

ENTHERMICS Medical Systems

the warming people[®]
FLUID WARMING CABINET



DC400L

DC250L
DC400L

DC250L
(SHOWN WITH OPTIONAL
ELECTRONIC COMBINATION
DOOR LOCK AND SINGLE
BASKET INSERT)

120V

OPERATION AND CARE MANUAL



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Wire Diagram

Refer to wire diagram included with the unit for the correct version.

Warranty

Transportation Damage and Claims	Back Cover
Limited Warranty	Back Cover

ENVIRONMENTAL CONDITIONS

Transport and Storage Environmental Conditions (not to exceed 15 days)

- Ambient temperature range of -40° to +70°C (-40° to +159°F).
- Relative humidity range of 10% to 95%, non-condensation.
- Atmospheric pressure range of 50KPa to 106KPa.

Operational Environmental Conditions

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

UNPACKING AND SET-UP

DELIVERY

The warming cabinet has been thoroughly tested and inspected to insure only the highest quality unit is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. See *Transportation Damage and Claims* section located in this manual.

This appliance, complete with unattached items and accessories, may have been delivered in one or more packages. Check to ensure that all standard items and options have been received with each model as ordered.

Save all the information and instructions packed with the appliance. Complete and return the warranty card to the factory as soon as possible to assure prompt service in the event of a warranty parts and labor claim.

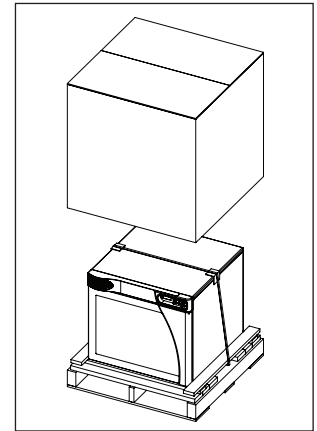
This manual must be read and understood by all people using or installing the equipment model. Contact the service department if you have any questions concerning installation, operation, or maintenance.

NOTE: All claims for warranty must include the full model number and serial number of the unit.

UNPACKING

1. Carefully remove the appliance from the carton or crate.

NOTE: Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.



2. Read all instructions in this manual carefully before initiating the installation of this appliance.

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.*

3. Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power.
4. When placing the cabinet into position use care in rolling cabinet across high thresholds.

CAUTION



**TO PREVENT PERSONAL INJURY,
USE CAUTION WHEN MOVING OR
LEVELING THIS APPLIANCE.**





WARNING


**TRANSPORT SHALL ONLY BE DONE
WITH THE DOORS CLOSED**

SAFETY PROCEDURES AND PRECAUTIONS


Knowledge of proper procedures is essential to the safe operation of electrically energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following 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.
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 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.
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 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.
--	--

CAUTION	Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.
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	Used to indicate that referral to operating instructions is a mandatory action. If not followed the operator or patient could suffer personal injury.
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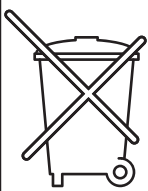
	Used to indicate that referral to operating instructions is recommended to understand operation of equipment.
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NOTE:	Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.
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1. This fluid warming cabinet is intended for warming injection and/or irrigation fluids ONLY. No other use for this device is authorized or recommended.
2. This device is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this device. Operating instructions and warnings must be read and understood by all operators and users.
3. Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
4. This manual should be considered a permanent part of this device. 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.

<h1 style="margin: 0;">NOTE</h1>
A temporary odor may be noticeable upon initial start-up of unit. Contact manufacturer if the odor persists after a day or longer of continuous use.

<h1 style="margin: 0;">NOTE</h1>
This unit 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.

<h1 style="margin: 0;">NOTE</h1>	
	<p>For equipment delivered for use in any location regulated by the following directive:</p> <p>DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.</p>

 <h1 style="margin: 0;">WARNING</h1>	
	<p>STACKED UNITS MAY BECOME UNSTABLE AND SHOULD ONLY BE TRANSPORTED WHEN EMPTY. CARE SHOULD BE TAKEN WHEN TRANSPORTING STACKED UNITS TO ENSURE SAFETY.</p>

GENERAL INFORMATION

Specifications:

- Warming cabinet with stainless steel interior
- Ultra quiet air flow system designed for balanced air movement
- Energy efficient, e-coated glass window in door allows for inventory observation
- Easy, hands-free, push-button door release
- Door is fully gasketed and hinged on the right side of the unit
- WarmRight® technology employs a multi-zone heating system that monitors cavity surfaces to ensure a safe temperature range
- Furnished with four (4) 3/4" (19mm) non-skid feet

Control:

- The warming cabinet can be set to warm either irrigation fluids (IRR) or injection fluids (INJ), with separate temperature ranges depending on the choice selected. IRR temperature may be adjusted from 32° to 66°C (90° to 150°F), and the INJ temperature can be adjusted from 32° to 40°C (90° to 104°F)
- Efficient, balanced heating system allows for low energy consumption and minimal heat loss
- Operates in Celsius or Fahrenheit
- Four digit L.E.D. display
- Actual temperature indication
- Built-in speaker for audible feedback
- User Interface lock-out control feature

Additional features:

- L.E.D. interior lighting casts a comforting blue glow with two (2) different intensity settings, and off mode.
- Convenience: In the event of a power failure the cabinet will remember its settings and begin to operate as before when power is restored with a visible indicator.
- Safety: A thermal shut-off system, separate from the electronic control, is included as an additional safety feature.
- Stackable design - see options and accessories list for available combinations.

DC250L INFORMATION:

The warming cabinet comes standard with two (2) white, epoxy-coated wire baskets to accommodate fluids packaged in bags or bottles, mounted on pull-out rails. Standard capacity with two baskets is 8 1-liter bags per basket, totaling 16 1-liter bags. By removing the upper basket the cabinet has a capacity of 12 1-liter bottles.

DC400L INFORMATION:

The warming cabinet comes standard with two (2) white, epoxy-coated wire baskets to accommodate fluids packaged in bags or bottles, mounted on pull-out rails. Standard capacity with two baskets is 14 1-liter bags per basket, totaling 28 1-liter bags. By removing the upper basket the cabinet has a capacity of 20 1-liter bottles.

Options & Accessories

DC250L

- Casters, 3" (76mm)** [5012693]
OVERALL HEIGHT INCREASES BY 3.6" (91.4mm)
- Electronic Combination Door Lock** [5015173]
(ALLOWS THE USER TO LOCK THE DOOR, INCLUDES MANUAL OVERRIDE)
AVAILABLE WITH ORIGINAL ORDER ONLY.

Door Assemblies

- Window Door Assembly with Manual Lock** [5016415]
- Solid Door Assembly** [5015697]

Stacking Kits (OTHER OPTIONS AVAILABLE, CONTACT FACTORY)

- DC250L over DC250L or DC350 [5013021]

DC400L

- Casters, 3" (76mm)** [5012693]
OVERALL HEIGHT INCREASES BY 3.6" (91.4mm)
- Electronic Combination Door Lock** [5015173]
(ALLOWS THE USER TO LOCK THE DOOR, INCLUDES MANUAL OVERRIDE)
AVAILABLE WITH ORIGINAL ORDER ONLY.

Door Assemblies

- Window Door Assembly with Manual Lock** [5015875]
- Solid Door Assembly** [5015698]

Stacking Kits (OTHER OPTIONS AVAILABLE, CONTACT FACTORY)

- DC400L over DC400L or DC750 [5013024]

CAUTION

THIS UNIT HAS NOT BEEN APPROVED FOR WARMING OF BLOOD OR BLOOD PRODUCTS.

DANGER



AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.

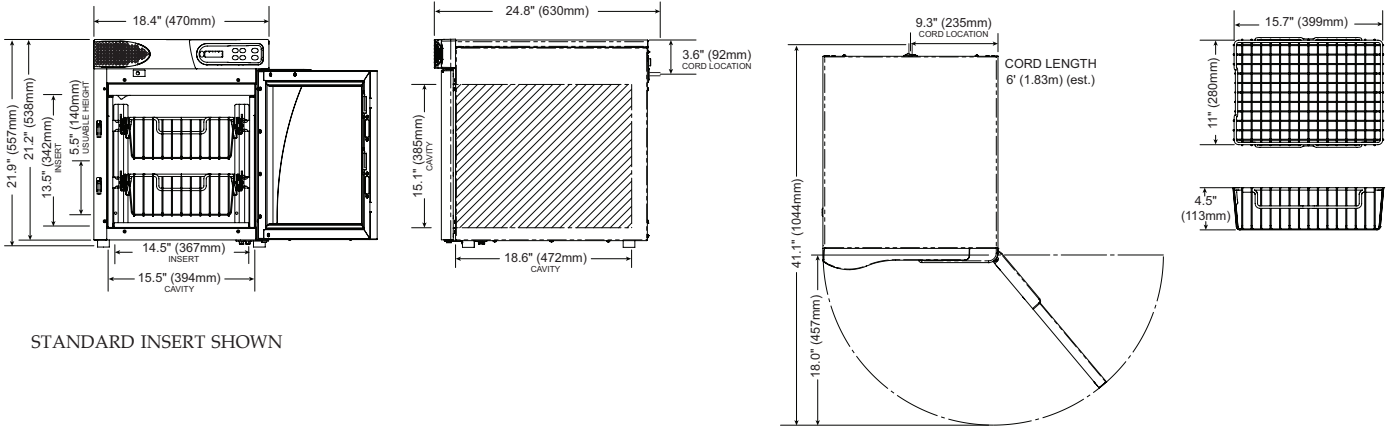


SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED

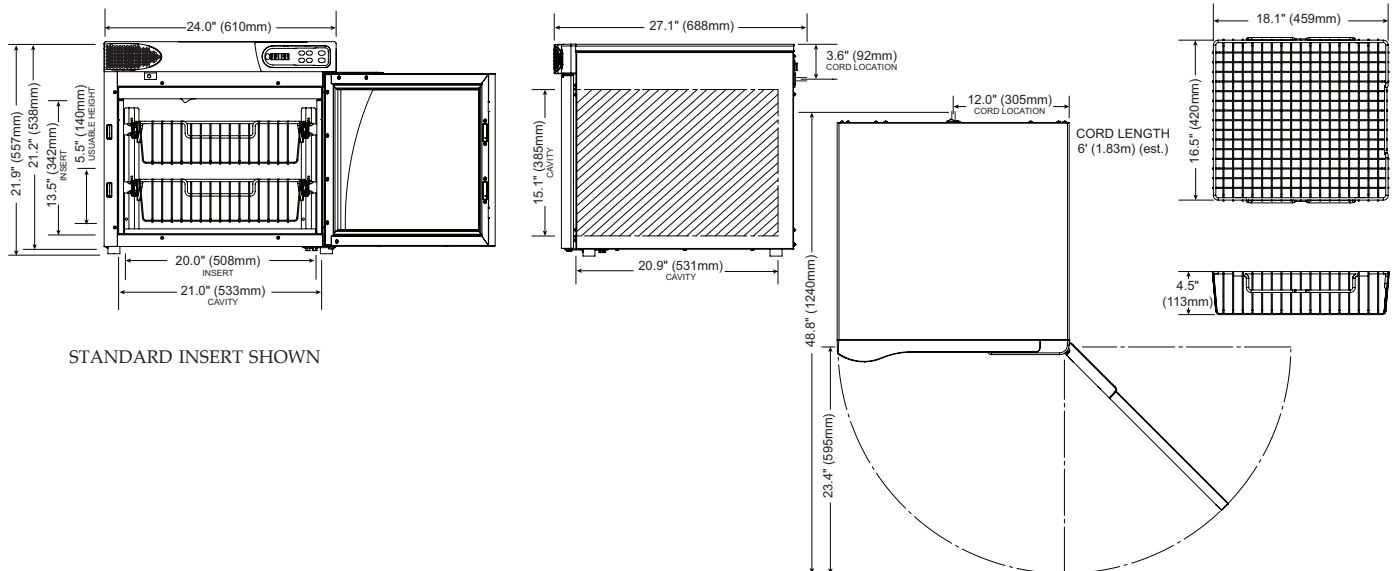
(IP X0 - Listed as Ordinary)

DC250L DIMENSIONS



STANDARD INSERT SHOWN

DC400L DIMENSIONS



STANDARD INSERT SHOWN

Optional 3" (76mm) casters increases height by 3.6" (91.4mm)

Clearance requirements:

- 2" (51mm) from rear
- 1" (25mm) from sides and top
- 3/4" (19mm) from bottom (PROVIDED BY THE FEET)

CAUTION

MAKE SURE THE AIR VENTS LOCATED IN THE AIRFLOW INSERT PANELS ON THE SIDES OF THE CAVITY ARE NOT OBSTRUCTED IN ANY WAY.

PREPARATION

Before operating the cabinet, clean both the interior and exterior of the unit with a damp cloth and mild soap solution. Wipe with an appropriate disinfectant. Wipe dry with a clean cloth or air dry.

ELECTRICAL INFORMATION & CAPACITIES



The power specifications are located on the unit identification rating tag. This tag is permanently attached to the unit and must be located to verify power requirements.

DC250L POWER REQUIREMENTS

120 V.A.C. — 60 Hz, 1 ph
0.7 kW, 5.8 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous



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



DC400L POWER REQUIREMENTS

120 V.A.C. — 60 Hz, 1 ph
0.7 kW, 5.8 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous



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



WIRE DIAGRAM LOCATED UNDER TOP COVER OF UNIT



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

Hazardous
Voltage Present

IMPORTANT

Do not load beyond the recommended maximum capacity:

DC250L		DC400L	
Two (2) Baskets, Standard	8 (1) liter bags per basket/16 bags total	Two (2) Baskets, Standard	14 (1) liter bags per basket/28 bags total
One (1) Basket, positioned on bottom rail	12 (1) liter bottles	One (1) Basket, positioned on bottom rail	20 (1) liter bottles
No Basket, Optional	CONTACT FACTORY	No Basket, Optional	CONTACT FACTORY

Overloading may cause lower or uneven temperatures of product and damage to basket and basket rail supports. Baskets that are overloaded may slip off rail supports, resulting in possible damage to product and equipment, as well as causing possible injury.

CAUTION

THIS UNIT HAS NOT BEEN APPROVED FOR WARMING OF BLOOD OR BLOOD PRODUCTS.



WARNING

INJECTION FLUID MANUFACTURER SUGGESTS NOT TO WARM INJECTION FLUIDS OVER 40°C (104°F).

IF FLUIDS ARE WARMED OVER SUGGESTED TEMPERATURE, THEY SHOULD BE DISCARDED.



DANGER



ENSURE POWER SOURCE MATCHES VOLTAGE IDENTIFIED ON APPLIANCE RATING TAG.



DANGER



DO NOT use this warming appliance in the presence of flammable anesthetic mixture (with air or with oxygen or nitrous oxide). THIS COULD CAUSE AN EXPLOSION!

(Not category AP or APG equipment)

GENERAL WARNINGS



The unit 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 unit 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.

Guidance and manufacturer's declaration – electromagnetic emissions

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

Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The unit 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.
RF emissions CISPR 11	Class B	The unit 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.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/Flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity

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


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

NOTE UT is the a.c. mains voltage prior to application of the test level.

The essential performance of the unit is to not exceed internal temperature of 150° F (+10%).

Guidance and manufacturer's declaration - electromagnetic emissions

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

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 V/m 150 kHz to 80 MHz	3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the unit, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = [3.5/3] \sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	$d = [3.5/3] \sqrt{P}$ 80 MHz to 800 MHz $d = [7/3] \sqrt{P}$ 800 MHz to 2.5 GHz 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, ^a should be less than the compliance level in each frequency range. ^b 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.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the unit is used exceeds the applicable RF compliance level above, the unit should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the unit.

^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [VI] V/m.

Guidance and manufacturer's declaration – electromagnetic immunity recommended separation distance between portable and mobile RF communications equipment and this unit.

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

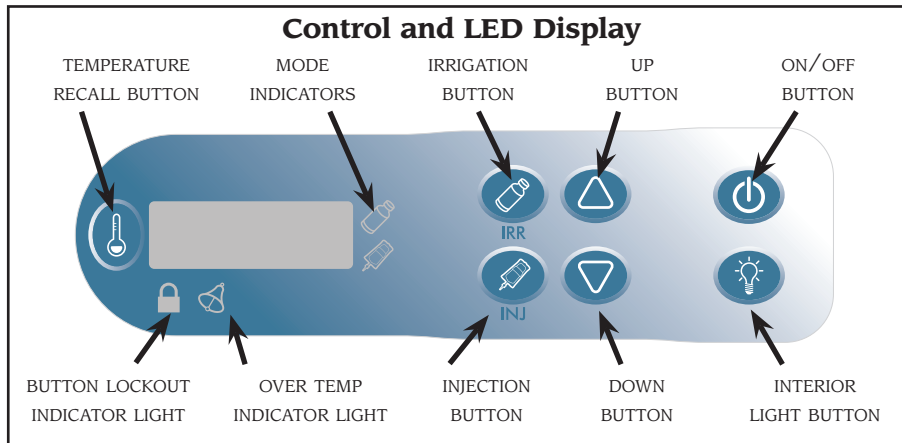
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.5 GHz
	$d = \left[\frac{3.5}{3} \right] \sqrt{P}$	$d = \left[\frac{3.5}{3} \right] \sqrt{P}$	$d = \left[\frac{7}{3} \right] \sqrt{P}$
0.01	0.117	0.117	0.233
0.1	0.369	0.369	0.738
1	1.167	1.167	2.333
10	3.689	3.689	7.379
100	11.667	11.667	23.333

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.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

FLUID CONTROL FEATURES



CONTROL PANEL BUTTONS

ON/OFF BUTTON

- Press the ON/OFF button to power on the control.
- Press and hold the ON/OFF button for three (3) seconds to power off the control.

INTERIOR LIGHT BUTTON

- Press INTERIOR LIGHT button to toggle blue interior LED light intensity to high, low, or off.

UP AND DOWN ARROW BUTTONS

- Used to increase or decrease the temperature set-point.

TEMPERATURE RECALL BUTTON

- Press the TEMPERATURE RECALL button to view the actual cavity temperature. The display will show the actual cavity temperature for five (5) seconds before reverting back to displaying the current temperature set-point.

IRRIGATION BUTTON

- The IRRIGATION button is used to select the IRRIGATION FLUIDS mode and to display the IRRIGATION set-point temperature. The temperature range is 32° to 66°C (90° to 150°F). The IRRIGATION mode indicator illuminates when the IRRIGATION set-point temperature is being displayed.

INJECTION BUTTON

- The INJECTION button is used to select the INJECTION FLUIDS mode and to display the INJECTION set-point temperature. The temperature range is 32° to 40°C (90° to 104°F). The INJECTION mode indicator illuminates when the INJECTION set-point temperature is being displayed.

NOTE: When the control is powered on, IRRIGATION or INJECTION must be selected to turn on the heating circuit. To switch between the irrigation and the injection mode, you must first turn the control off and back on. **If switching from a high temperature to a lower temperature the display will flash the higher actual temp until it cools to the set temperature.**

L.E.D. DIGITAL DISPLAY

The control has a four-digit L.E.D. display.

AUDIBLE BUTTON FUNCTION

The warmer's audible button volume can be changed:

1. While the warmer is on, press the temperature recall button and the DOWN arrow to display the current volume setting. Release.
2. Press the UP or DOWN arrow to adjust the volume. Volume settings are from 0 (mute) to 12.

Note: The volume setting does not affect the alarm volume. Alarm Volume can not be adjusted.

L.E.D. DISPLAY STATUS INDICATORS

OVER-TEMP INDICATOR LIGHT

- This indicator will illuminate and an alarm will sound if the control senses a temperature of 5° over set point.

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 warmer is still experiencing an error and may need service.

BUTTON LOCKOUT INDICATOR LIGHT

- The lock indicator light will illuminate when the control lock feature is engaged. Press the ON/OFF button and UP ARROW simultaneously to lock the control.
- Press the ON/OFF button and DOWN ARROW button simultaneously to unlock the control.

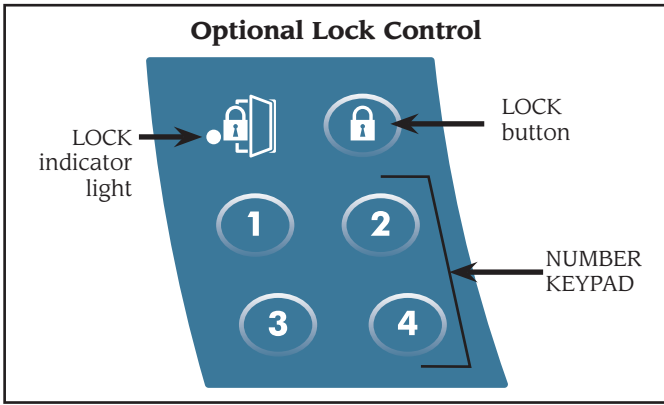
POWER FAIL DETECTION

If the power fails for any reason while heating, the warmer will retain its current operating state in memory. The control will resume operating after the power is restored. In order to alert the user that the power has failed, the decimal place on the first digit will flash. Press the ON/OFF key once to acknowledge that the power has been restored.

FAHRENHEIT AND CELSIUS SELECTION

- While the controller is in OFF state, press and hold the TEMPERATURE RECALL button for four (4) seconds to display the current temperature scale. Press either the UP or DOWN arrows to toggle between Fahrenheit and Celsius.

OPTIONAL ELECTRONIC DOOR LOCK



The optional combination lock is designed with a three (3) second delay to safely secure your medical fluids.

The electronic lock is equipped with a four-digit keyless control, an electromechanical mechanism to secure the Fluid Warmer door. The lock can store any four (4) digit password code. Upon shipment there is a default code (1 1 1 1) that needs to be changed after installation of unit. Power required for the lock draws directly from the power supplied to the fluid warmer.

NOTE: If your warmer is not equipped with this optional lock feature or you choose not to use it, you do not need to set the combination and this section can be skipped.

COMBINATION LOCK CONTROL PANEL

Fluid warmers with this option have five (5) buttons:

LOCK INDICATOR LIGHT



The LOCK indicator light illuminates when the lock is engaged (ie unit is locked, light is on, unit unlocked light off).

LOCK BUTTON



Press the LOCK button to initiate lock feature. The ON/OFF indicator light next to this button will illuminate when mode is turned on.

NUMBER KEYPAD



Press to select combination for lock

CODE/DATE CREATED RECORD

Record your new lock code and date created here.

CODE	DATE CREATED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

PROGRAMMING COMBINATION CODE INTO LOCK

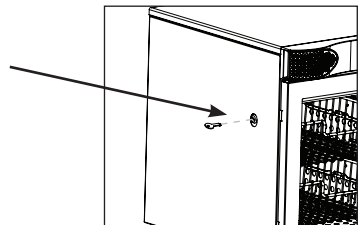
1. Select a unique four (4) digit combination code to be used. (Default code is 1 1 1 1)
 2. Press and hold buttons number 1, 2, and 4 for at least 15 seconds. The LED will illuminate.
 3. Enter the current password. The LED will flash rapidly. If the current password is entered incorrectly, the LED will shut off and the user must start the process over.
 4. While the LED flashes rapidly, enter the new four (4) digit code into the four (4) digit keyless control. The LED will flash slowly.
 5. Re-enter the new password while the LED continues to flash slowly. If the re-entered password matches the first entry, the LED will illuminate continuously during reprogramming, indicating that the lock combination has been successfully changed. If the password is entered incorrectly during the second entry, the LED will shut off and the user must start the process again.
- Note:** If the wrong combination is entered, the LED will flash rapidly for three (3) seconds. After three (3) seconds the user may re-enter the combination. Subsequent failed combination input attempts will increase the delay time between allowed attempts.
6. Press LOCK Button in order to re-lock the door.
- Note:** Factory default is to enter the programmed four (4) digit combination code to automatically open the door and pressing the lock button after you close the oven door to re-lock the door. If you wish to have the lock automatically re-engage whenever you close the door, additional programming is required (see next steps).
7. Unlock the unit and open the door.
 8. Press and hold the lock button for more than eight (8) seconds. The LED will flash for a few seconds to indicate that the change has been made.
- Note:** Repeating steps 6 and 7 will allow you to toggle between the different types of locking responses.

FACTORY RESET

1. Press and hold buttons number 1, 3, and 4 for at least 15 seconds.
2. The LED will illuminate while the password is reset to the factory default (1 1 1 1). The LED will flash slowly to indicate the lock has been successfully reset.

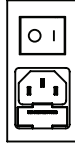
MANUAL OVERRIDE OF ELECTRONIC LOCK




1. Insert key into lock on left side of unit and turn to open door.
2. Lock re-engages when door is closed.



OPERATIONAL PROCEDURES



1. The appliance should be plugged into an appropriate hospital grade receptacle as specified on the electrical information page.
2. **Turn on the power switch**, which is located at the back of the appliance just above power cord. It is a rocker-type switch with international ON (I) and OFF (O) markings.



3.  **ACTIVATE CONTROL BY PRESSING THE ON/OFF BUTTON ON CONTROL PANEL ONCE.**
4. **SELECT DESIRED MODE OF OPERATION.**
 -  Press the IRRIGATION button to select the IRRIGATION FLUIDS mode or the INJECTION button to choose the INJECTION FLUIDS mode.
 -  The last set-point temperature for that mode of operation will appear in the display.

NOTE: In order to switch between the irrigation and injection modes, you must first turn the unit off and then turn the unit back on.

5. SET DESIRED TEMPERATURE.

- To set the fluid warming temperature, press and hold the UP or DOWN ARROW keys to change the value shown in the display. The IRRIGATION FLUIDS set-point temperature range is 32° to 66°C (90° to 150°F) and the INJECTION FLUIDS set-point temperature range is 32° to 40°C (90° to 104°F).
- 
 - 

NOTE: The warmer is designed to warm fluids to the appropriate temperature recommended by your fluid supplier. The warm-up stabilization time will vary depending on the warmer load. Exercise judgment to determine inventory rotation protocols and warm-up time for the fluids you use.

Caution:

- If the warmer control has failed, or if error messages are displayed, contact your service representative. It is highly recommended that you discard your fluid inventory.

Internal surfaces of cavity may be hot so use caution when operating.



WARNING

REFER TO FLUID MANUFACTURER'S LABELING FOR RECOMMENDED WARMING PROCEDURES



WARNING

INJECTION FLUID MANUFACTURER SUGGESTS NOT TO WARM INJECTION FLUIDS OVER 40°C (104°F). IF FLUIDS ARE WARMED OVER SUGGESTED TEMPERATURE, THEY SHOULD BE DISCARDED.

CAUTION

MAKE SURE THE AIR VENTS LOCATED IN THE AIRFLOW INSERT PANELS ON THE SIDES OF THE CAVITY ARE NOT OBSTRUCTED IN ANY WAY.



DANGER



DO NOT use this warming appliance in the presence of flammable anesthetic mixture (with air or with oxygen or nitrous oxide). THIS COULD CAUSE AN EXPLOSION!

(Not category AP or APG equipment)



DANGER



DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.



CAUTION

THE UNIT MAY TIP OVER IF MORE THAN ONE BASKET IS EXTENDED SIMULTANEOUSLY. OPEN ONLY ONE BASKET AT A TIME WHEN LOADING OR UNLOADING FLUIDS.



CAUTION

METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

CLEANING AND PREVENTIVE MAINTENANCE

PROTECTING STAINLESS STEEL, EPOXY COATED 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 will abrade surfaces causing damage to this protective coating and will eventually result in areas of corrosion. Even water, particularly hard water that contains high to moderate concentrations of chloride, will cause oxidation and pitting that result in rust and corrosion. In addition, many acidic spills left to remain on metal surfaces are contributing factors that will corrode surfaces.

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

PREVENTATIVE MAINTENANCE

1. Ensure that the correct Operation and Care Manual is available to all users.
2. Ensure that all users have been properly trained in unit's operation.
3. Do not overload cabinet.
 - **Blanket Warmer:** 1" (25mm) from top interior of unit
 - **Fluid Warmer:** See electrical/capacity page
4. Inspect condition of plug and cord. Replace if damaged.
5. Clean dust from outer vents surrounding the unit and around top of bonnet (if applicable).
6. Check door gasket integrity. Are there any tears? Is the gasket worn or loose? Make sure seal is tight to unit body. Replace gasket if integrity is compromised.
7. Check air temperature sensor mount on the interior of chamber. Is the guard in place? Are the wires in good condition?
8. Check insert assembly (depends on unit):
 - **Blanket Warmer:** Check the blanket support assembly and shelf. Is the assembly in place? Are any pieces missing?
 - **Fluid Warmer:** Check basket and side rail condition. Do baskets move smoothly and freely?
9. Check condition of casters or feet. Ensure components are secure and tightly threaded.
10. Check control panel overlay condition. Are there any tears or excessive wear on the graphic? Does the control work properly when buttons are pushed?
11. Check that all control and interior LEDs light up.
12. Is the set temperature comparable to the actual temperature displayed? Check cavity air temperature with a quality thermocouple placed 1" from the cavity sensor not allowing it to touch any surface. Monitor for approximately one hour in an empty cavity.




CLEANING AGENTS

Use non-abrasive cleaning products designed for use on stainless steel surfaces. Cleaning agents must be chloride-free compounds and must not contain quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel surfaces. Always use the proper cleaning agent at the manufacturer's recommended strength. Contact your local cleaning supplier for product recommendations.

CLEANING MATERIALS

The cleaning function can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods must be employed, use a non-abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of surface metal to avoid surface scratches. Never use wire brushes, metal scouring pads, or scrapers to remove residue.



CAUTION	
  	TO PROTECT SURFACES, COMPLETELY AVOID THE USE OF 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.

Contact service for immediate repair if any of the above problems exist.

CARE AND CLEANING

The cleanliness and appearance of this equipment will contribute considerably to its operating efficiency. Make certain the cabinet and door gasket are kept free of any debris that may accumulate. Good equipment that is kept clean works better and lasts longer.



CLEAN THE UNIT REGULARLY:

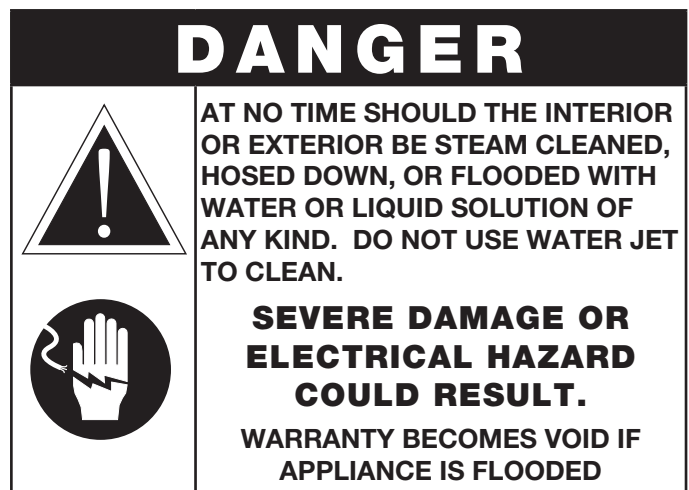
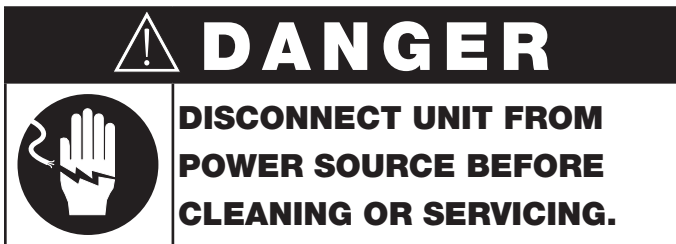
1. Disconnect the cabinet from the power source.
2. Remove all detachable items such as metal basket and basket rail supports. Clean these items separately.

NOTE: Avoid the use of abrasive cleaning compounds, chloride based cleaners, or cleaners containing quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel.



3. Clean the interior metal surfaces of the cabinet with a damp cloth and any mild commercial detergent. Avoid the use of abrasive cleaning compounds. Rinse surfaces by wiping with sponge & clean warm water. Remove excess water with sponge and wipe dry with a clean cloth or air dry. Leave doors open until interior is completely dry.
4. Interior can be wiped with a sanitizing solution after cleaning and rinsing. This solution must be approved for use on stainless steel surfaces. Replace support assembly.
5. Clean the exterior of the cabinet with a cleaner recommended for stainless steel or epoxy coated surfaces. Spray the cleaner on a clean cloth and wipe with the grain of the stainless steel.
6. Clean the window glass with a standard commercial glass cleaner.
7. Wipe control panel, door vents, door handles, and door gaskets thoroughly since these areas can harbor debris.
8. Wipe door gaskets and control panel dry with a clean, soft cloth.
9. To help maintain the protective film coating on polished stainless steel, clean the exterior of the cabinet with a cleaner recommended for stainless steel or epoxy coated surfaces. Spray the cleaning agent on a clean cloth and wipe with the grain of the stainless steel.

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



(IP X0 - Listed as Ordinary)

TROUBLESHOOTING GUIDE

NOTE: If your unit is not operating properly, check the following before calling your authorized service agent. Check the power applied to the unit. Verify female end of plug is securely seated in unit and that the male end of plug is in an appropriate, functioning outlet. Check fuses. (See "Fuse Replacement" section in manual.) Has the high limit manual reset tripped? If so, reset. (See "Manual Reset Instructions" below.)

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

This chart is provided for the assistance of qualified technicians only and is not intended for use by untrained or unauthorized service personnel.

Code	Refers to	Action Required
E-10 ES10 ES20 ES30 ES40 ES50 ES60 ES70	Cavity sensor Sensor 1 Sensor 2 Sensor 3 Sensor 4 Sensor 5 Sensor 6 Sensor 7	Sensor is shorted. Software disengages heating pads. User must acknowledge error by pressing ON/OFF button. If error persists, a qualified service technician should test sensor. <ul style="list-style-type: none"> To test sensor: Detach the sensor from unit. Use an Ohm meter to measure the resistance of the sensor. Check sensor at 0°C (32°F) using a container of ice water. If reading is 32.6 KOhm ±1.5KOhm, replace display. If reading is ±2KOhm, replace sensor. Check 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.
E-11 ES11 ES21 ES31 ES41 ES51 ES61 ES71	Cavity sensor Pad sensor 1 Pad sensor 2 Pad sensor 3 Pad sensor 4 Pad sensor 5 Pad sensor 6 Pad sensor 7	Sensor is open. Software disengages heating pads. User must acknowledge error by pressing ON/OFF button. If error persists, a qualified service technician should test sensor. <ul style="list-style-type: none"> To test sensor: Detach the sensor from unit. Use an Ohm meter to measure the resistance of the sensor. Check sensor at 0°C (32°F) using a container of ice water. If reading is 32.6 KOhm ±1.5KOhm, replace display. If reading is ±2KOhm, replace sensor. Check 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.
P130 P230 P330 P430 P530 P630 P730	Pad 1 Pad 2 Pad 3 Pad 4 Pad 5 Pad 6 Pad 7	Heating pad has not reached set-point temperature. User must acknowledge error by pressing ON/OFF button. If error persists, a qualified service technician should test the pad(s). <ul style="list-style-type: none"> Turn unit OFF and unplug it from AC power. Use Ohm meter to measure resistance between L:(Line) & N:(Neutral) leads of heater pad. <ul style="list-style-type: none"> The Ohm readings shall be: 120V = 72 Ohm ±10% or 230V = 288 Ohm ±10% Call Service if error persists.
*E-31	Cavity sensor	<ul style="list-style-type: none"> Sensor reading is above maximum allowable temperature set-point. <ul style="list-style-type: none"> <i>Fluid Warmers</i>, triggers at 5°F over set point. <i>Blanket Warmers</i>, triggers at 15°F over set point Call Service.
P131 P231 P331 P431 P531 P631 P731	Pad sensor 1 Pad sensor 2 Pad sensor 3 Pad sensor 4 Pad sensor 5 Pad sensor 6 Pad sensor 7	Pad over-temp error <ul style="list-style-type: none"> Software disengages heating pads. User must acknowledge error by pressing ON/OFF button. Allow unit to cool. Call Service if error persists.
*E-33	Cavity sensor	<ul style="list-style-type: none"> Sensor reading is above maximum allowable temperature set-point and over temp value <ul style="list-style-type: none"> <i>Fluid Warmers</i>, triggers at 160°F. <i>Blanket Warmers</i>, triggers at 200°F Contact Service
*E-50	Analog to Digital Convertor Error	<ul style="list-style-type: none"> Remove product and allow unit to cool down. Inspect fluid and discard if necessary. If error persists after cool down and reset, control assembly should be replaced by a qualified service technician. Contact Service.
E-60	Real Time Clock Checksum Error	<i>(Blanket Warmers Only)</i> Real Time Clock rechargeable battery backup has discharged. <ul style="list-style-type: none"> Plug unit into outlet for 30 minutes. See "Timer Control Panel" section in blanket manual to reset clock.
*E-61	Real Time Clock	<i>(Blanket Warmers Only)</i> Real Time Clock not responding. Call Service if error persists.
E-62	Real Time Clock	Timer overlay is present, but no real time clock is detected. Call Service.
*E-70	Pad Count Error	More pads detected than set for. Hold ON/OFF button for 12 seconds until display shows "PA#" (# = number of pads selected [3-7]). Press UP or DOWN arrow to adjust to correct number of pads. <ul style="list-style-type: none"> <i>Fluid Warmers</i>: DC250L & DC400L = 3 pads <i>Blanket Warmers</i>: DC150 & DC250 = 3 pads, DC350 & DC400 = 4 pads, DC750 = 7 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.

Note: 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 on the back of the unit off.

(continued on next page)

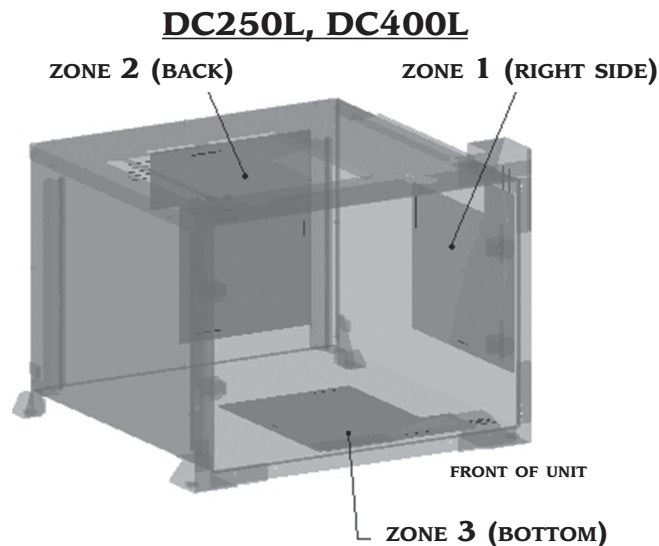
TROUBLESHOOTING GUIDE

Code	Refers to	Action Required
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 no debris is causing a short between the test pins. If pins are good, replace control.
*E-98	Temperature Delta Error	<i>(Fluid Warmers Only)</i> Temperature of cavity sensors 1 and 2 differ by more than 1.7°C (3°F). <ul style="list-style-type: none"> Remove product and allow unit to cool down. Verify that product sensor is clean and operating correctly. Press 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	<ul style="list-style-type: none"> Inspect connections and condition of high limit bimetal thermostat. If error continues call Service.
*EFA n	Fan or Fan Sensor failure	<i>(Fluid Warmers Only)</i> <ul style="list-style-type: none"> If the fan is operating, ensure that the lens on the sensor is not blocked or dirty. If error persists after cleaning sensor, use an Ohm meter to ensure sensor wires are good. A good wire will have a reading of <1 Ohm. If wires are good, replace sensor. If error persists after replacement, check sensor mount location. If error still persists, replace control.

Note: 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 on the back of the unit off.

Manual Reset Instructions: After allowing unit to cool, remove three (3) screws from top cover (on upper edge of the back of unit). Slide top panel toward back of unit (approximately 1/2" [13mm]) and then lift up. Locate the two (2) manual reset buttons in middle of the bonnet. (See "MANUAL RESETS" shown in the electrical service view) Firmly push reset button(s). You will hear an audible click when the buttons are reset. If reset button trips again while unit is running, contact a qualified service technician.

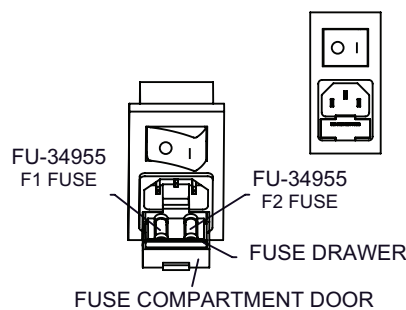
ZONE HEATING PAD LOCATIONS



FUSE REPLACEMENT

Fuse replacement:

1. Unplug power cord from wall outlet and from power switch assembly.
2. Fuse compartment is located directly below the plug receptacle. Use fingernail or thin implement to flip compartment door open.
3. Use fingernail or thin implement to pull fuse drawer out from compartment.
4. Use a thin implement to push fuses up out of drawer.
5. Replace with new fuse.
6. Push drawer back into compartment.
7. Close compartment door.



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.

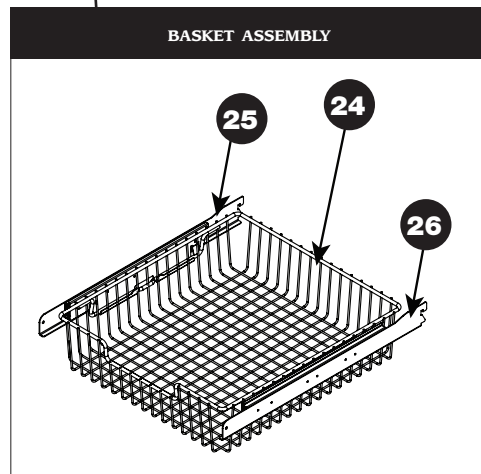
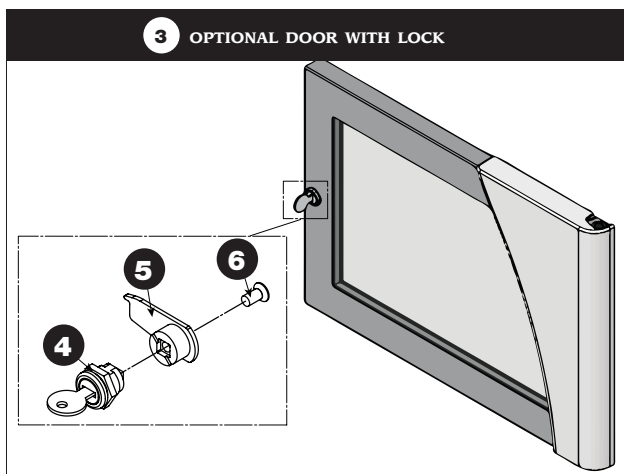
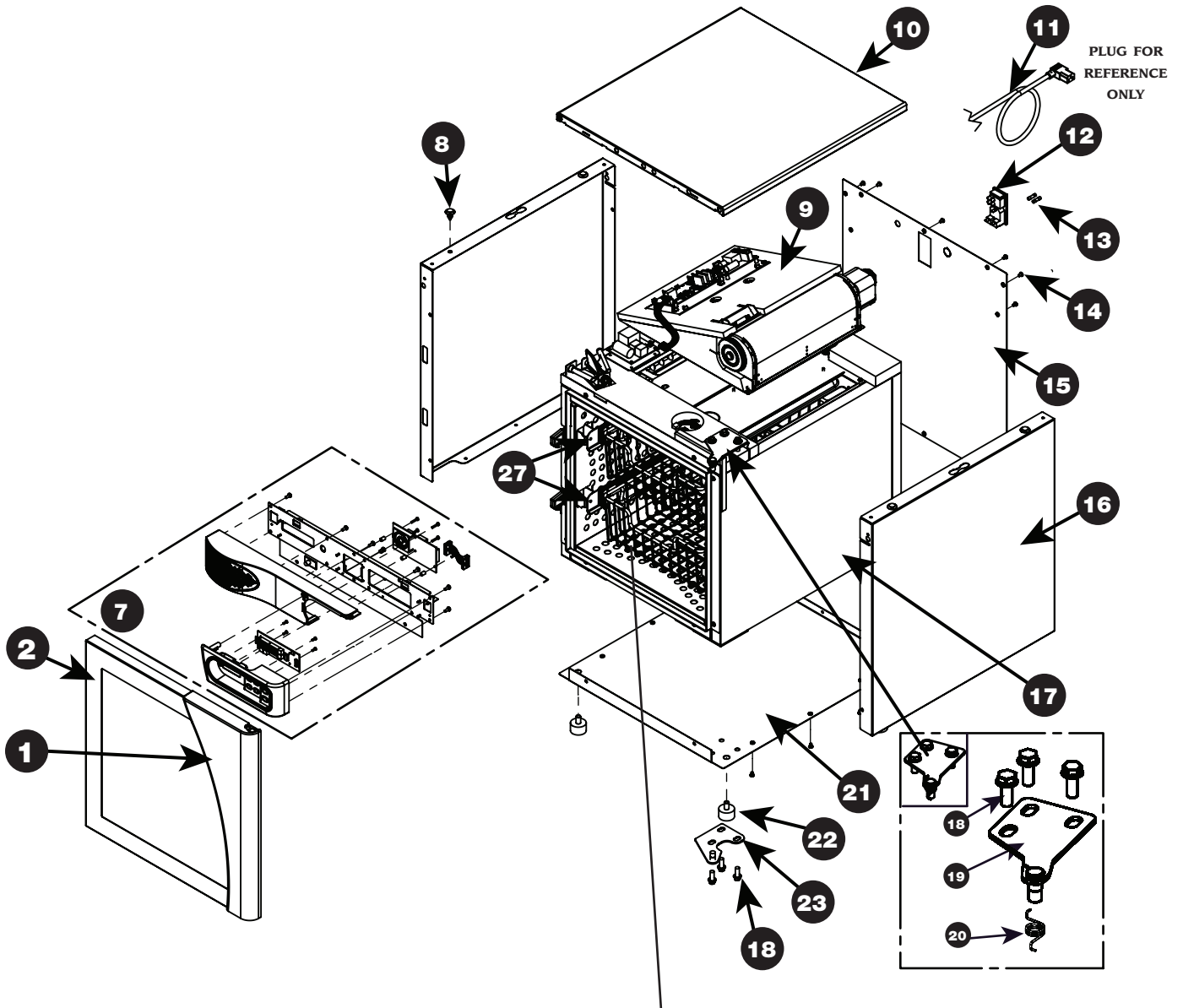


HOSPITAL GRADE CORD MUST BE USED. REFER TO OPERATION AND CARE MANUAL OR CONTACT MANUFACTURER FOR ACCEPTABLE CORDS. EQUIPMENT MUST BE CONNECTED TO AN EQUIVALENT RECEPTACLE MARKED "HOSPITAL GRADE".

LA-29452

SERVICE

FULL ASSEMBLY (DC250L SHOWN)



PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

SERVICE

FULL ASSEMBLY

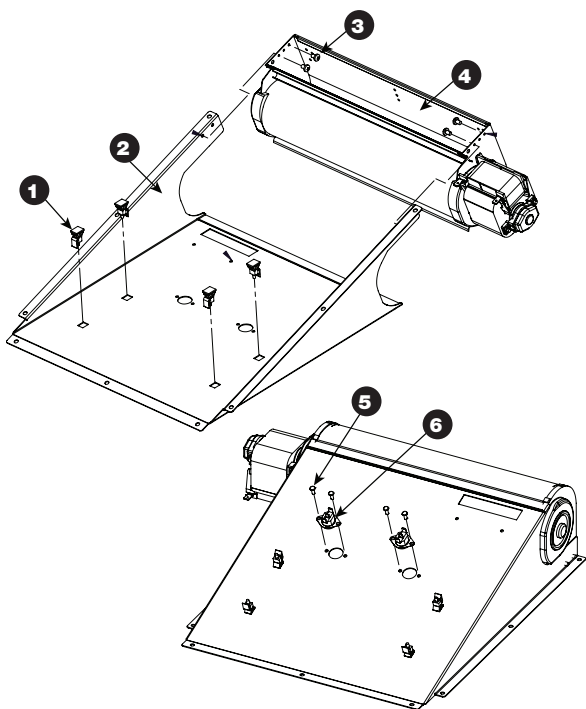
LOC	DESCRIPTION	DC250L	QTY	DC400L	QTY
1.	PANEL, DOOR	CV-35300	1	CV-35301	1
2.	DOOR ASSEMBLY, INCLUDES PANEL	STANDARD 5015297	1	5015298	1
3.	DOOR ASSEMBLY, WITH MANUAL LOCK	OPTIONAL 5016415	1	5015875	1
4.	LOCK ASSEMBLY, WITH KEY	LK-35652	1	LK-35652	1
5.	CAM, TAB LOCK	LK-35651	1	LK-35651	1
6.	SCREW, CAM (1/4-20 X 1/2" FH)	SC-27556	1	SC-27556	1
7.	INTERFACE ASSEMBLY (STANDARD)	18.5" (470mm) 5015219	1	—	—
		24" (610mm)	—	5015220	1
	INTERFACE ASSEMBLY, WITH ELECTRONIC LOCK	18.5" (470mm) 5015221	1	—	—
		24" (610mm)	—	5015222	1
8.	CLIP, TOP COVER RETAINING	CL-29193	4	CL-29193	4
9.	FAN ASSEMBLY, SERVICE KIT	120V 5016044	1	5017337	1
		230V 5016045	1	5017338	1
10.	TOP COVER	1011266	1	1011475	1
11.	POWER CORD	120V CD-35030	1	CD-35030	1
		230V	VARIOUS INTERNATIONAL CORDS AVAILABLE - CONTACT FACTORY		
12.	INLET SWITCH	SW-34911	1	SW-34911	1
13.	FUSES	FU-34955	2	FU-34955	2
14.	SCREWS (M4 x 0.7 X 6mm)	SC-22271	*	SC-22271	*
15.	REAR COVER PANEL	5013521	1	5013643	1
16.	SIDE COVER PANEL	1011269	2	1011472	2
17.	INSULATION KIT	5015685	1	5015653	1
18.	SCREWS (M8 x 1.25 x 20mm HEX FLANGE)	SC-27046	*	SC-27046	*
19.	HINGE PLATE, UPPER	5015522	1	5015522	1
20.	DOOR SPRING	SD-29340	1	SD-29340	1
21.	BOTTOM COVER PANEL	5013524	1	5013644	1
22.	FEET, RUBBER BUMPER	FE-29203	4	FE-29203	4
23.	HINGE PLATE, LOWER	5015523	1	5015523	1
24.	BASKET TRAY	BS-35243	1	BS-35241	1
25.	BASKET RAIL ASSEMBLY	LEFT-HAND 5017014	1	5017016	1
26.	BASKET RAIL ASSEMBLY	RIGHT-HAND 5017015	1	5017017	1
27.	SCREWS, RAIL (M4 x 0.7 x 10mm PH PHH)	SC-22273	*	SC-22273	*

* SCREW QUANTITY VARIES PER MODEL

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

SERVICE

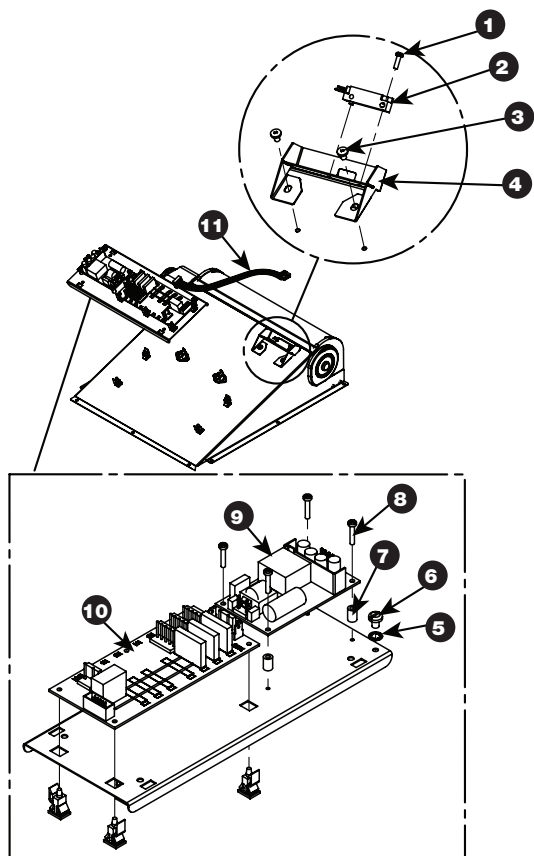
FAN ASSEMBLY (DC250L SHOWN)



LOC	DESCRIPTION	DC250L	QTY	DC400L	QTY
FAN ASSEMBLY, SERVICE KIT (INCLUDES CLIPS, BAFFLE, FAN, RIVETS, SCREWS & THERMOSTAT)					
		120V	5016044	1	5017337
		230V	5016045	1	5017338
1.	CHASSIS PANEL CLIP		CL-35031	4	CL-35031
2.	BAFFLE		1012966	1	1012966
3.	SCREWS (M4 x 0.7 x 6mm PHH)		SC-22271	4	SC-22271
4.	FAN	120V	FA-29883	1	FA-29883
		230V	FA-29884	1	FA-29884
5.	RIVET		RI-27108	4	RI-27108
6.	THERMOSTAT, MANUAL RESET		TT-35688	2	TT-35688
7.*	INSULATION, BAFFLE		1013740	1	1014396

* NOT SHOWN

ELECTRICAL & SENSOR (DC250L SHOWN)

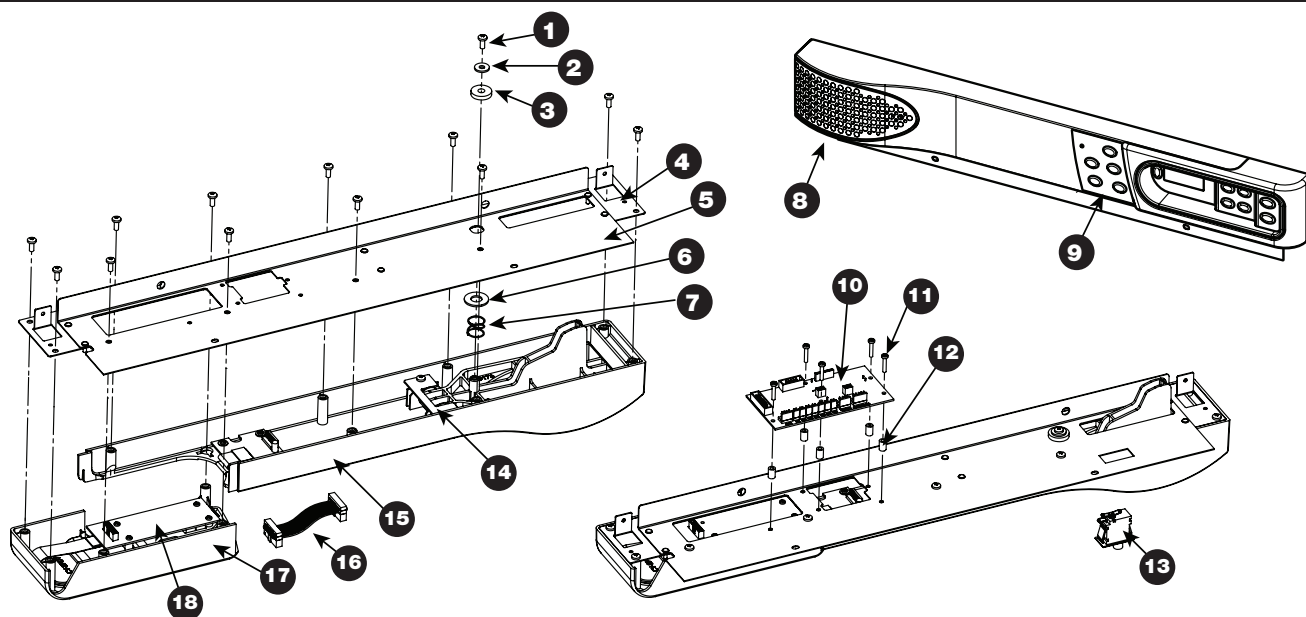


LOC	DESCRIPTION	DC250L	QTY	DC400L	QTY
1.	SCREWS, SENSOR (M3 x 0.5 x 10mm PH)	SC-22620	1	SC-22620	1
2.	SENSOR, FAN	SN-35026	1	SN-35026	1
3.	SCREWS (M4 x 0.7 x 6mm PHH)	SC-22271	2	SC-22271	2
4.	BRACKET, SENSOR	1014112	1	1014112	1
5.	WASHER, INT. LOCK	WS-2467	1	WS-2467	1
6.	SCREW, CHASSIS (10-32 x 1/4" PH)	SC-2190	1	SC-2190	1
7.	SPACER, POWER SUPPLY	SP-29425	4	SP-29425	4
8.	SCREWS, POWER SUPPLY (M3 x 0.5 x 16mm PHH)	SC-22270	4	SC-22270	4
9.	POWER SUPPLY	BA-34965	1	BA-34965	1
10.	RELAY BOARD, 3-ZONE	120V	BA-35106	1	BA-35106
		230V	BA-35109	1	BA-35109
11.	CABLE, RELAY BOARD		CB-35193	1	CB-35193

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

SERVICE

INTERFACE ASSEMBLY (24" WITH ELECTRONIC LOCK OPTION SHOWN)

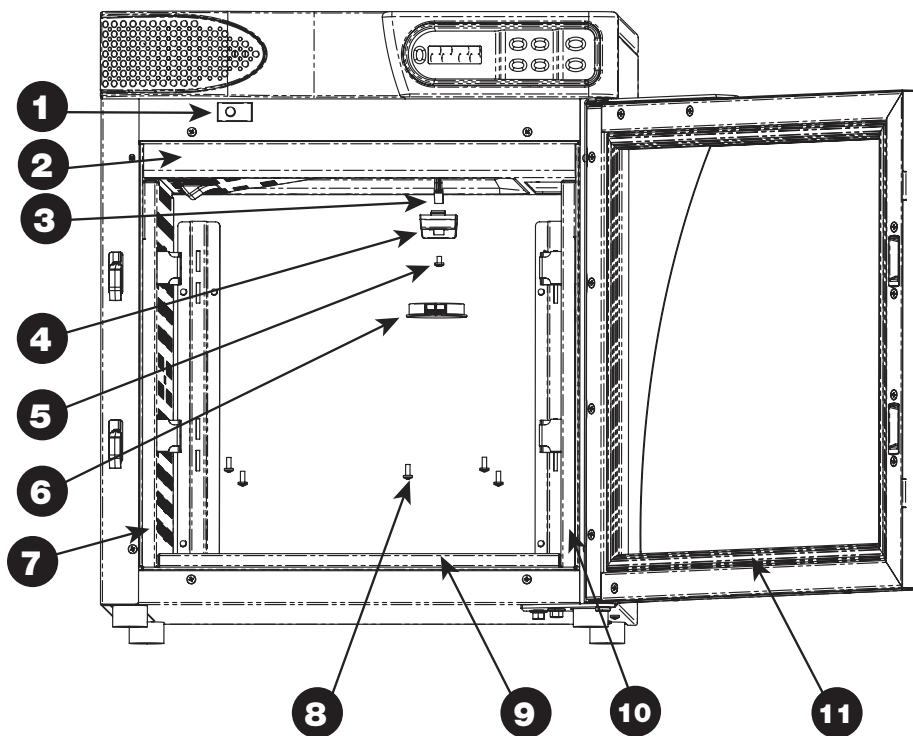


LOC	DESCRIPTION	DC250L	QTY	DC400L	QTY
1.	SCREWS (M4 x 0.7 x 12mm PLASTIC THREAD CUTTER)	SC-29333	**	SC-29333	**
2.	WASHER, FLAT	WS-22323	5	SC-29333	5
3.	WASHER, RUBBER, FLAT	WS-25056	1	WS-25056	1
4.	PANEL, FRONT TOP TRIM	18.5" (470mm) 1011032	1	—	—
		24" (610mm) —	—	1011481	1
5.	PANEL, INTERFACE MOUNT	18.5" (470mm) 1011336	1	—	—
		24" (610mm) —	—	1011482	1
6.	WASHER, FLAT	WS-23991	1	WS-23991	1
7.	SPRING, COMPRESSION	SD-29371	1	SD-29371	1
8.	LATCH, BUTTON	LT-29176	1	LT-29176	1
9.	PANEL OVERLAY, WITH ELECTRONIC LOCK	OPTIONAL PE-29888	1	PE-29888	1
10.	CONTROL ASSEMBLY	STANDARD CC-36126	1	CC-36126	1
	CONTROL ASSEMBLY, WITH ELECTRONIC LOCK	OPTIONAL CC-36128	1	CC-36128	1
11.	SCREW (M3 x 0.5 x 16mm, PH HD)	SC-35824	5	SC-35824	5
12.	SPACER, CONTROL BOARD	SP-29425	5	SP-29425	5
13.	DOOR SWITCH	SW-35416	1	SW-35416	1
14.	PLATE, BUTTON RETAINER	1011149	1	1011149	1
15.	BUTTON ASSEMBLY (STANDARD)	18.5" (470mm) 5015848	1	—	—
		24" (610mm) —	—	5015851	1
	BUTTON ASSEMBLY, WITH ELECTRONIC LOCK	18.5" (470mm) 5015850	1	—	—
		24" (610mm) —	—	5015853	1
16.	CABLE, DISPLAY	CB-35192	1	CB-35192	1
17.	DISPLAY ASSEMBLY SERVICE KIT (INCLUDES PANELS, OVERLAY & SCREWS)	5015525	1	5015525	1
18.	CIRCUIT BOARD	BA-35309	1	BA-35309	1
19.*	BUSHING, BUTTON	BU-29206	1	BU-29206	1

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

SERVICE

INTERIOR (DC250L SHOWN)



LOC	DESCRIPTION	DC250L	QTY	DC400L	QTY
1.	DOOR SWITCH	SW-35416	1	SW-35416	1
2.	TOP AIRFLOW INSERT	IS-29880	1	IS-29881	1
3.	CAVITY SENSOR	PR-35492	1	PR-35492	1
4.	SENSOR BLOCK	BK-29882	1	BK-29882	1
5.	SCREW (M4 x 0.7 x 6mm)	SC-22271	**	SC-22271	**
6.	LED ASSEMBLY (INCLUDES COVER, RING & LED)	5014852	1	5014852	1
7.	LEFT AIRFLOW INSERT	1014316	1	1014316	1
8.	SCREW (M4 x 0.7 x 10mm)	SC-22273	**	SC-22273	**
9.	BOTTOM COVER PANEL, BASKET INSERT	1014113	1	1014114	1
10.	RIGHT AIRFLOW INSERT	1014317	1	1014317	1
11.	DOOR GASKET	GS-29189	1	GS-29191	1
12.*	CLIP PLATE, BOTTOM INSERT	1014115	1	1014115	1
13.*	RIVET, BOTTOM INSERT	RI-27108	2	RI-27108	2

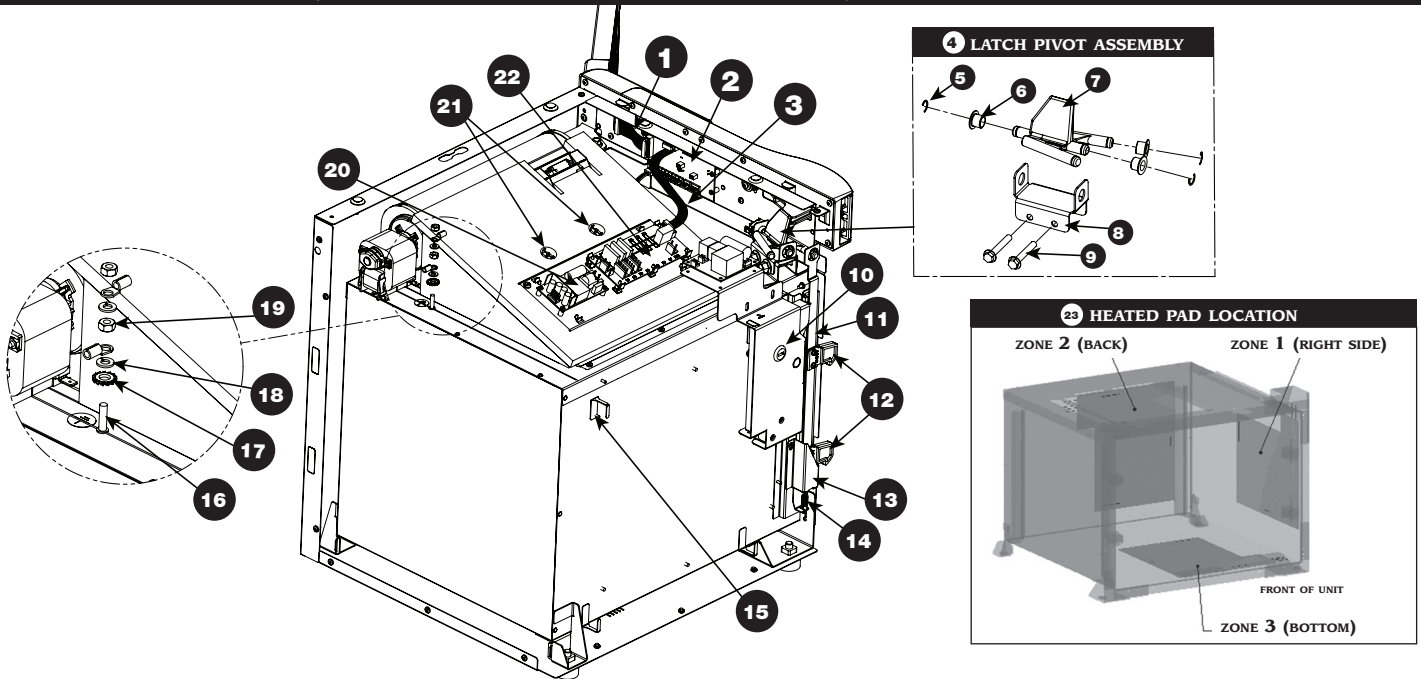
* NOT SHOWN

** SCREW QUANTITY VARIES PER MODEL

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

SERVICE

ELECTRICAL (DC250L WITH COMBINATION LOCK SHOWN)

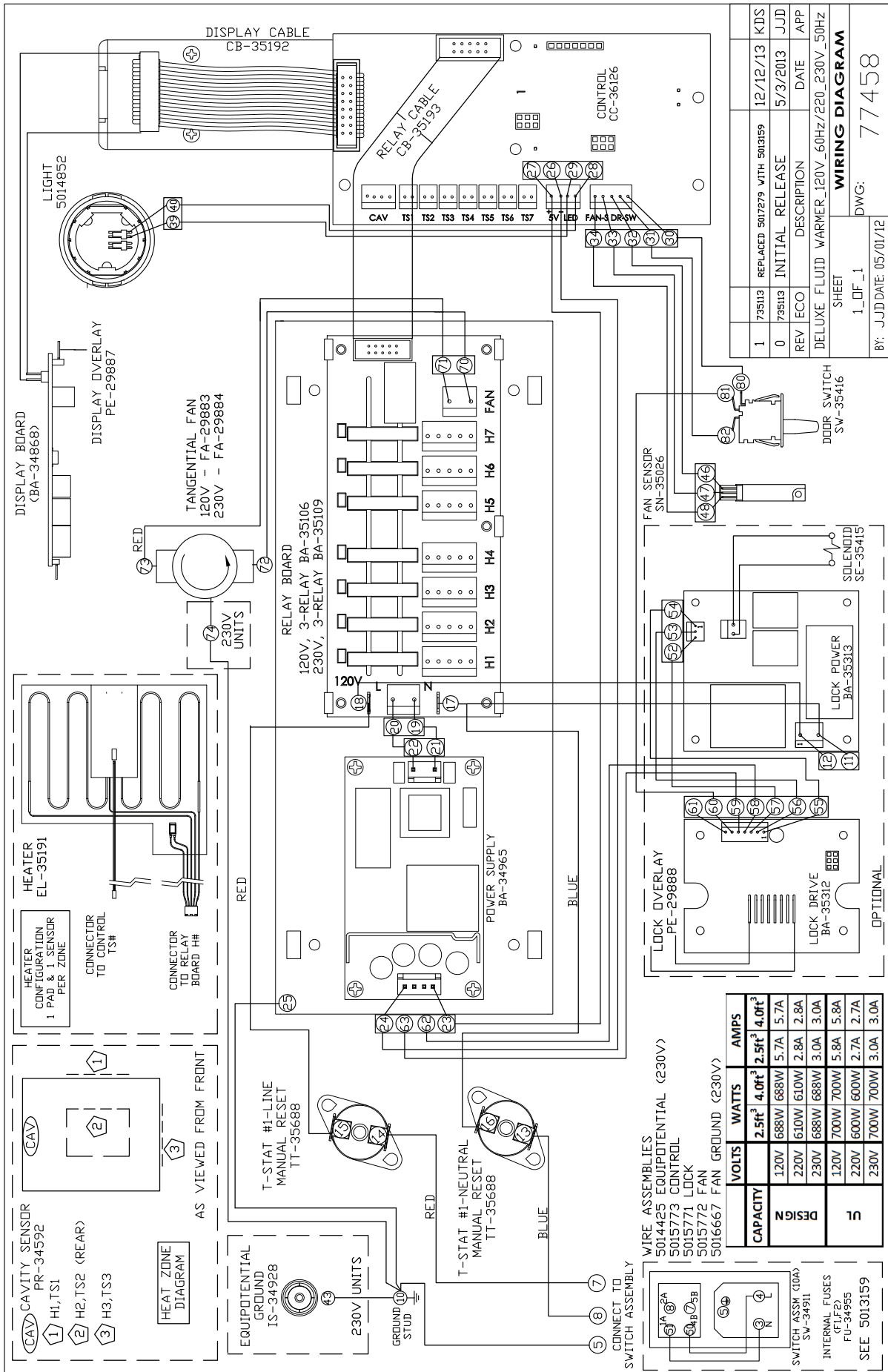


LOC	DESCRIPTION	DC250L	QTY	DC400L	QTY
1.	CABLE, DISPLAY	CB-35192	1	CB-35192	1
2.	CONTROL BOARD	STANDARD CC-36126	1	CC-36126	1
	CONTROL BOARD, WITH ELECTRONIC LOCK	OPTIONAL CC-36128	1	CC-36128	1
3.	CABLE, RELAY BOARD	CB-35193	1	CB-35193	1
4.	LATCH PIVOT ASSEMBLY, COMPLETE	5013640	1	5013640	1
5.	CLIP	CL-29257	3	CL-29257	3
6.	BUSHING	BU-29206	3	BU-29206	3
7.	LATCH, PIVOT	LT-29175	1	LT-29175	1
8.	BRACKET, LATCH PIVOT MOUNT	1011196	1	1011196	1
9.	SCREW, TRUSS HEAD M6 X 40mm	SC-28600	1	SC-28600	1
10.	LOCK ASSEMBLY, WITH KEY FOR UNITS THAT ALREADY INCLUDE OPTIONAL LOCK	5015173	1	5015173	1
	SOLENOID	SE-35415	1	SE-35415	1
	CAM	LK-27076	1	LK-27076	1
11.	LATCH PLATE	1011263	1	1011263	1
12.	LATCH HOOKS	LT-29174	2	LT-29174	2
13.	LATCH SPRING HOUSING	1011163	1	1011163	1
14.	LATCH SPRING	SD-28513	1	SD-28513	1
15.	INSTALLATION CLIPS KIT	5016120	1	5016120	1
16.	GROUND STUD	REFERENCE ONLY		REFERENCE ONLY	
17.	WASHER	WS-28085	1	WS-28085	1
18.	WASHER	WS-22302	2	WS-22302	2
19.	NUT	NU-22291	2	NU-22291	2
20.	POWER SUPPLY	BA-34965	1	BA-34965	1
21.	MANUAL RESET	TT-35688	2	TT-35688	2
22.	RELAY BOARD, 3-ZONE	120V BA-35106	1	BA-35106	1
		230V BA-35109	1	BA-35109	1
23.	HEATING PAD ASSEMBLY	EL-35191	3	EL-35191	3
24.*	EQUIPOTENTIAL GROUND STUD	230V ONLY IS-34928	1	IS-34928	1
25.*	WIRE DIAGRAM (UNDER TOP)	77458	1	77458	1

* NOT SHOWN

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Refer to wire diagram included with the unit for the correct version.



	VOLTS	WATTS	AMPS
CAPACITY	2.5ft ³	4.0ft ³	4.0ft ³
DESIGN	120V	688W	5.7A
	220V	610W	2.8A
	230V	688W	3.0A
	120V	700W	5.8A
	220V	600W	2.7A
	230V	700W	3.0A

WIRE ASSEMBLIES
 5014425 EQUIPOTENTIAL (230V)
 5015773 CONTROL
 5015771 LOCK
 5015772 FAN
 5016667 FAN GROUND (230V)

CONNECT TO SWITCH ASSEMBLY
 61A 62A
 60A 65B
 SWITCH ASSM (10A) SW-34911
 INTERNAL FUSES FU-34955
 U-34925
 SEE 5013159

REV	ECO	DESCRIPTION	DATE	APP
1	735113	REPLACED 501279 WITH 5013159	12/12/13	KDS
0	735113	INITIAL RELEASE	5/3/2013	JJD

DELUXE FLUID WARMER_120V_60Hz/220_230V_50Hz
 SHEET 1_OF_1
 BY: JJD DATE: 05/01/12
WIRING DIAGRAM
 DWG: 77458

TRANSPORTATION DAMAGE AND CLAIMS



All Enthermics Medical Systems equipment is sold F.O.B. shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

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. Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.
2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.
3. Note all damage to packages directly on the carrier's delivery receipt.
4. Make certain the driver signs this receipt. If he 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. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of 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.

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

ENTHERMICS MEDICAL SYSTEMS LIMITED WARRANTY

Enthermics Medical Systems warrants to the original purchaser that any original part that is found to be defective in material or workmanship will, at our option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

The labor warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first.

The original parts warranty for the cavity fan motor remains in effect one (1) year from installation of appliance or fifteen (15) months from the shipping date, whichever occurs first. The original parts warranty on all other parts remains in effect three (3) years from installation of appliance or thirty-nine (39) months from the shipping date, whichever occurs first.

This warranty does not apply to:

1. Calibration
2. Equipment damage caused by accident, shipping, improper installation or alteration.
3. Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions including equipment subjected to harsh or inappropriate chemicals including but not limited to compounds containing chloride or quaternary salts, poor water quality, or equipment with missing or altered serial numbers.
4. Any losses or damage resulting from malfunction, including loss of contents or consequential or incidental damages of any kind.
5. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.
6. Collateral or incidental damage as a direct result of servicing equipment built into a wall structure is not covered under warranty. It is the responsibility of the owner to bear all expense related to structural repairs including, but not limited to, external electrical connections and wiring, and the removal or replacement of caulk, grout, tile, or wall covering of any kind. A service access panel for built-in equipment installations is strongly recommended.

This warranty is exclusive and is in lieu of all other warranties, expressed or implied, including the implied warranties of merchantability and fitness for purpose. In no event shall the Company be liable for loss of use, loss of revenue, or loss of contents or revenue, or for indirect or consequential damages. This warranty is in lieu of all other warranties expressed or implied and Enthermics Medical Systems neither assumes or authorizes any persons to assume for it any other obligation or liability in connection with Enthermics Medical Systems equipment.

Enthermics Medical Systems

Record the model and serial numbers of the unit for easy reference. Always refer to both model and serial numbers in your correspondence regarding the unit.

Model: _____
Serial Number: _____
Purchased From: _____
Date Installed: _____ Voltage: _____

Warranty Effective November 1, 2012



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