



**OPERATION & CARE
MANUAL**

P-2110

P-2120

P-2118

P-2130

120V



P-2110



P-2130

**FLUID WARMING CABINET
OPERATION & CARE**

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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

This 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 more than one package. 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.

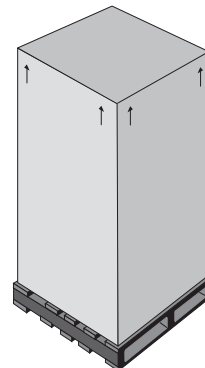
This manual must be read and understood by all people using or installing the equipment model. Contact the service department if you have any questions concerning installation, operation, or maintenance.

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.

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.



WARNING

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



CAUTION

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

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.



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



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

NOTE:

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

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.

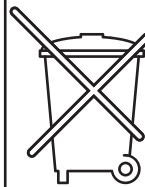
NOTE

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.

NOTE

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.

NOTE



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

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

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.

<p style="text-align: center;">P-2110 POWER REQUIREMENTS</p> <p>120 V.A.C. — 50/60 Hz, 1 ph 0.65 kW, 5.4 Amps Safety Class I Equipment No Applied Parts Mode of Operation: Continuous</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: left;"> <p>NEMA 5-15P 15A - 125V Plug Hospital Grade</p> </div> <div style="margin-left: 20px;"> </div> </div>	<p style="text-align: center;">P-2118 POWER REQUIREMENTS</p> <p>120 V.A.C. — 50/60 Hz, 1 ph 0.9 kW, 7.5 Amps Safety Class I Equipment No Applied Parts Mode of Operation: Continuous</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: left;"> <p>NEMA 5-15P 15A - 125V Plug Hospital Grade</p> </div> <div style="margin-left: 20px;"> </div> </div>
<p style="text-align: center;">P-2120 POWER REQUIREMENTS</p> <p>120 V.A.C. — 50/60 Hz, 1 ph 0.78 kW, 6.4 Amps Safety Class I Equipment No Applied Parts Mode of Operation: Continuous</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: left;"> <p>NEMA 5-15P 15A - 125V Plug Hospital Grade</p> </div> <div style="margin-left: 20px;"> </div> </div>	<p style="text-align: center;">P-2130 POWER REQUIREMENTS</p> <p>120 V.A.C. — 50/60 Hz, 1 ph 1.06 kW, 8.8 Amps Safety Class I Equipment No Applied Parts Mode of Operation: Continuous</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: left;"> <p>NEMA 5-15P 15A - 125V Plug Hospital Grade</p> </div> <div style="margin-left: 20px;"> </div> </div>

IMPORTANT

Do not load each basket beyond the recommended maximum capacity:

P-2110 = **11 1-liter bottles/basket or 16 1-liter bags/basket**

P-2120 = **9 1-liter bottles/basket (18 total) or 15 1-liter bags per/basket (30 total)**

P-2118 = **18 1-liter bottles/basket or 28 1-liter bags/basket**

P-2130 = **18 1-liter bottles/basket (54 total) or 24 1-liter bags per/basket (72 total)**

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.

Wire diagram located under top cover of unit



Hazardous Voltage Present

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



Protective Earth Ground Symbol

Medical Equipment classified by Underwriters Laboratories with Respect to Electrical Shock, Fire and Mechanical Hazards only, in Accordance with UL 2601-1 and CAN/CSA C22.2 No. 601.1.



UL File No. E201645

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 INFORMATION

This warming cabinet is designed to safely warm and store either irrigation fluids or injection fluids.

The single-chambered warming cabinet is constructed with stainless steel exterior casing and door with handle and hinges designed to withstand heavy usage. A door with window allows observation of inventory with the door closed. The cabinet is warmed using low-heat-density electrothermal cable array. The electrothermal cable is positioned in the floor and two sides of the warming cabinet, providing even heating of the interior chamber.

The interior chamber temperature is regulated by an electronic control consisting of a 4 digit L.E.D. display, ON/OFF button, INCREASE and DECREASE buttons, integrated lock-out control feature and a series of prompt sequence indicators.

The electronic control can easily be set to operate in Fahrenheit or Celsius. After a power failure, the cabinet will remember its programming and begin to operate as before. The ON/OFF indicator will blink to indicate a failure occurred; pressing the ON/OFF button once will eliminate this blinking. A thermal shut-off system, separate from the electronic control, is included as an additional safety feature.

The control will display temperature in whole degrees.

Fluid warming chamber:

The warming cabinet can be programmed to warm either irrigation fluids (IRR) or injection fluids (INJ), with separate temperature ranges provided depending on the choice selected.

- IRR temperature range: 37° to 66°C (98° to 150°F),
- INJ temperature range: 37° to 40°C (98° to 104°F).

A fan located inside the chamber mixes the air to prevent temperature stratification and to ensure an accurate chamber temperature for each mode.

- Within +0/-1.67°C (+0/-3°F) for set points of 43° to 66°C (110° to 150°F)
- Within +0/-1.12°C (+0/-2°F) for set points of 37° to 40°C (98° to 104°F).

An alarm will sound if temperatures exceed 6°C (10°F) over the set-point temperature, and an OVERTEMP indicator will blink indicating an over-temperature condition.

P-2110 INFORMATION:

The warming cabinet is equipped with one (1) white, epoxy-coated wire basket to accommodate fluids packaged in bags or bottles, mounted on basket rail supports. The basket has a capacity of **11 1-liter bottles or 16 1-liter bags**. The cabinet is furnished with four (4) 1-1/4" (31mm) non-skid rubber feet.

P-2120 INFORMATION:

The warming cabinet is equipped with two (2) white, epoxy-coated wire baskets to accommodate fluids packaged in bags or bottles, mounted on basket rail supports. Each basket has a capacity of **9 1-liter bottles or 15 1-liter bags**. The cabinet is furnished with a full perimeter rubber bumper assembly and one set of 5" (127mm) heavy duty casters, two with locking brakes.

P-2118 INFORMATION:

The warming cabinet is equipped with one (1) stationary white, epoxy-coated basket to accommodate fluids packaged in bags or bottles. The basket has a capacity of **18 1-liter bottles or 28 1-liter bags**. The cabinet is furnished with one set of 0.5" (13mm) leveling feet.

P-2130 INFORMATION:

The warming cabinet is equipped with three (3) white, epoxy-coated wire baskets to accommodate fluids packaged in bags or bottles, mounted on basket rail supports. Each basket has a capacity of **18 1-liter bottles or 24 1-liter bags**. The cabinet is furnished with a full perimeter rubber bumper assembly and one set of 5" (127mm) heavy duty casters, two with locking brakes.

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.

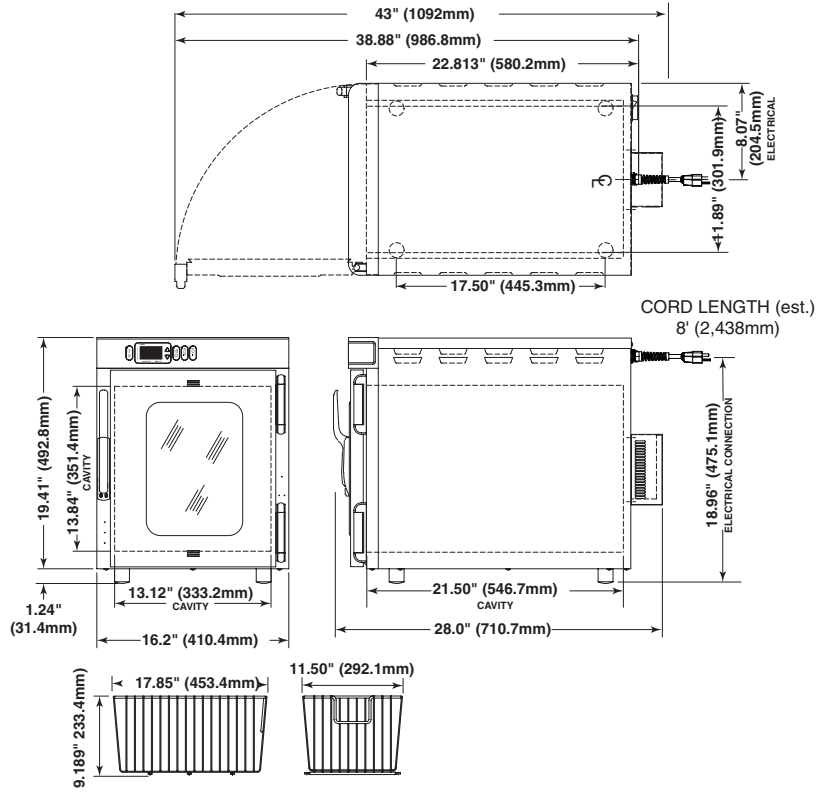


SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

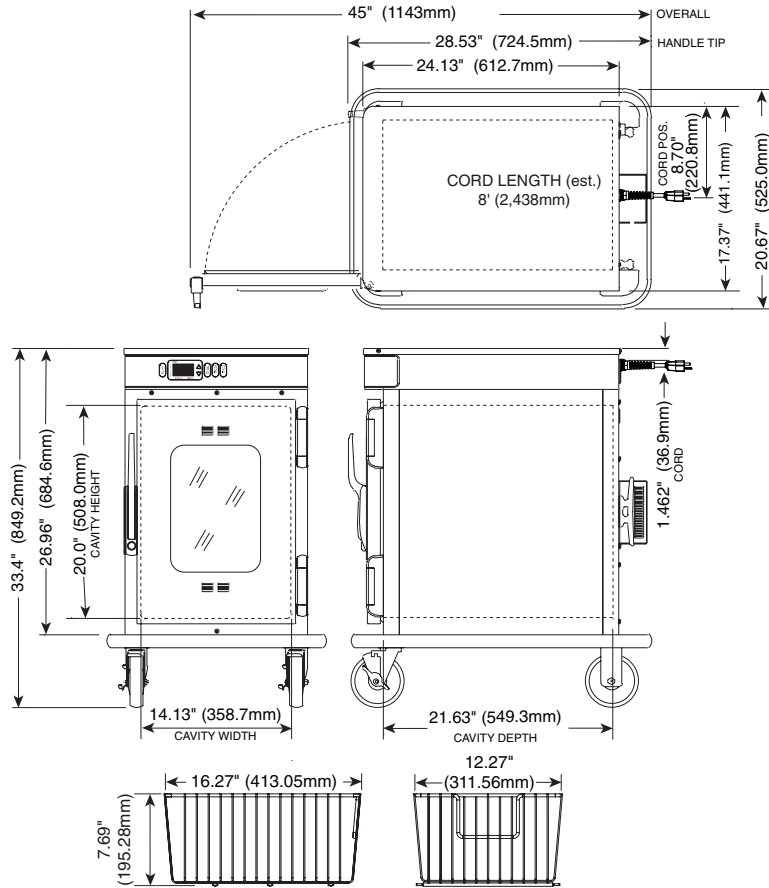
WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED

(IPX-0 - Listed as Ordinary)

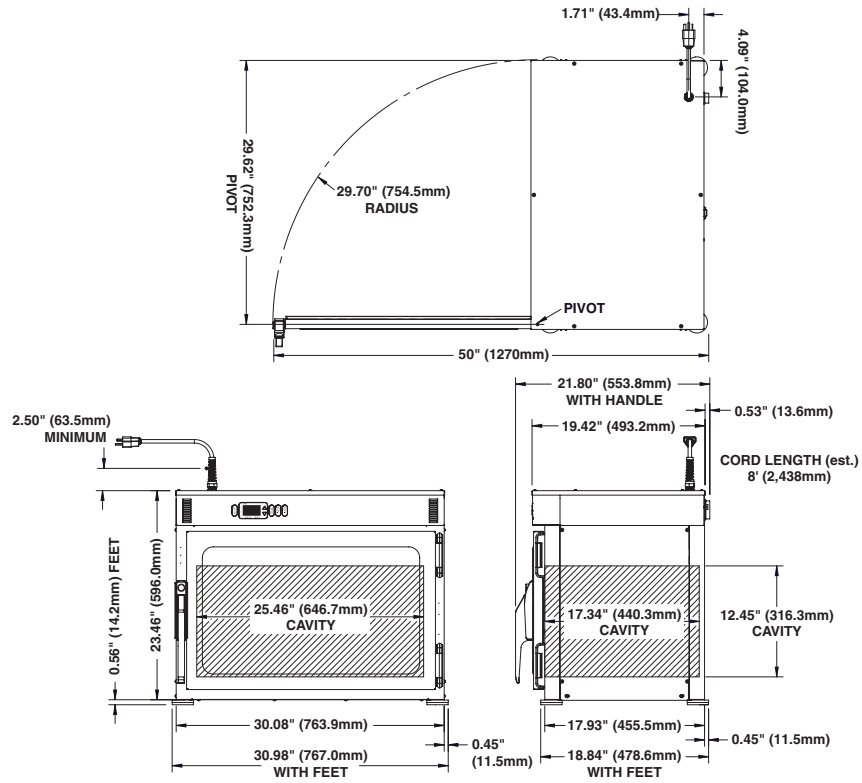
P - 2110 DIMENSIONS



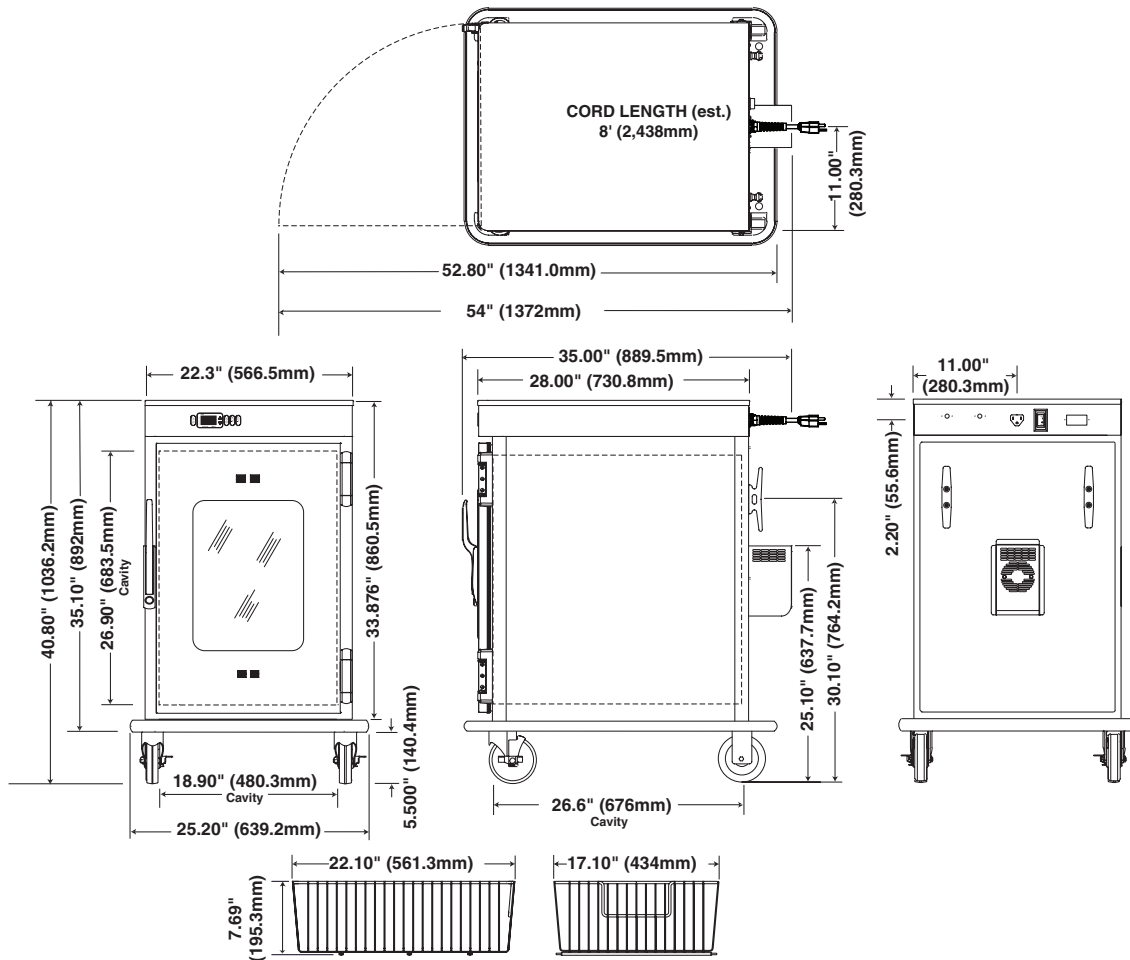
P - 2120 DIMENSIONS



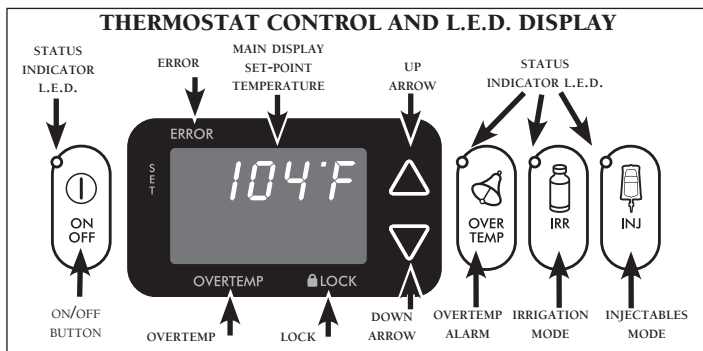
P - 2118 DIMENSIONS



P - 2130 DIMENSIONS



FLUID CONTROL FEATURES



The following refers to features that are available when the control is powered on.

CONTROL PANEL BUTTONS

ON/OFF BUTTON

Press the ON/OFF button to power on the control. Press and hold the ON/OFF button for 2 seconds to turn the control off. The status indicator L.E.D. will illuminate in the power ON state. **Note:** The IRR or INJ must be selected to turn on the heating circuit.

UP ARROW / DOWN ARROW BUTTONS

These buttons are used to increase or decrease the temperature set-point as desired. Continual pressure to a button will increase the increments in which the values will change.

OVERTEMP ALARM BUTTON

Depressing this button displays the current over-temperature trip-point. The alarm trip-point is always 6°C (10°F) above the temperature setting. When the green OVERTEMP indicator is blinking, the warmer has entered an over-temperature condition.

IRR BUTTON

The IRR button is used to select the IRRIGATION FLUIDS mode and to display the IRR set-point temperature. The temperature range is 37° to 66°C (98° to 150°F). The green IRR indicator and the yellow indicator below the IRR button illuminates when the IRR set-point temperature is being displayed.

INJ BUTTON

The INJ button is used to select the INJECTION FLUIDS mode and to display the INJ set-point temperature. The temperature range is 37° to 40°C (98° to 104°F). The green INJ indicator and the yellow indicator below the INJ button illuminates when the INJ set-point temperature is being displayed.

NOTE: When the control is powered on, IRR or INJ 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. Be careful to cool the cavity down prior to switching from a high temperature to a lower temperature or the control will display an unwanted overtemp alarm.

L.E.D. DISPLAY STATUS INDICATORS

OVERTEMP

When the control senses a temperature 10°F (6°C) greater than the set point, this indicator will illuminate. The audible alarm will sound. The ON/OFF button indicator will flash. The green indicator of the overtemp button will stop blinking once the warmer temperature drops back to the set point temperature range. To silence the alarm and extinguish the ERROR indicator after the temperature has dropped into the selected temperature range, use the ON/OFF button to reset the control. Inspection of the product in the cavity may be necessary.

ERROR

This illuminates when an over-temperature condition is detected. The ERROR indicator will remain illuminated, even after the over-temperature condition is cleared, until the warmer is turned off. This will alert the operator that the control has indicated an OVERTEMP and the product in the cavity should be inspected.

LOCK

Illuminates when the lock feature is engaged.

POWER FAIL DETECT

If the power were to fail for any reason while control is powered on, the warmer will retain in memory its current operating state. When the power is restored, the control will alarm once and resume operating in its previously set mode, but will alert the operator that such an event has occurred: The ON/OFF status indicator will flash.

Press the ON/OFF button once to acknowledge that the power has been restored. The ON/OFF status indicator will stop flashing. When pushing the ON/OFF button, the display will indicate the time period of the outage in hours and minutes (HH:MM), then return to the normal display and previously set mode. Inspection of the product in the cavity may be necessary.

FAHRENHEIT OR CELSIUS SELECTION

While the controller is in the OFF mode, press and hold the UP ARROW button for 5 seconds to view the current setting. Press again to switch between °F (Fahrenheit) or °C (Celsius).

CAVITY TEMPERATURE DISPLAY

To reference the cavity air temperature, push and hold the OVERTEMP and UP ARROW buttons. While holding both buttons, the value in the display refers to the temperature at the cavity sensor.

OPERATIONAL SOUND SELECTION

While the controller is in the off mode, press and hold the DOWN ARROW button for 5 seconds. Press again to turn the sound ON (I) and OFF (O).

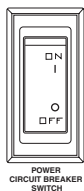
CONTROL LOCK PROGRAMMING

The warmer control can be locked so that no changes can be made to the temperature set-point or the mode selection. Press and hold the ON/OFF button and the UP arrow button at the same time. The LOCK indicator will illuminate. Attempts to operate the ON/OFF button, or to change the temperature set-point will be unsuccessful. To unlock the control, press and hold the ON/OFF button and the DOWN arrow button at the same time. The control will unlock, and the LOCK indicator will go out.

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 circuit breaker switch, which is located at the back of the appliance. 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.**
The ON/OFF indicator will illuminate and remain lit until the unit is turned off. The digital display will indicate last temperature set-point of compartment.

4. **SELECT DESIRED MODE OF OPERATION.**
Press the IRR button to select the IRRIGATION FLUIDS mode or the INJ 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 power to the control off and then back on.

5. **SET DESIRED TEMPERATURE.**
To set the fluid warming temperature, *press and hold* the UP or DOWN ARROW buttons to change the value shown in the display. The IRRIGATION FLUIDS set-point temperature range is 37° to 66°C (98° to 150°F) and the INJECTION FLUIDS set-point temperature range is 37° to 40°C (98° to 104°F).

NOTE: Switching from a higher temperature setting to a lower setting may cause an unwanted alarm.

NOTE: The warmer is designed to warm fluids to the appropriate temperature recommended by your 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:

- Check fluid temperature prior to use.
- Verify that the fan is rotating freely. If it is not working, discard your inventory, contact your service representative, and discontinue use of unit until it is repaired.
- If the warmer control has failed, or if error messages are displayed, it is recommended that you discard your fluid inventory. Refer to the Trouble Shooting Guide for error descriptions and action required.



WARNING

REFER TO FLUID MANUFACTURER'S LABELING FOR RECOMMENDED WARMING PROCEDURES



WARNING

TRANSPORT SHALL ONLY BE DONE WITH THE DOORS CLOSED



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

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.

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" (25mm) 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:

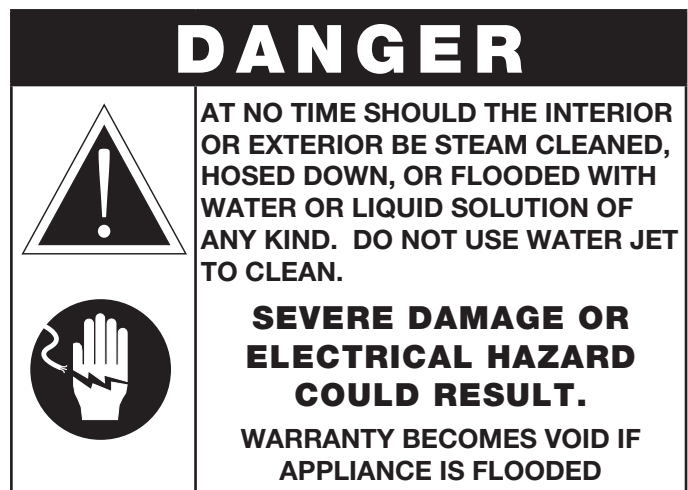
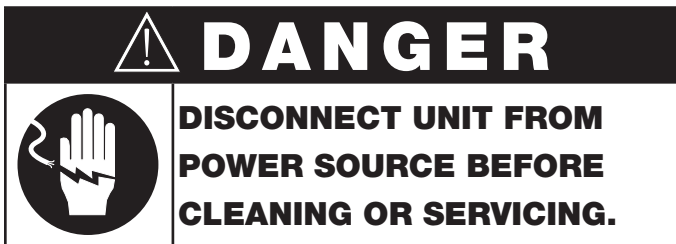
1. Disconnect the cabinet from the power source.
2. Remove all detachable items such as metal basket and basket rail supports. Clean these items separately.

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.



(IPX-0 - Listed as Ordinary)

NOTE: If your unit is not operating properly, check the following before calling your authorized service agent. Check the power applied to the unit. Is the plug in outlet? Is the power circuit breaker switch in rear of unit OK? Has the high limit manual reset tripped? If so, reset. (See “Manual Reset Instructions” below.)

If temperature calibration adjustment is required, call service for proper instruction.

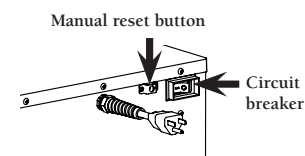
Do not attempt to repair or service beyond this point. Contact manufacturer for nearest authorized service agent. Repairs made by any other service agent without prior authorization by manufacturer will void the warranty on the unit.

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

TROUBLESHOOTING GUIDE		
CODE	DESCRIPTION	ACTION REQUIRED
door	Door left open for more than 3 minutes	<ul style="list-style-type: none"> • Close door • Verify door switch operation. Replace if necessary.
E-10	Cavity Air Sensor Shorted	<ul style="list-style-type: none"> • Detach the sensor from the terminal block. Use an Ohm meter to measure the resistance of the sensor. Check sensor at 32°F (0°C) using a container of ice water. Ohm reading should be 100. If Ohm reading is +/- 10, 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. • If error continues call Service.
E-11	Cavity Air Sensor Open	<ul style="list-style-type: none"> • Detach the sensor from the terminal block. Use an Ohm meter to measure the resistance of the sensor. Check sensor at 32°F (0°C) using a container of ice water. Ohm reading should be 100. If Ohm reading is +/- 10, 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. • If error continues call Service.
E-30	Under Temperature (Blanket warmers only)	<ul style="list-style-type: none"> • Blanket chamber temperature has been lower than the set temperature for 90 minutes or longer. • Check that door is closed. • Not preheated due to an overpacked cavity.
E-31	Over Temperature	<ul style="list-style-type: none"> • Unit may be overloaded. Redistribute inventory. Do not exceed height of insert. • Check sensor at 32°F (0°C) using a container of ice water. Ohm reading should be 100. If Ohm reading is +/- 10, 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. • Relay may be defective. • If error continues call Service.
E-50	Temp. Measurement Error	<ul style="list-style-type: none"> • Call Service.
E-60	Real-Time Clock Error	<ul style="list-style-type: none"> • Unit may have been unplugged for an extended period of time. • To resolve, turn circuit breaker switch to ON position for 1 minute, then turn circuit breaker switch to the OFF position for 5 seconds, and then back to ON. The error message should no longer appear in the display. • In order for the unit to fully recharge, it should remain plugged in and power circuit breaker switch turned ON for at least 24 hours after resetting. • Upon resolving an E-60 error, check that the date and time are correct.
E-61	Real-Time Clock Error	<ul style="list-style-type: none"> • Call Service.
E-80	EEPROM Error	<ul style="list-style-type: none"> • Ensure that all temperature and times are properly set. • If error continues call Service.
E-81	EEPROM Error	<ul style="list-style-type: none"> • Call Service.
E-82	EEPROM Error	<ul style="list-style-type: none"> • Call Service.
E-83	EEPROM Error	<ul style="list-style-type: none"> • Call Service.
E-87	EEPROM Error	<ul style="list-style-type: none"> • Stored offsets corrupted. Offsets reset to 0. Control may need a recalibration. Possible bad EEPROM. • If error continues call Service.
E-90	Button Stuck	<ul style="list-style-type: none"> • A button has been held down for >60 seconds. Adjust control. Error will reset when the problem has been resolved.
E-99	Hardware Over Temp	<ul style="list-style-type: none"> • Inspect connections and condition of high limit bimetal thermostat and the fan switch (fluid warmers only). Adjust if necessary. • Check operation of cavity fan motor (fluid warmers only). Air movement from the cavity fan blade should move the safety sail switch to the closed position. Adjustment to the fan blade may be needed or replacement of the fan motor. • If error continues call Service.

NOTE: All error codes must be cleared using the circuit breaker switch or power switch on the rear of the unit.

Manual Reset Instructions: Locate the manual reset button on back of unit. (Location may vary slightly from diagram.) Using a pen, screwdriver or other long, thin implement, firmly push reset button. You will hear an audible click when the button is reset. If reset button trips again while unit is running, contact a qualified service technician.



SERVICE

FULL ASSEMBLY VIEW (P-2130 & P-2118 SHOWN)

LOC	DESCRIPTION	QTY	P-2110 P/N	QTY	P-2120 P/N	QTY	P-2118 P/N	QTY	P-2130 P/N
1.	TOP	1	5000730	1	5010831	1	1010247	1	5003367
2.	SCREWS, 8-32 X 1/4"	*	SC-2459	*	SC-2459	*	SC-2459	*	SC-2459
3.	STRAIN RELIEF BUSHING	1	BU-34836	1	BU-34836	1	BU-34836	1	BU-34836
4.	CORDSET, HOSPITAL GRADE	1	E3025CD	1	E3025CD	1	E3025CD	1	E3025CD
5.	PLATE, MOTOR MOUNT	—	—	—	—	—	—	1	1004300
6.	MOTOR SPACER	—	—	—	—	—	—	1	1004303
7.	FAN MOTOR†	1	E3034FA	1	E3034FA	1	E3044FA**	1	E3044FA
8.	WASHER, #10 FLAT NYLON	—	—	—	—	—	—	2	WS-2420
9.	NUT, 8-32, NC HEX	—	—	—	—	—	—	2	NU-2296
10.	NUT, 8-21, NC ACORN	—	—	—	—	—	—	2	NU-2455
11.	MOTOR BOX	1	1009331	1	1009331	—	—	2	5003358
12.	BOX FAN	—	—	—	—	—	—	1	FA-3973
13.	SCREW, 10-32 X 1/2", MOTOR MOUNT	—	—	—	—	—	—	4	SC-2661
	SCREW, 8-32 X 5/8", MOTOR MOUNT	3	SC-2077	3	SC-2077	—	—	—	—
14.	NUT, 8-32	—	—	—	—	2	NU-26526	2	NU-26526
15.	SIDES	1	1009697	2	1010721	2	1010279	2	1010744
16.	FULL PERIMETER RUBBER BUMPER	—	—	1	5010798	—	—	1	5010873
17.	CASTERS, 5" (127mm) RIGID	—	—	2	CS-24874	—	—	2	CS-24874
18.	CASTERS, 5" (127mm) SWIVEL W/ BRAKE	—	—	2	CS-24875	—	—	2	CS-24875
19.	SCREWS, 1/4 - 20 X 3/4" HEX	—	—	8	SC-25286	—	—	8	SC-25286
20.	BASKET SUPPORT ASSEMBLY	1	5014017	1	5014018	1	5012206	1	5014019
21.	BASKET	1	BS-28518	2	BS-28517	—	—	3	BS-28516
22.	BASKET SUPPORT RAIL	2	1002305	4	1002302	—	—	6	1002304
23.	BASKET SLIDE GUIDE (1 SET OF 2)	1	GI-25941	2	GI-25941	—	—	3	GI-25942
24.	WINDOW DOOR ASSEMBLY, RIGHT HINGE	1	5009043	1	5010808	1	5014222	1	5001253
25.	DOOR HANDLE	1	HD-24171	1	HD-24171	1	HD-24171	1	HD-24171
26.	SCREW, 10-32 X 1-1/2" FLAT	4	SC-2073	4	SC-2073	4	SC-2073	4	SC-2073
27.	DOOR GASKET	1	E2132GS	1	GS-22950	1	GS-26321	1	GS-23794
28.	PLATE, COVER, VENT	—	—	2	1010827	—	—	2	1010827
29.	HINGE SET (1 SET OF 2 HINGES)	1	HG-2015	1	HG-22338	1	HG-2015	1	HG-22338
30.	SCREW, 10-32 X 3/4" FLAT	12	SC-2072	12	SC-2072	12	SC-2072	12	SC-2072
31.	FAN GUARD	1	1012553	1	1012555	1	1010254	1	1012557
32.	FAN BLADE	1	FA-34604	1	FA-34602	1	E3045FA	1	FA-34603
33.	SCREW, M3 X 0.5 X 16MM PAN	2	SC-22270	2	SC-22270	—	—	2	SC-22270
34.	FAN SWITCH	1	SW-33907	1	SW-33907	—	—	1	SW-33907
35.	FAN SWITCH BRACKET	1	1011007	1	1011008	—	—	1	1011008
36.	LED LAMP ASSEMBLY	1	LP-34578	1	LP-34578	1	LP-34578	1	LP-34578
37.	PLATE ACCESS, LED LAMP	1	1009718	1	1009718	—	—	1	1009718
38.	BUSHINGS, SNAP	2	BU-3419	2	BU-3419	1	BU-3419	2	BU-3419
39.	SENSOR BLOCK	1	BK-28344	1	BK-28344	1	BK-28344	1	BK-28344
40.	SENSOR	1	SN-33541	1	SN-33541	1	SN-33541	1	SN-33541
41.	THERMOSTAT, MANUAL RESET	1	E3030TT	1	E3030TT	1	E3030TT	1	E3030TT
42.	SCREW, 8-32 X 1" FLAT	2	SC-22138	2	SC-22138	2	SC-22138	2	SC-22138
43.	NUT, M3 - 0.5 HEX	2	NU-22285	2	NU-22285	—	—	2	NU-22285
44.	WASHER, M3 X 9MM FLAT	2	WS-22293	2	WS-22293	—	—	2	WS-22293
45.	REAR COVER	—	—	1	1010720	1	5009685	1	1010741
46.	LEVELING FEET	—	—	—	—	4	FE-28909	—	—
	INSERTS, LEVELING FEET	—	—	—	—	4	FT-28910	—	—
47.	BOTTOM ASSEMBLY	1	E4042**	—	—	1	1010251	—	—
48.	BASKET HEADER	—	—	—	—	1	1003076	—	—
49.	CONTROL PANEL OVERLAY	1	PE-28487**	1	PE-28489**	1	PE-29401	1	PE-28389
50.**	BUMPER FEET	4	BM-22606	—	—	—	—	—	—

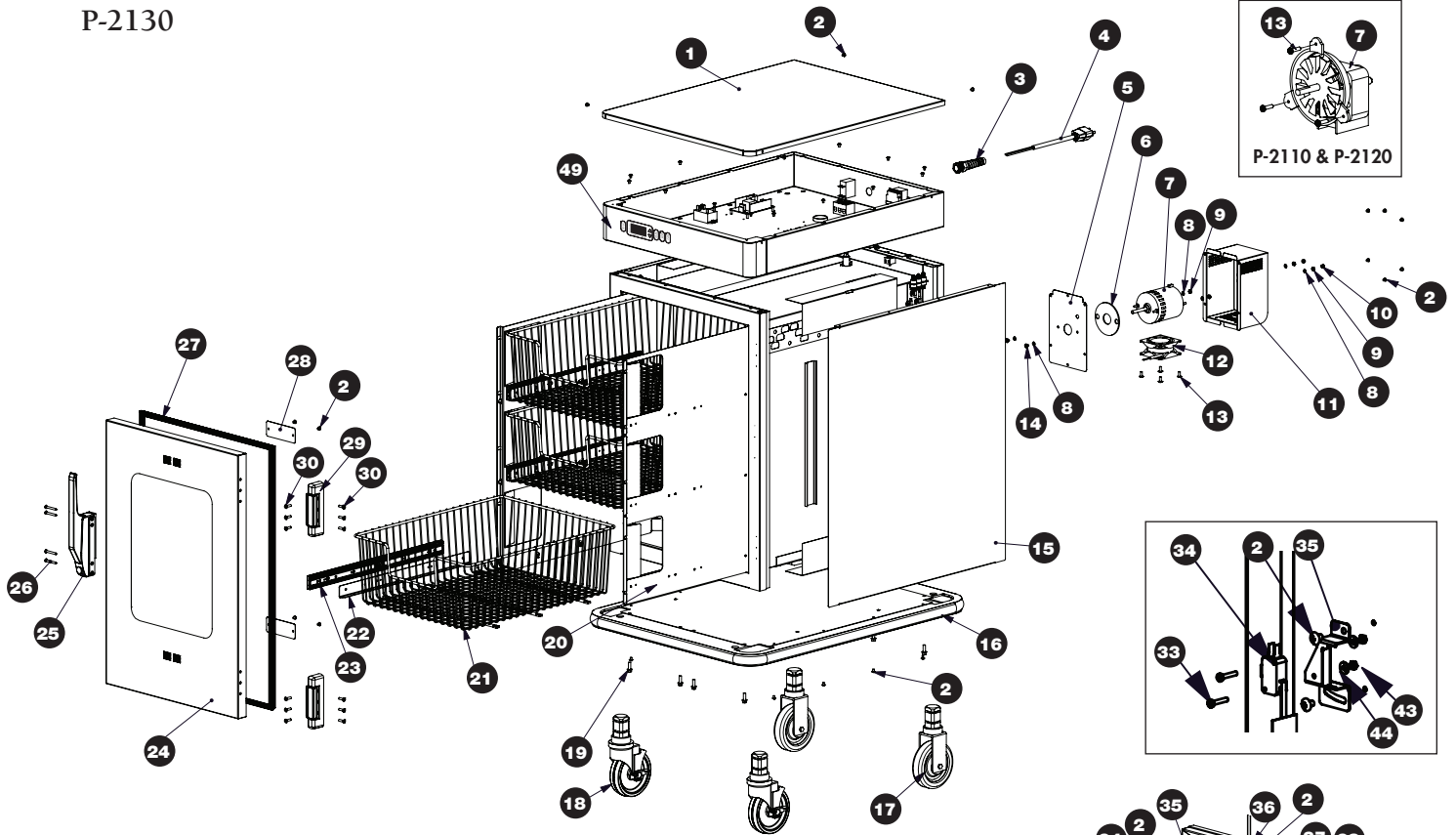
* QUANTITY VARIES **NOT SHOWN PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

† Note: The cavity fan motor has a one year life expectancy. The cavity fan motor parts warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first.

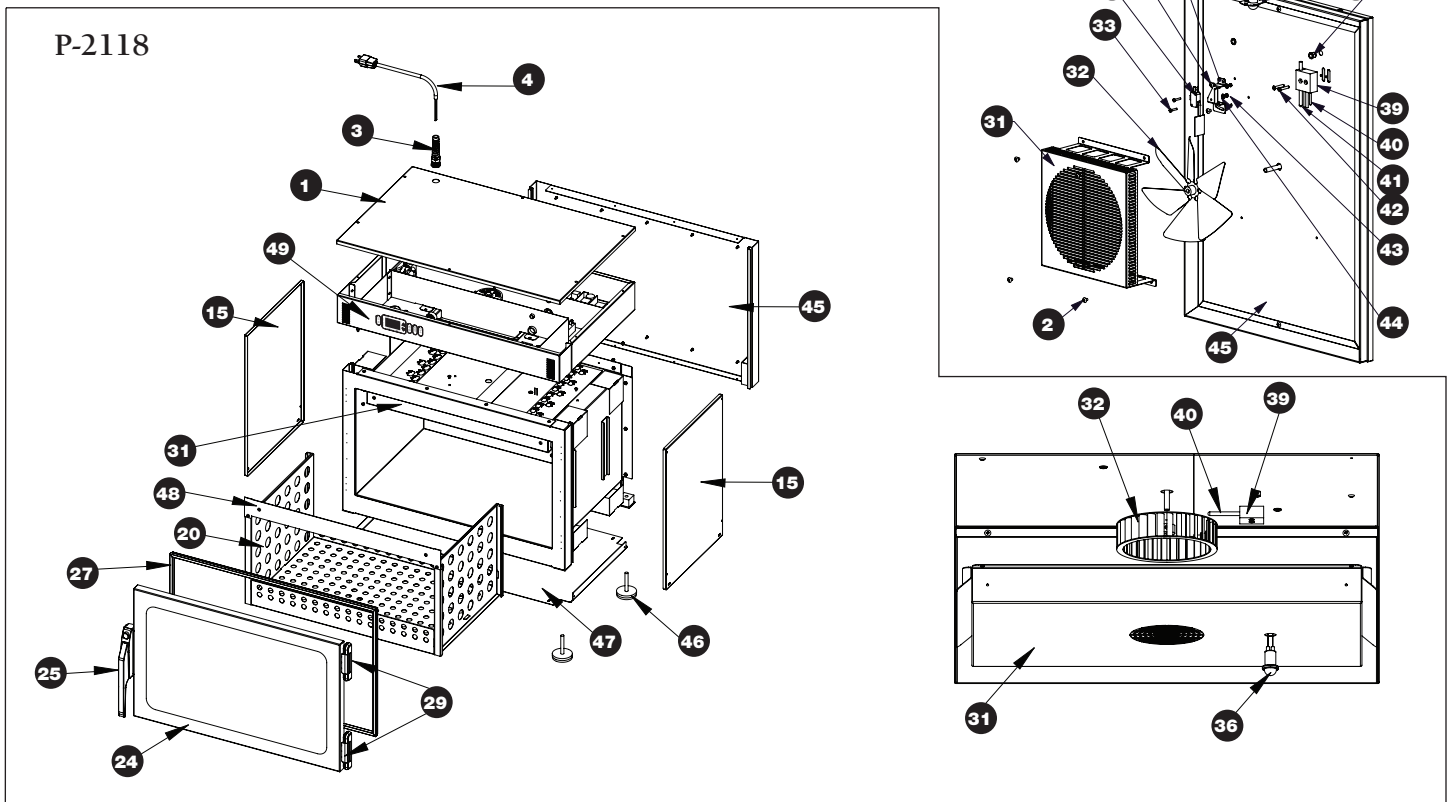
SERVICE

FULL ASSEMBLY VIEW (P-2130 & P-2118 SHOWN)

P-2130



P-2118



PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

MN-29614/MM-1065 • Rev 2 (04/14) • Fluid Warmer • 13

SERVICE

ELECTRICAL VIEW (P-2130 & P-2118 SHOWN)

LOC	DESCRIPTION	QTY	P-2110 P/N	QTY	P-2120 P/N	QTY	P-2118 P/N	QTY	P-2130 P/N
1.	CONTROL PANEL OVERLAY	1	PE-28487*	1	PE-28489*	1	PE-29401*	1	PE-28389
2.	SCREW, 6-3 X 1/2"	2	SC-2472	2	SC-2472	2	SC-2472	2	SC-2472
3.	BEEPER, SOLID STATE	1	BP-3567	1	BP-3567	1	BP-3567	1	BP-3567
4.	RELAY, 12V DC, COIL	1	RL-34434	1	RL-34434	1	RL-34434	1	RL-34434
5.	SCREW, 8-32 X 3/8" PAN	2	SC-29631	2	SC-29631	2	SC-29631	2	SC-29631
6.	POWER SUPPLY BOARD	1	BA-34041	1	BA-34041	1	BA-34041	1	BA-34041
7.	SCREW, 6-32 X 1-1/4" PAN	2	SC-2365	2	SC-2365	2	SC-2365	2	SC-2365
8.	TERMINAL BLOCK, 3 FORM COMPRESS	1	BK-3019	1	BK-3019	1	BK-3019	1	BK-3019
9.	CIRCUIT BREAKER SWITCH	1	SW-33826	1	SW-33826	1	SW-33826	1	SW-33858
10.	TERMINAL BLOCK, PORCELAIN	1	BK-33546	1	BK-33546	1	BK-33546	1	BK-33546
11.	SCREW, M4 X 0.7 X 6mm PAN	2	SC-22271	2	SC-22271	2	SC-22271	2	SC-22271
12.	COVER, HI-LIMIT	1	1009751	1	1009751	1	1009751	1	1009751
13.	THERMOSTAT, MANUAL RESET	1	E3030TT	1	E3030TT	1	E3030TT	1	E3030TT
14.	GROUND SCREW	1	SC-2190	1	SC-2190	1	SC-2190	1	SC-2190
15.	WASHER, #10 LOCK	1	WS-2467	1	WS-2467	1	WS-2467	1	WS-2467
16.	SCREW, 8-32 X 3/8"	2	SC-29631	2	SC-29631	2	SC-29631	2	SC-29631
17.	RELAY, 25A, ZERO CROSSING	1	RL-33829	1	RL-33829	1	RL-33829	1	RL-33829
18.	CONTROL ASSEMBLY	1	CC-34765	1	CC-34765	1	CC-34765	1	CC-34765
19.	CONNECTORS	1	CR-33718	1	CR-33718	1	CR-33718	1	CR-33718
20.	CONNECTORS	1	CR-33717	1	CR-33717	1	CR-33717	1	CR-33717
21.	NUT, 8-32	4	NU-26526	4	NU-26526	4	NU-26526	4	NU-26526
22.	BOX FAN	—	—	—	—	1	FA-3973	—	—
23.	FAN MOTOR†	—	—	—	—	1	E3044FA	—	—
24.	THERMOSTAT, HI-LIMIT	1	E3040TT	1	E3040TT	1	E3040TT	1	E3040TT
25.	WASHER, FLAT, 3/8" ID 7/8"	—	—	—	—	2	WS-23991	—	—
26.	WASHER, FLAT, 4.5mm x 13.5mm	—	—	—	—	2	WS-22323	—	—
27.*	WIRE DIAGRAM	1	7659	1	7749	1	77273	1	7784

*NOT SHOWN

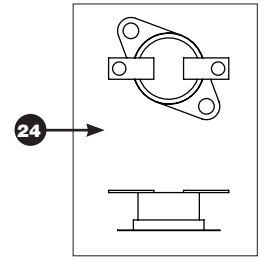
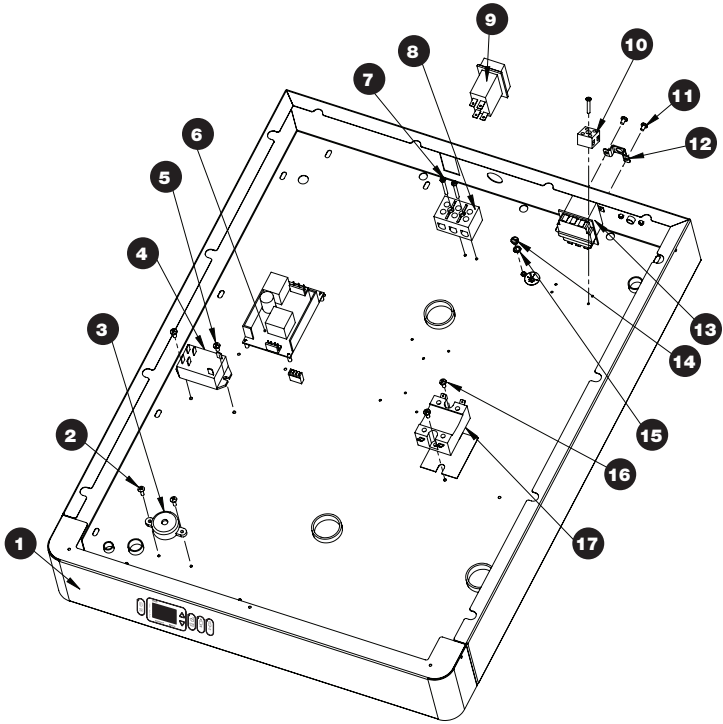
PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

† Note: The cavity fan motor has a one year life expectancy. The cavity fan motor parts warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first.

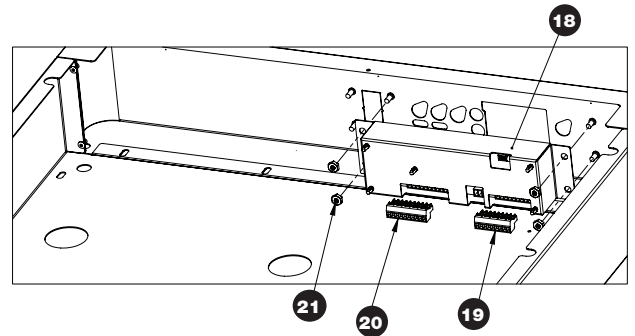
SERVICE

ELECTRICAL VIEW (P-2130 & P-2118 SHOWN)

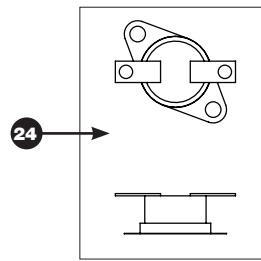
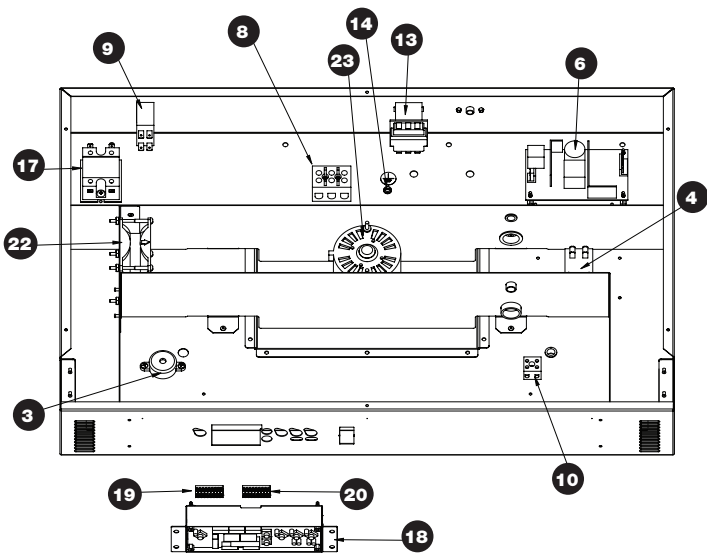
P-2130



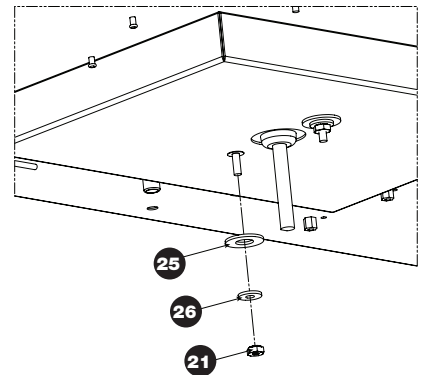
LOCATED UNDER THE BONNET



P-2118



LOCATED UNDER THE BONNET



PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ACCESSORY SERVICE PARTS LIST *

*NOT SHOWN

ACCESSORY SERVICE PARTS	P-2110	P-2120	P-2118	P-2130
Built-in Trim Kit, Reach-In	—	—	—	CONTACT FACTORY
Caster Upgrade Kit, 3.5" (89mm)	CONTACT FACTORY	—	—	—
Casters, 3.5" (89mm) PLATE, RIGID	CS-23731	—	—	—
PLATE, SWIVEL W/ BRAKE	CS-23730	—	—	—
SCREW (4 REQUIRED FOR EACH CASTER)	SC-2351	—	—	—
Caster Upgrade Kit, 5" (127mm)	CONTACT FACTORY	CONTACT FACTORY	—	—
Casters, 5" (127mm) PLATE, RIGID	CS-2025	CS-2025	—	—
PLATE, SWIVEL W/ BRAKE	CS-2026	CS-2026	—	—
SCREW (4 REQUIRED FOR EACH CASTER)	SC-2351	SC-2351	—	—
Combination Lock	REFER TO COMBINATION LOCK MANUAL MN-28753			
Leg Kit Upgrade Kit, 6" (152mm)	CONTACT FACTORY	CONTACT FACTORY	—	CONTACT FACTORY
Lock for Door Handle	LK-22567	LK-22567	LK-22567	LK-22567
Solid Door Assembly	5009920	5012610	5012103	5012572
STACKING HARDWARE				
P-2010 over P-2110 or P-2110 over P-2110	5012145	—	—	—
P-2010 over P-2120	—	5012146	—	—
P-2010 over P-2130	5012148	—	—	5012148
P-2020 over P-2120 or P-2120 over P-2120	—	5012153	—	—
P-2020 over P-2130	—	—	—	5012149
P-2030 over P-2130 or P-2130 over P-2130	—	—	—	5011588

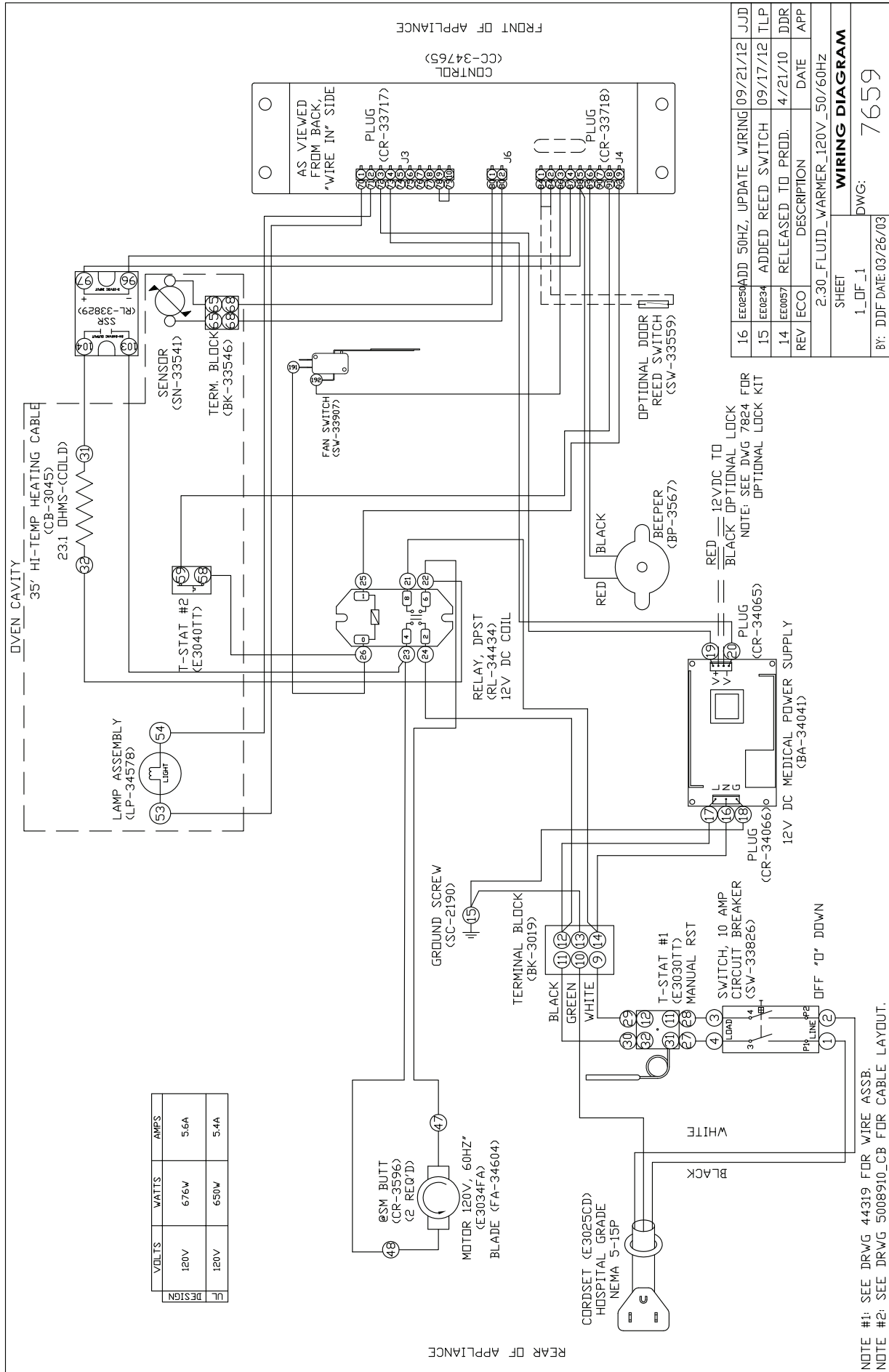
HEATING CABLE REPLACEMENT KITS *

*NOT SHOWN

		P-2110	P-2120	P-2118	P-2130
CABLE REPLACEMENT KIT NUMBER		4877	4880	4875	4881
SERVICE KIT INCLUDES:					
CB-3045	CABLE HEATING ELEMENT	37 ft (11m)	134 ft (41m)	—	210 ft (64m)
CB-3044	CABLE HEATING ELEMENT	—	—	150 ft (46m)	—
BU-3106	CUP BUSHING	2	8	6	12
TA-3540	ELECTRICAL TAPE	1 ROLL	1 ROLL	1 ROLL	1 ROLL
NU-2215	HEX NUT	4	32	12	24
IN-3488	INSULATION CORNER	8 ft (2m)	8 ft (2m)	8 ft (2m)	8 ft (2m)
SL-3063	INSULATING SLEEVE	2	8	6	12
CR-3226	RING CONNECTOR	2	8	6	12
BU-3105	SHOULDER BUSHING	2	8	6	12
ST-2439	STUD, 10-32	2	8	6	12

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Refer to wire diagram included with the unit.



VOLTS	WATTS	AMPS
120V	676W	5.6A
120V	650W	5.4A

REV	ECO	DESCRIPTION	DATE	APP
16	E0054	ADD 50HZ, UPDATE WIRING	09/21/12	JJD
15	E0034	ADDED REED SWITCH	09/17/12	TLP
14	E0057	RELEASED TO PRODD.	4/21/10	DDR
2.30_FLUID_WARMER_120V_50/60HZ				

BY: DDJ DATE: 03/26/03

1_DF_1

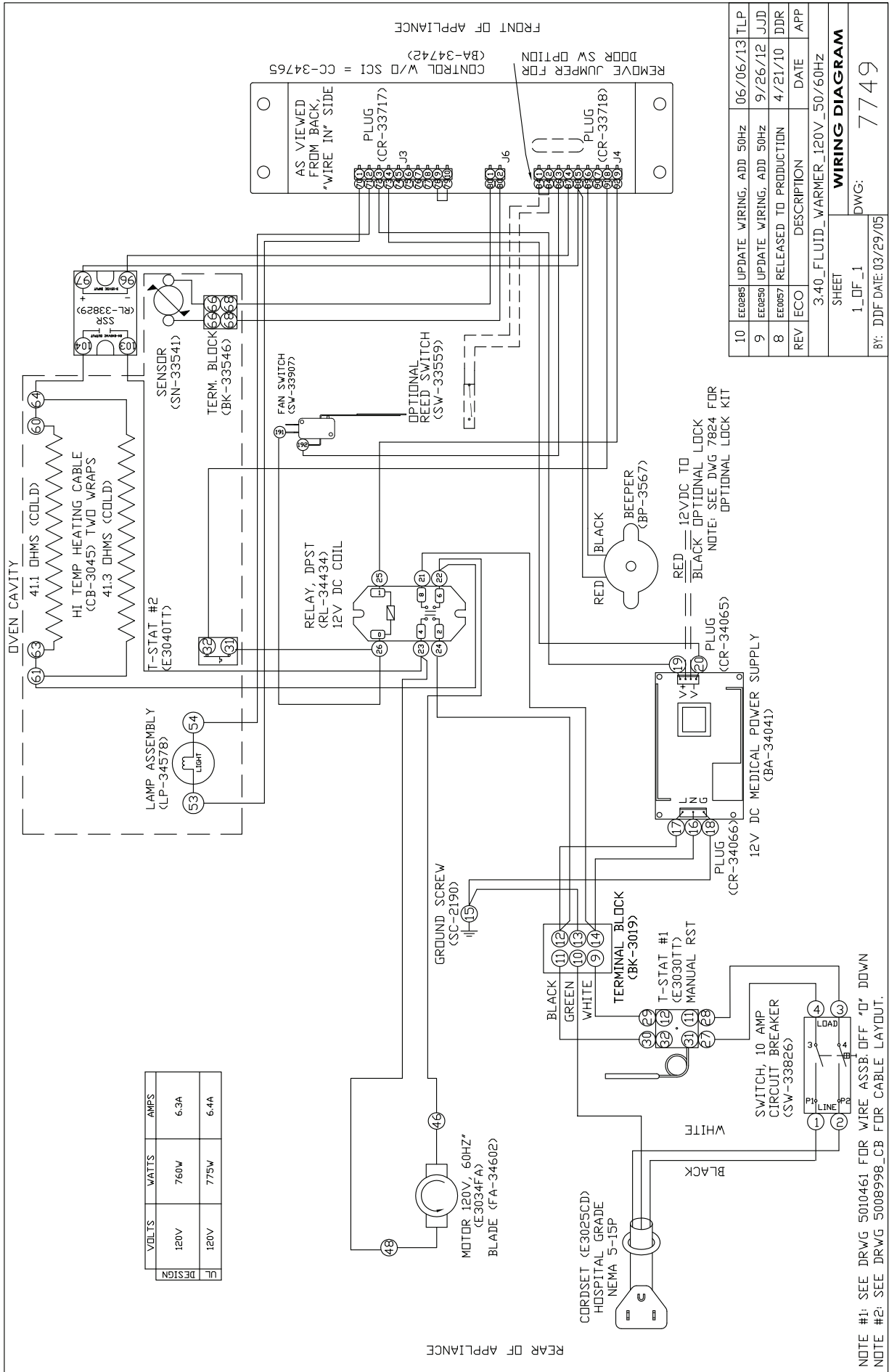
7659

WIRING DIAGRAM

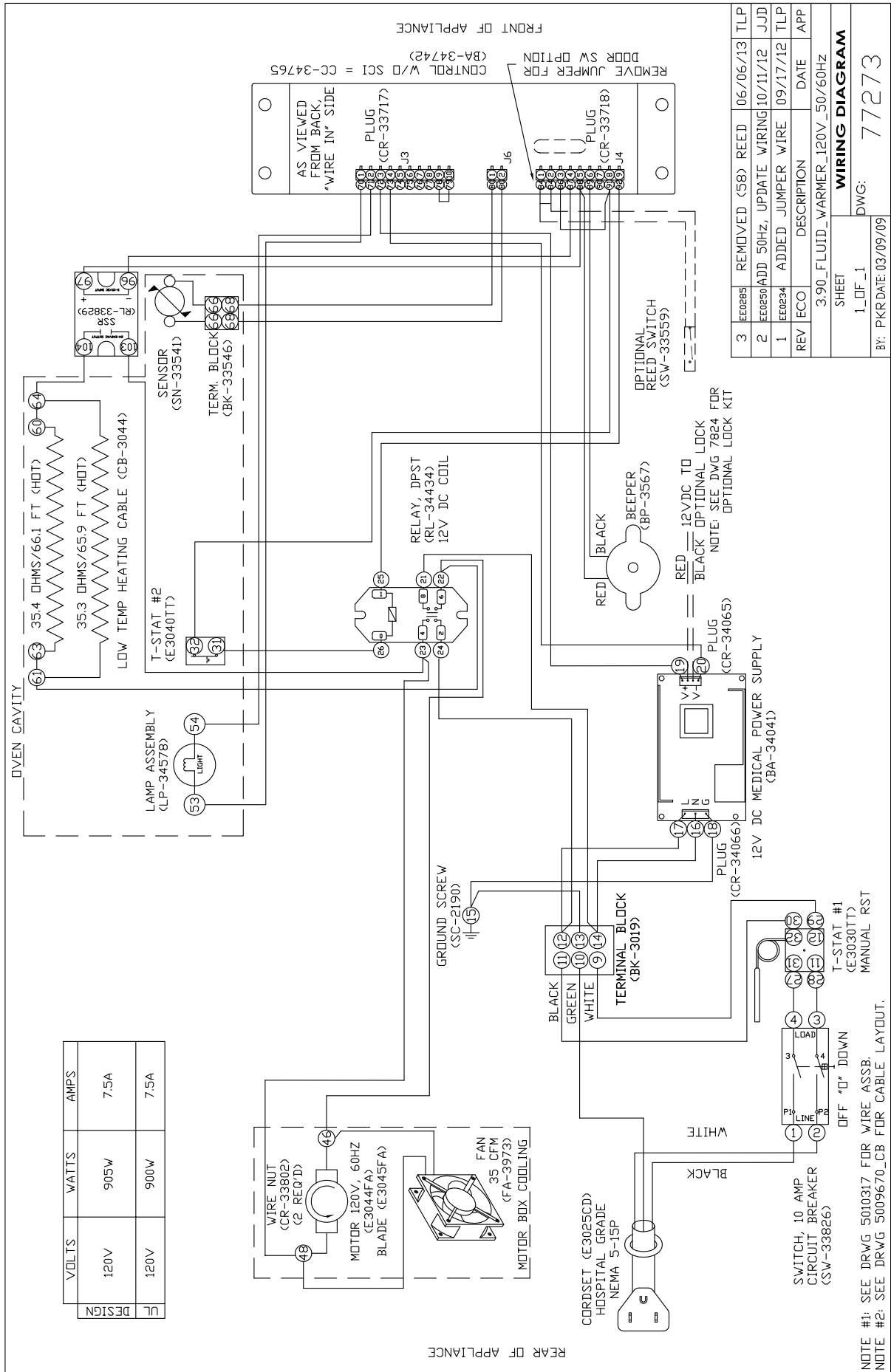
SHEET
1_DF_1
DWG: 7659

NOTE #1: SEE DRWG 44319 FOR WIRE ASSB.
NOTE #2: SEE DRWG 5008910_CB FOR CABLE LAYOUT.

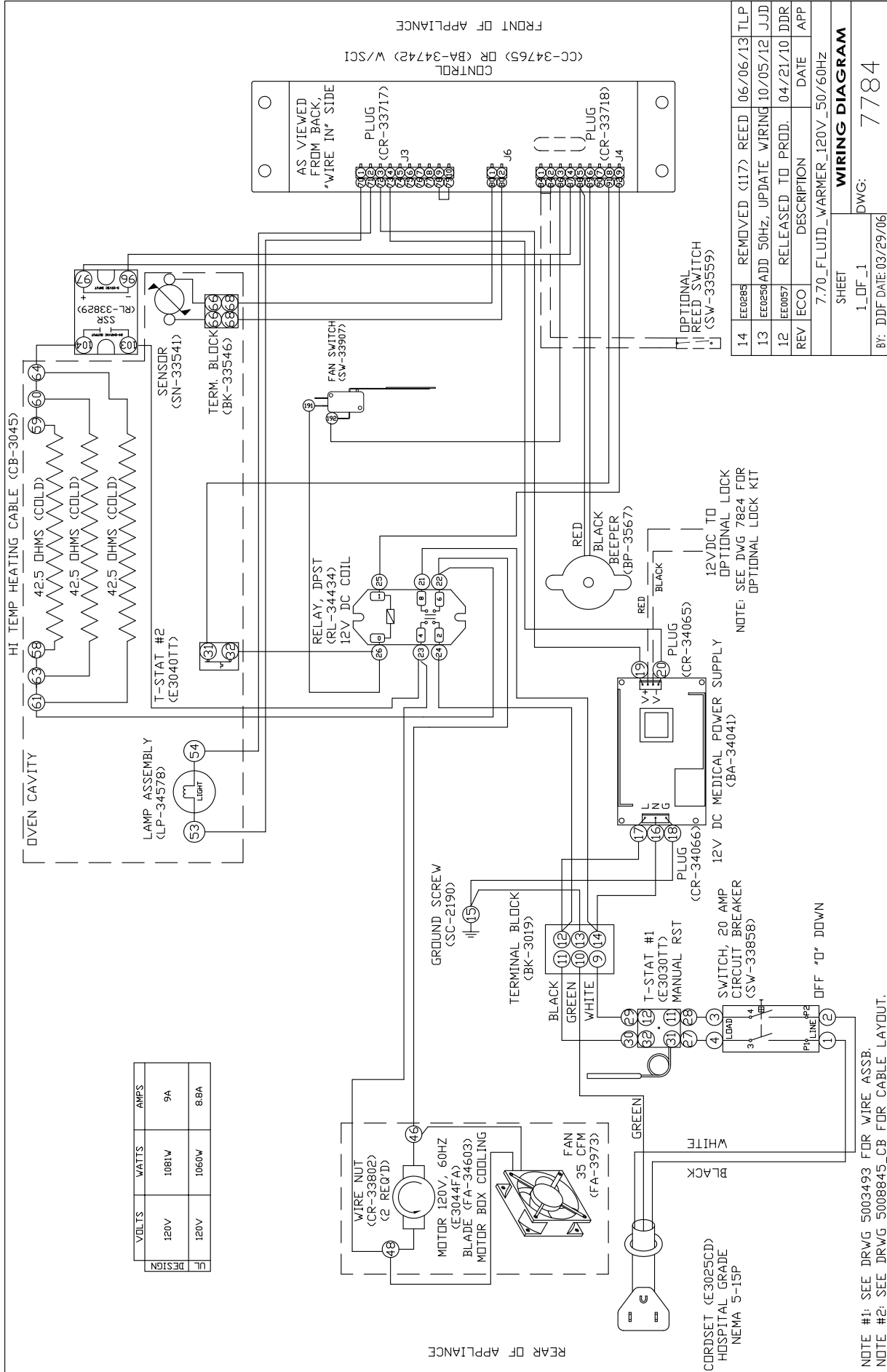
Refer to wire diagram included with the unit.



Refer to wire diagram included with the unit.



Refer to wire diagram included with the unit.



DESIGN	VOLTS	WATTS	AMPS
UL	120V	1081W	9A
	120V	1060W	8.8A

NOTE #1: SEE DRWG 5003493 FOR WIRE ASSB.
 NOTE #2: SEE DRWG 5008845_CB FOR CABLE LAYOUT.

REV	ECO	DESCRIPTION	DATE	APP
14	E0085	REMOVED (117)	REED	06/06/13
13	E0050	ADD 50Hz, UPDATE WIRING	JJD	10/05/12
12	E0057	RELEASED TO PROD.	DDR	04/21/10

7:70_FLUID_WARMER_120V_50/60Hz	
SHEET	1_OF_1
DWG: 7784	
BY: DDF DATE: 03/29/06	

WIRING DIAGRAM

FRONT OF APPLIANCE
 CONTROL
 (CC-34765) OR (BA-34742) W/SCI

REAR OF APPLIANCE

TRANSPORTATION DAMAGE AND CLAIMS



All Pedigo Products, Inc. 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.

PEDIGO PRODUCTS, INC. LIMITED WARRANTY

Pedigo Products, Inc. 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 Pedigo Products, Inc. neither assumes or authorizes any persons to assume for it any other obligation or liability in connection with Pedigo Products, Inc. equipment.

Pedigo Products, Inc.

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



Pedigo Products, Inc
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Phone: 800.822.3501 • Fax: 360.696.1700 • www.pedigo-usa.com