX light-duty roll stand for devices and bracket kit</td>
<td>mount to GCX equipment stand - stand included (cord exits bottom of unit) 5012246</td>
<td></td>
<td></td>
<td>—</td>
</tr>
<tr>
<td>GCX heavy-duty roll stand for devices and bracket kit</td>
<td></td>
<td></td>
<td>mount to GCX equipment stand - stand included 5013312</td>
<td>—</td>
</tr>
<tr>
<td>Bracket kit for equipment stand</td>
<td>mount to equipment stand or mast - stand not included (cord exits bottom of unit) 5012735</td>
<td></td>
<td></td>
<td>—</td>
</tr>
<tr>
<td>Bracket kit for horizontal wall mount</td>
<td>two (2) GCX horizontal rails included 5012242</td>
<td>two (2) GCX horizontal rails included 5012242</td>
<td>two (2) GCX horizontal rails included 5012242</td>
<td>(cord exits bottom of unit) two (2) GCX horizontal rails included 5012242</td>
</tr>
<tr>
<td>Bracket kit for seismic horizontal wall mount OPA-0698-10</td>
<td>one (1) GCX horizontal rail included 5016601</td>
<td>one (1) GCX horizontal rail included 5016601</td>
<td>two (2) GCX horizontal rails included 5016602*</td>
<td>two (2) GCX horizontal rails included 5016602*</td>
</tr>
<tr>
<td>Vertical wall channel mount and bracket kit</td>
<td>one (1) GCX vertical rail included 5012241*</td>
<td>one (1) GCX vertical rail included 5012241*</td>
<td>one (1) GCX vertical rail included 5012241*</td>
<td>one (1) GCX vertical rail included 5012241*</td>
</tr>
<tr>
<td>Bracket kit for vertical wall channel mount</td>
<td>GCX vertical rail not included 5012288*</td>
<td>GCX vertical rail not included 5012288*</td>
<td>GCX vertical rail not included 5012288*</td>
<td>GCX vertical rail not included 5012288*</td>
</tr>
<tr>
<td>Bracket for Mounting to Harloff Anesthesia Cart</td>
<td>1015253</td>
<td>1015254</td>
<td>1015255</td>
<td>—</td>
</tr>
</tbody>
</table>

* See equipment diagram below
Troubleshooting Guide

<table>
<thead>
<tr>
<th>Code</th>
<th>Refers to</th>
<th>Action Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-10</td>
<td>Temperature sensor 1 short</td>
<td>1. Press the status button to clear the error code.</td>
</tr>
<tr>
<td>E-11</td>
<td>Temperature sensor 1 open</td>
<td>2. If the error persists, a qualified service technician should replace the sensor switch assembly. Contact service.</td>
</tr>
<tr>
<td>E-20</td>
<td>Temperature sensor 2 short</td>
<td></td>
</tr>
<tr>
<td>E-21</td>
<td>Temperature sensor 2 open</td>
<td></td>
</tr>
<tr>
<td>E-P0</td>
<td>Plate temperature sensor short</td>
<td></td>
</tr>
<tr>
<td>E-P1</td>
<td>Plate Temperature sensor open</td>
<td></td>
</tr>
<tr>
<td>E-98</td>
<td>Temperature delta error</td>
<td>1. Temperature of fluid bag sensors 1 and 2 differ by more than 3.3°C (6°F).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Remove the fluid bag(s) and allow the warmer to cool.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Verify that the fluid bag sensor is clean and operating correctly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Press the status button to clear the error code.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Manually reset the warmer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Reposition the fluid bag(s) to be slightly off centered and to the right inside the contoured warming module.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. If the error persists, a qualified service technician should replace the sensor switch assembly. Contact service.</td>
</tr>
<tr>
<td>E-31</td>
<td>Product over temperature and the warmer has been actively heating</td>
<td>1. Press the status button to clear the error code.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Remove the fluid bag(s) and allow the warmer to cool.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. If the error persists, a qualified service technician should replace the sensor switch assembly or the lower control assembly. Contact service.</td>
</tr>
</tbody>
</table>

**NOTE:** If the warmer is not operating properly, do the following before calling an authorized service agent:
- Verify that the power to the outlet is on.
- Ensure the plug is securely seated in an appropriate, functioning outlet.
- Verify that the power switch is in the ON (I) position.
- Examine the high limit manual reset button. If the reset button is tripped, reset the button using the instructions How to manually reset the warmer.
- All error codes must be cleared by pressing the circuit breaker on the back of the warmer to the OFF (O) position and allowing the warmer to cool.

**Notice:** Do not attempt to repair or service the warmer 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.

**How to Manually Reset the Warmer:**
1. Push the power switch to the OFF (O) position.
2. Allow the warmer to cool.
3. Locate the manual reset button on the front of the warmer.
4. Use a pen, screwdriver or other long, thin implement to firmly push the reset button. The button clicks when it resets.

If the reset button trips again while the warmer is operating and the bag is properly placed, contact a qualified service technician.

**WARNING**
To prevent serious injury, death, or property damage, always disconnect the appliance from the power source before cleaning or servicing.
## Troubleshooting Guide (continued)

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-50</td>
<td>Analog to digital convertor error</td>
<td>1. Press the status button to clear the error code. 2. Remove the fluid bag(s) and allow the warmer to cool. Inspect the fluid and discard if necessary.</td>
</tr>
<tr>
<td>E-F0</td>
<td>Flash write error</td>
<td>3. If the error persists, a qualified service technician should replace the lower control assembly. Contact service.</td>
</tr>
<tr>
<td>E-F1</td>
<td>Flash erase error</td>
<td>1. Press the status button to clear the error code. 2. This error is acceptable upon initial start up. The warmer will self-correct.</td>
</tr>
<tr>
<td>E-F2</td>
<td>Flash value error</td>
<td>1. Measure the voltage at the outlet with a volt meter. Correct the voltage if the voltage being supplied is incorrect. 2. If the error persists, a qualified service technician should replace the lower control assembly. Contact service.</td>
</tr>
<tr>
<td>E-70</td>
<td>Low voltage flag triggered</td>
<td>1. Is the warmer plugged into an appropriate outlet? 2. Measure the outlet voltage. Inspect the voltage rating on equipment rating tag. Make sure both voltages match. 3. Verify that the manual reset button has not tripped. Reset if needed. 4. Allow the warmer to cool to reset the auto hi-limit condition. 5. Inspect the fuses. Replace if blown. Contact service. 6. If warmer still does not power on, contact service.</td>
</tr>
<tr>
<td></td>
<td>The warmer does not power on</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warmer powers on and off when product is loaded and the power switch is ON (I)</td>
<td>1. Remove the warmer from operation. 2. Contact service.</td>
</tr>
<tr>
<td></td>
<td>Warmer reads a temperature without a bag of fluid in the contoured warming module</td>
<td>1. Inspect the sensor switch. 2. If the sensor switch is sticking, clean the sensor switch with a dampened isopropyl alcohol wipe and use compressed air to blow out the area. 3. If the warmer still displays a temperature, contact service.</td>
</tr>
</tbody>
</table>

### WARNING

To prevent serious injury, death, or property damage, **always** disconnect the appliance from the power source before cleaning or servicing.
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Qty</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Circuit board, LED, 120V</td>
<td>1</td>
<td>BA-34834</td>
</tr>
<tr>
<td>1A</td>
<td>Circuit board, LED, 230V</td>
<td>1</td>
<td>BA-34833</td>
</tr>
<tr>
<td>2</td>
<td>Company label</td>
<td>1</td>
<td>LA-28583</td>
</tr>
<tr>
<td>3</td>
<td>Cover, right end</td>
<td>1</td>
<td>CV-28579</td>
</tr>
<tr>
<td>4</td>
<td>Screw, ka 40 x 12, philips flat head</td>
<td>2</td>
<td>SC-28587</td>
</tr>
<tr>
<td>5</td>
<td>Washer, #8 ext lock</td>
<td>2</td>
<td>WS-2333</td>
</tr>
<tr>
<td>6</td>
<td>Screw, M4 x 0.70 x 10mm philips pan head</td>
<td>2</td>
<td>SC-22273</td>
</tr>
<tr>
<td>7</td>
<td>5-15P hospital grade cord</td>
<td></td>
<td>contact factory</td>
</tr>
<tr>
<td>8</td>
<td>Bushing, strain relief</td>
<td>1</td>
<td>BU-37016</td>
</tr>
<tr>
<td>9</td>
<td>Cover, left end</td>
<td>1</td>
<td>CV-28580</td>
</tr>
<tr>
<td>10</td>
<td>Bag sensor</td>
<td>1</td>
<td>CV-38062</td>
</tr>
<tr>
<td>11</td>
<td>Extrusion assembly</td>
<td>1</td>
<td>5008986</td>
</tr>
<tr>
<td>12</td>
<td>Kit, switch</td>
<td>1</td>
<td>5018369</td>
</tr>
<tr>
<td>13</td>
<td>Screw, M3 x 0.05 x 8mm pan</td>
<td>2</td>
<td>SC-29332</td>
</tr>
<tr>
<td>14</td>
<td>Bracket, plate sensor</td>
<td>1</td>
<td>1016799</td>
</tr>
<tr>
<td>15</td>
<td>Top cover</td>
<td>1</td>
<td>CV-28578</td>
</tr>
<tr>
<td>16</td>
<td>Reset button</td>
<td>1</td>
<td>CV-29140</td>
</tr>
<tr>
<td>17</td>
<td>Control panel assy</td>
<td>1</td>
<td>5008987</td>
</tr>
<tr>
<td>17A</td>
<td>Control panel assy - no logo</td>
<td>1</td>
<td>5012152</td>
</tr>
<tr>
<td>17B</td>
<td>Control panel assy, 230V</td>
<td>1</td>
<td>5012347</td>
</tr>
<tr>
<td>17C</td>
<td>Control panel assy - no logo, 230V</td>
<td>1</td>
<td>5012348</td>
</tr>
<tr>
<td>18</td>
<td>Screw, M4 x 0.70 x 10mm philips pan head</td>
<td>2</td>
<td>SC-22273</td>
</tr>
<tr>
<td>19</td>
<td>Bracket, assy, strain relief</td>
<td>1</td>
<td>5018366</td>
</tr>
<tr>
<td>20</td>
<td>Cordset - 16AWG, 3/C, international harm</td>
<td>1</td>
<td>contact factory</td>
</tr>
<tr>
<td>21</td>
<td>Rear cover - 4 cavity</td>
<td>1</td>
<td>1017132</td>
</tr>
<tr>
<td>21A</td>
<td>Rear cover - universal cord</td>
<td>1</td>
<td>1017129</td>
</tr>
<tr>
<td>21B</td>
<td>Rear cover - universal cord</td>
<td>1</td>
<td>1017130</td>
</tr>
<tr>
<td>21C</td>
<td>Rear cover - universal cord</td>
<td>1</td>
<td>1017131</td>
</tr>
<tr>
<td>21D</td>
<td>Rear cover - 5 cavity</td>
<td>1</td>
<td>1017133</td>
</tr>
<tr>
<td>21E</td>
<td>Rear cover - 6 cavity</td>
<td>1</td>
<td>1017134</td>
</tr>
<tr>
<td>22</td>
<td>M4-0.7 Hex nut 18-8</td>
<td>3</td>
<td>NU-22286</td>
</tr>
<tr>
<td>23</td>
<td>Switch, rocker, 16A</td>
<td>1</td>
<td>SW-34171</td>
</tr>
<tr>
<td>24</td>
<td>Terminal jumper - 3</td>
<td>2</td>
<td>BK-34879</td>
</tr>
<tr>
<td>25</td>
<td>Terminal block, 20A, 250V, 7-place</td>
<td>1</td>
<td>BK-34713</td>
</tr>
<tr>
<td>26</td>
<td>Screw, M4 x 0.70 x 12mm, philips flat head</td>
<td>3</td>
<td>SC-23141</td>
</tr>
<tr>
<td>27</td>
<td>Fuse holder, 10A, 250V</td>
<td>1</td>
<td>FU-34873</td>
</tr>
<tr>
<td>28</td>
<td>Screw, 10-32 x 5/16 philips flat head</td>
<td>2</td>
<td>SC-25004</td>
</tr>
</tbody>
</table>
Serial number is required for all inquiries.
Part numbers and drawings are subject to change without notice.
ivNow-1 120V Wiring Diagram

NOTE: SEE DRAG 250000/14 FOR VERS 4530
Wiring Diagrams

ivNow-2 120V Wiring Diagram
Wiring Diagrams

ivNow-3 120V Wiring Diagram
ivNow-6 120V Wiring Diagram
Wiring Diagrams

ivNow-1 230V Wiring Diagram
ivNow-4 230V Wiring Diagram