PEDIGO®

OPERATION & CARE MANUAL

P-2148

P-2140

P-2145

P-2145

WARMWATCH® COMBINATION BLANKET/FLUID WARMING CABINET

OPERATION & CARE

MM-1068 (MN-29617) • Rev 0 (10/15)

PRINTED IN U.S.A.

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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.

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 below.

This appliance, complete with unattached items and accessories, may be 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 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.

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

Always include both model and serial numbers in your correspondence regarding the unit.

Model: _____

Serial Number: _____

Purchased From: _____

Date Installed: _____ **Voltage:** _____

TRANSPORTATION DAMAGE & 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, do not put the appliance into service until the damage has been inspected by an authorized service provider.

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

1. 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. Ensure 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.

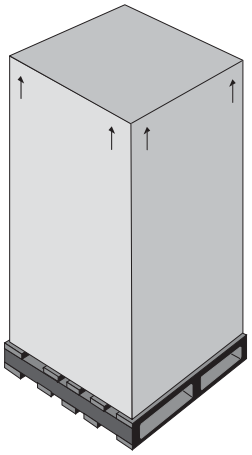
We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, assume the responsibility of any claims, or accept deductions in payment for such claims.

UNPACKING AND SET-UP

- Carefully remove the appliance from the carton or crate.

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

- Read all instructions in this manual carefully before initiating the installation of this appliance, using the appliance or performing routine maintenance. Following procedures other than those indicated in this guide to use and clean the appliance is considered inappropriate and may cause damage, injury or fatal accidents, in addition to invalidating the guarantee and relieving the manufacturer of all liability.
- **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.
- Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.



SAFETY PROCEDURES AND PRECAUTIONS

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

DANGER

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

WARNING

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

CAUTION

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

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.

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

1. The blanket chamber is intended for warming DRY, cotton blankets ONLY. The fluid chamber is intended for warming injection and/or irrigation fluids ONLY. No other use for these devices is authorized or recommended.
2. This warmer is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this device. The warmer can be used wherever there is appropriate space and electrical source including patient support areas, ER, ICU, PAU, surgical suites, patient rooms, and nursing stations. 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.

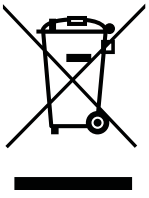
WARNING

Transport shall only be done with the doors closed.

WARNING

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

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



DO NOT dispose of electrical or electronic equipment with other municipal waste.

NOTICE: **Due to the energy efficient design of the warming cabinet and tight seal around the door, the water vapor from moist or damp blankets placed in the warming cabinet may cause condensation to collect on interior surfaces. To avoid this accumulation, use DRY blankets or towels.**

PREPARATION

Before operating the unit, 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

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.

Hazardous Voltage Present

P-2148

120 V.A.C. — 50/60 Hz, 1 ph
1.7 kW, 14.2 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous

NEMA 5-20P
20A - 125V Plug
Hospital Grade

IP X0

P-2140

120 V.A.C. — 50/60 Hz, 1 ph
1.92 kW, 16.0 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous

NEMA 5-20P
20A - 125V Plug
Hospital Grade

IP X0

P-2145

120 V.A.C. — 60 Hz, 1 ph
1.92 kW, 16.0 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous

NEMA 5-20P
20A - 125V Plug
Hospital Grade

IP X0

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.”

Protective Earth Ground Symbol

Medical Equipment classified by Underwriters Laboratories with Respect to Electrical Shock, Fire and Mechanical Hazards only, in Accordance with UL 60601-1 and CAN/CSA C22.2 No. 601.1.

UL File No. E201645

⚠ DANGER

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

DANGER

TO PREVENT SERIOUS INJURY, DEATH, OR PROPERTY DAMAGE:

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

(Not category AP or APG equipment)

⚠ WARNING

Injection fluid manufacturer suggests not to warm injection fluids ABOVE 40°C (104°F).

If fluids are warmed ABOVE suggested temperature, they should be discarded.

CAUTION

This unit is not approved for warming of blood or blood products.

GENERAL INFORMATION

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

The dual-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.

Each chamber's temperature is regulated by a separate 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.

Each 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 controls, is included as an additional safety feature.

The control will display temperature in whole degrees.

Blanket warming chamber:

The design and operational characteristics of the chamber eliminate the need for a heat circulating fan.

The electronic control has an adjustable temperature range of 37° to 93°C (98° to 200°F).

The TIMER feature allows the user to program the control to automatically turn on and turn off once during a 24 hour period at selected times. This enables the chamber to be shut off automatically at night to save energy, but to turn on again in the early morning to ensure warm blankets are available.

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/-3ºF) for set points of 43° to 66°C (110° to 150°F)
- Within +0/-1.12°C (+0/-2ºF) 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-2148 INFORMATION:

The blanket warming chamber includes a white, epoxy-coated blanket support assembly and two (2) shelves. The fluid warming chamber is equipped with one (1) white, epoxy-coated shelf to accommodate most commonly used surgical 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 four (4) leveling feet.

P-2140 INFORMATION:

The blanket warming chamber contains an epoxy-coated blanket support assembly and one (1) shelf. The fluid warming chamber is equipped with three (3) white, epoxy-coated wire baskets to accommodate most commonly used surgical 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 for exterior protection, and one (1) set of 5" (127mm) heavy-duty casters – two (2) rigid and two (2) swivel with locking brake.

P-2145 INFORMATION:

The blanket warming chamber contains an epoxy-coated blanket support assembly and two (2) shelves. The fluid warming chamber is equipped with one (1) white, epoxy-coated metal basket to accommodate most commonly used surgical fluids packaged in bags or bottles, mounted on basket rail supports. The basket has a capacity of **30 1-liter bottles or 24 1-liter bags**. The cabinet is furnished with one (1) set of 5" (127mm) heavy-duty casters – two (2) rigid and two (2) swivel with locking brake.

DANGER

To prevent SERIOUS PERSONAL INJURY, DEATH, or PROPERTY DAMAGE:

DO NOT steam clean, hose down or flood the interior or exterior with water or liquid solution of any kind. DO NOT use water jet to clean.

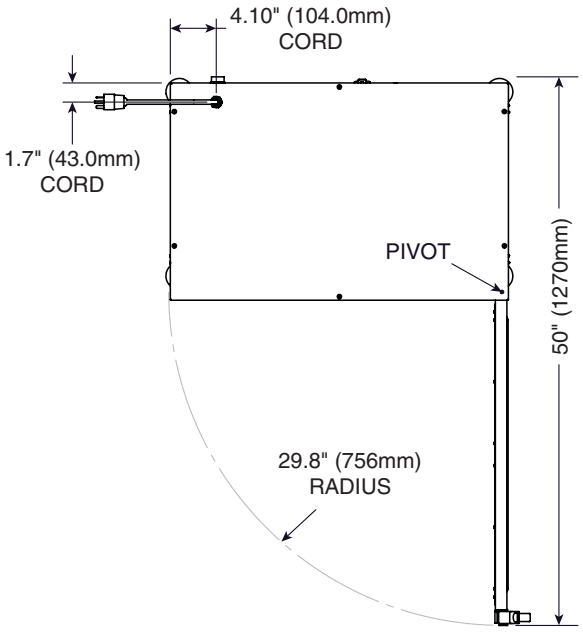
Failure to observe this precaution will void the warranty.

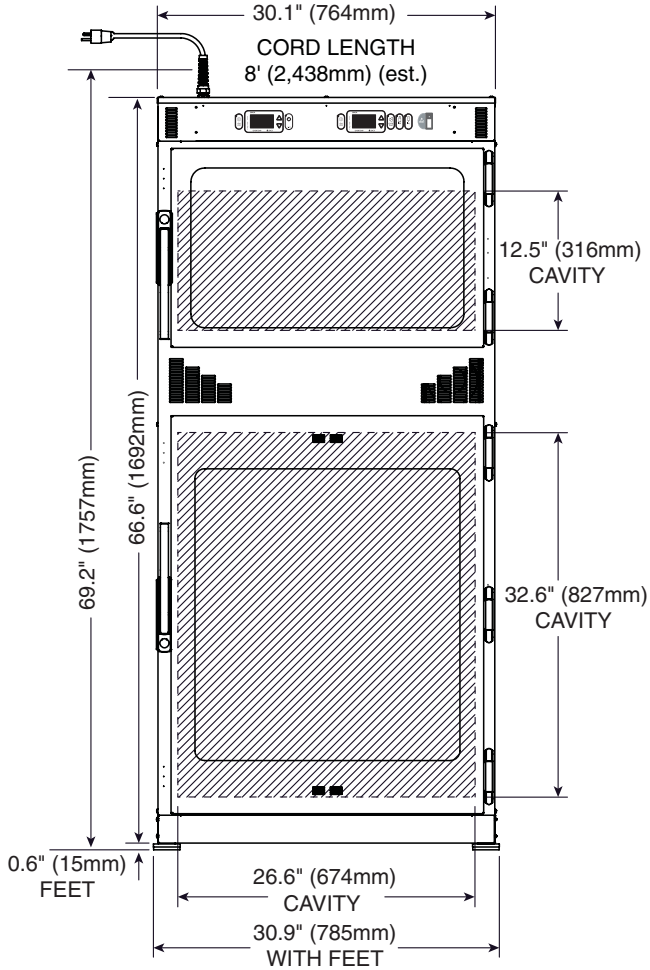
(IP X0 - Listed as Ordinary)

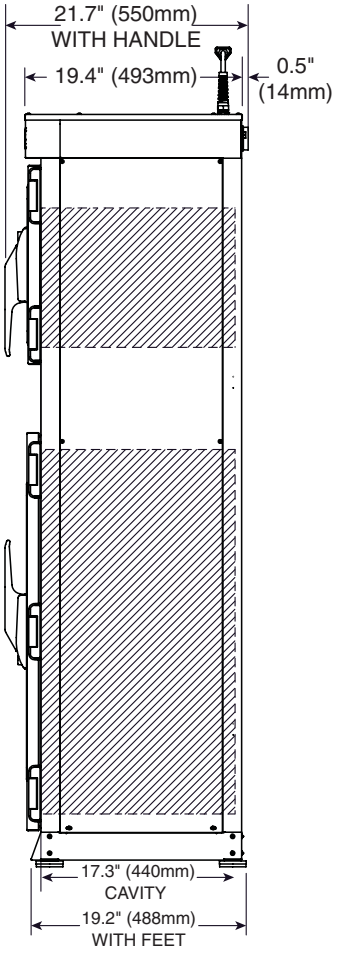
CAUTION

This unit is not approved for warming of blood or blood products.

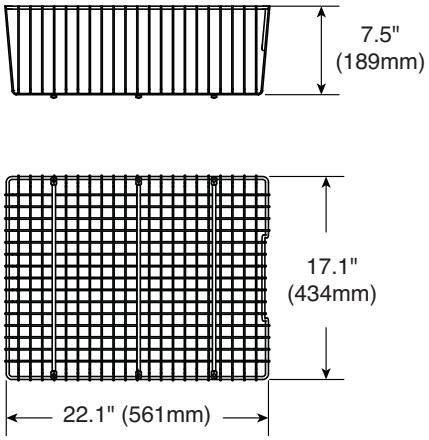
P-2148 DIMENSIONS

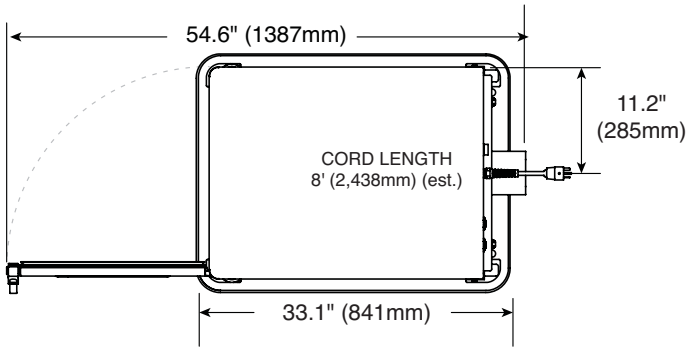


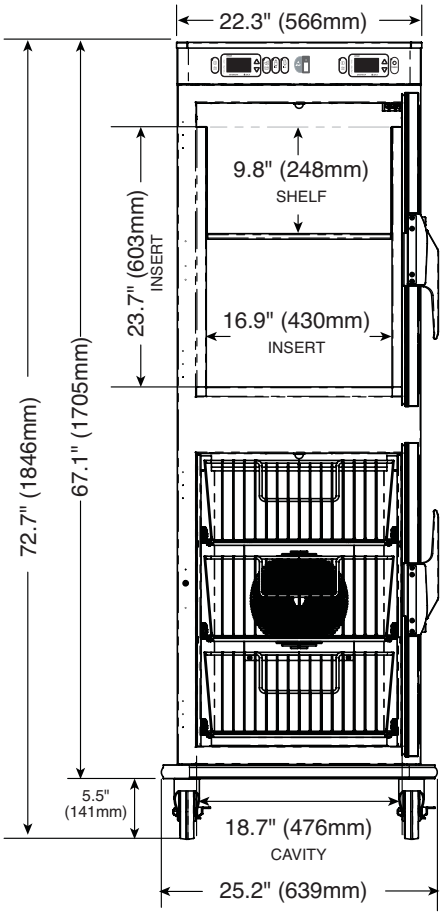


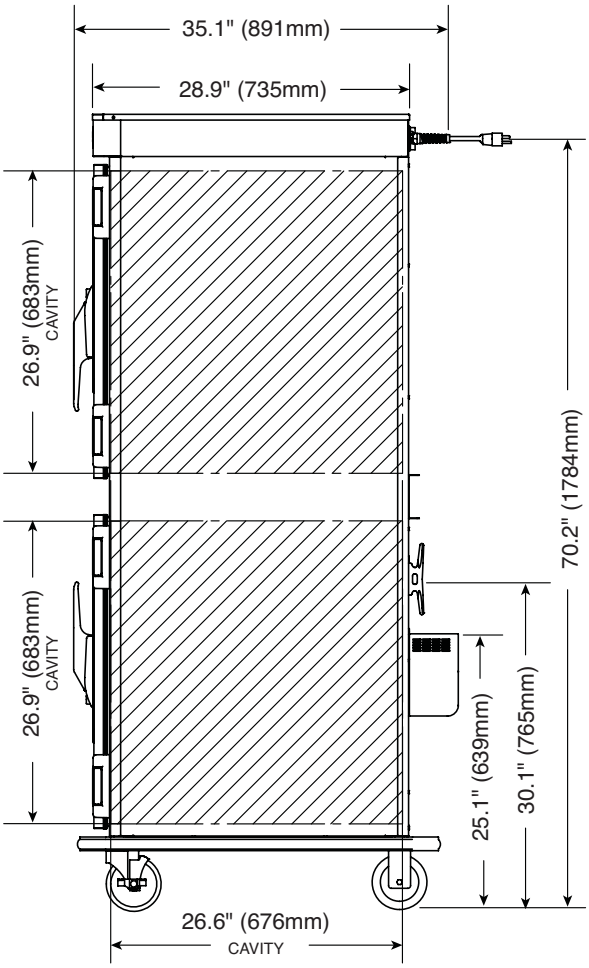


P-2140 DIMENSIONS

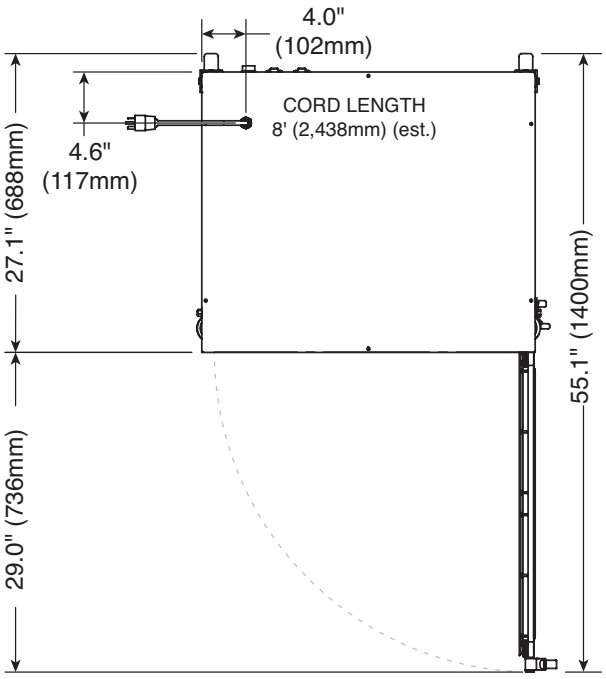


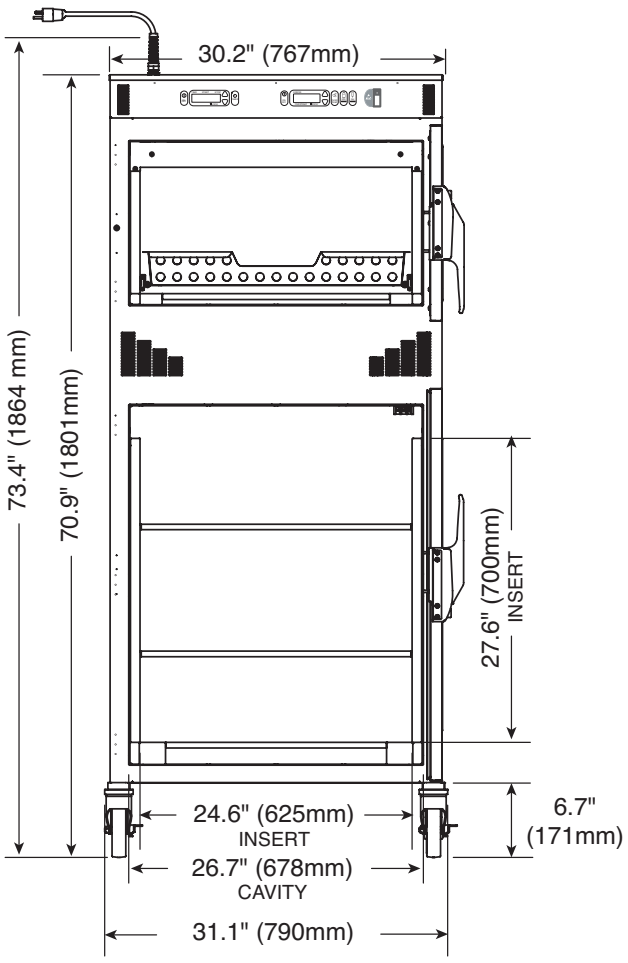


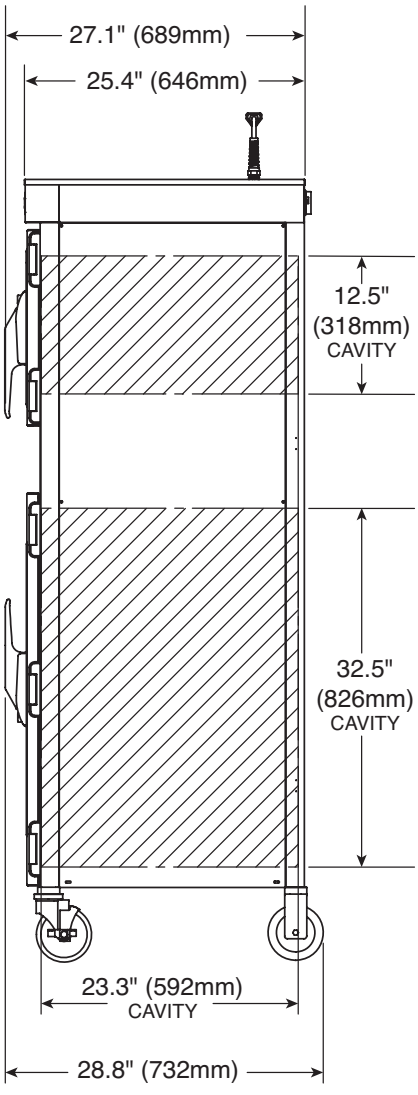




P-2145 DIMENSIONS







GENERAL WARNINGS

⚠ WARNING

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

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

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
			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**
Conducted RF IEC 61000-4-6	3 V/m 150 kHz to 80 MHz	3 V/m	d = [3.5/3] √P
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	d = [3.5/3] √P 80 MHz to 800 MHz d = [7/3] √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: 

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

[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.

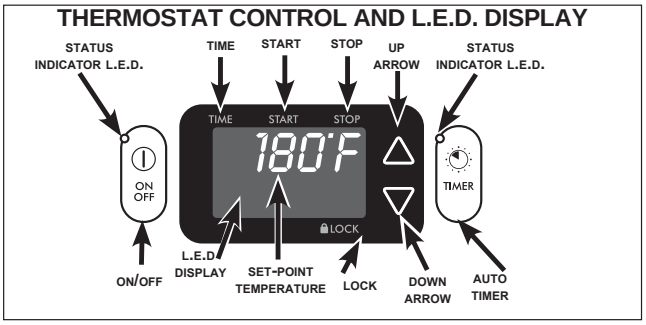
The unit is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the unit can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) 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 $d = \left[\frac{3.5}{3}\right]\sqrt{P}$	80 MHz to 800 MHz $d = \left[\frac{3.5}{3}\right]\sqrt{P}$	800 MHz to 2.5 GHz $d = \left[\frac{7}{3}\right]\sqrt{P}$
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.

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

BLANKET 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 power the control off. The status indicator L.E.D will illuminate according to the power state.

UP ARROW / DOWN ARROW BUTTONS

Used to increase or decrease the temperature set-point. Additionally used to set the current time, auto-start, and auto-stop times. Continual pressure to a button will increase the increments in which the values will change.

TIMER BUTTON

Blanket warmers have a timer button which is used to program the time of day, as well as the automated start and stop times. See “Setting the Time” instructions on this page.

L.E.D. DIGITAL DISPLAY

The control has a four-digit L.E.D. display. When the control is activated, the display will show current temperature set-point. When programming the timer, the display will show hour and minutes.

L.E.D. DISPLAY STATUS INDICATORS

TIME

Illuminates while current time of day is displayed when programming the TIMER mode.

START

Illuminates while the start time is displayed when programming the TIMER Auto-On mode.

STOP

Illuminates while the stop time is displayed when programming the TIMER Auto-Off mode.

LOCK

Illuminates when the lock feature is engaged.

POWER FAIL DETECTION

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.

TEMPERATURE FORMAT SELECTION

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

CAVITY TEMPERATURE DISPLAY

To reference the cavity air temperature, push and hold the TIMER 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

The warmer control can be locked so that no changes can be made to the temperature set-point or the mode selection. Press 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 the ON/OFF button and the DOWN arrow button at the same time. The control will unlock and the LOCK indicator will extinguish.

SETTING THE TIME

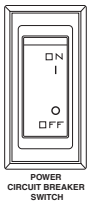
NOTICE: If you do not wish to use the automated timer feature, then you do not need to set the time and this section can be skipped.

Press the TIMER button to illuminate the TIME indicator. The current time of day will show on the display in 24-hour format (HH:MM). Use the UP or DOWN arrow to set the display to the current time. Press the TIMER button again to transition to the START Auto-On Time. This is the time that the control will automatically turn on when enabled. Adjust to desired start time using the UP or DOWN arrow buttons. Press the TIMER button again to transition to the STOP Auto-Off Time. This is the time the control will automatically turn off when enabled. Adjust to desired stop time. Press the TIMER button again to enable the Auto-Timer feature. The TIME status indicator L.E.D. will illuminate when the Auto-Time function is activated. To disable, press and hold the TIMER button until the indicator L.E.D. goes off.

NOTICE: When the Auto-On and the Auto-Off times are equal, the unit will recognize the Auto-Off time ONLY and the control will never turn on without user intervention.

BLANKET CHAMBER OPERATIONAL PROCEDURES

1. The appliance must be plugged into an appropriate hospital grade receptacle as specified on the electrical information page.



POWER CIRCUIT BREAKER SWITCH

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 L.E.D. display will indicate last temperature set-point of compartment.
4. **SET DESIRED TEMPERATURE.**
   To set the blanket warming temperature, press and hold the UP or DOWN ARROW buttons to change the value shown in the display. The temperature set-point range is 37° - 93°C (98° - 200°F).
5. **LOAD THE CHAMBER WITH 100% COTTON BLANKETS. DO NOT WARM SYNTHETIC BLEND FABRICS OR ITEMS CONTAINING PLASTIC, RUBBER OR METAL SNAPS, STUDS, HOOKS, ETC.**
   Check that the epoxy-coated blanket support assembly and shelf is in place. This blanket support assembly and shelf MUST be used to hold blankets. A full load of blankets will take two to three hours to reach optimum temperature. Make certain the cabinet door is securely closed after initial loading and following each blanket removal.

NOTICE: Do not block sensor by overloading cabinet with blankets.

6. **ROTATE LOAD OF BLANKETS DAILY.**
   Rotate the blankets at the bottom of the load to the top to ensure equal usage. Failure to rotate blankets can cause blankets to discolor.

NOTICE: Avoid using flammable cabinet cleaning agents, as well as blanket cleaning agents that cause fabric to become brittle over time.

WARNING

To prevent PERSONAL INJURY or PROPERTY DAMAGE:

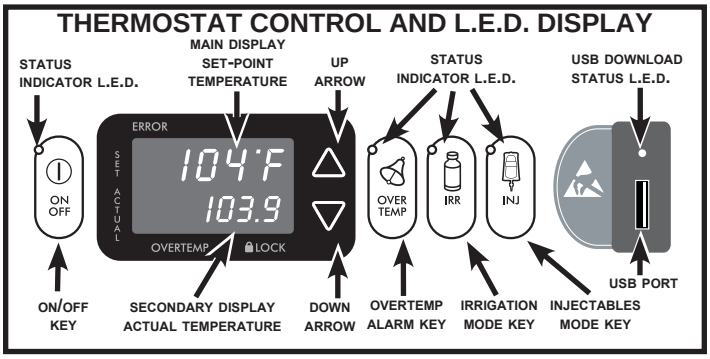
Blanket support assembly and shelf must be in place when warming blankets to prevent scorching or discoloration.

NOTICE: **To enable the warming appliance to function properly, DO NOT overload the interior. Allow 1" (25mm) gap between blankets and interior of cavity and/or shelf.**

Load blankets only to the top of the blanket support assembly.

P-2140 Blanket Warming Chamber

P-2148 & P-2145 Blanket Warming Chamber



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

CONTROL PANEL KEYS

ON/OFF KEY

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

UP ARROW / DOWN ARROW KEYS

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

OVERTEMP ALARM KEY

Depressing this key 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 KEY

The IRR key 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 key illuminates when the IRR set-point temperature is being displayed.

INJ KEY

The INJ key 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 key illuminates when the INJ set-point temperature is being displayed.

NOTICE: 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 key indicator will flash. The green indicator of the overtemp key 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 key 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 key once to acknowledge that the power has been restored. The ON/OFF status indicator will stop flashing. When pushing the ON/OFF key, 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 key for 5 seconds to view the current setting. Press again to switch between °F (Fahrenheit) or °C (Celsius).

OPERATIONAL SOUND SELECTION

While the controller is in the off mode, press and hold the DOWN ARROW key 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 key and the UP arrow key at the same time. The LOCK indicator will illuminate. Attempts to operate the ON/OFF key, or to change the temperature set-point will be unsuccessful. To unlock the control, press and hold the ON/OFF key and the DOWN arrow button at the same time. The control will unlock, and the LOCK indicator will go out.

DOOR ALARM

"dOOR" will appear on the display when the door is opened. An audible alarm will sound if the door remains open for more than 2 minutes.

PROGRAMMING AUTOMATIC TIMER AND TIME/DATE

NOTICE: All times will be displayed in hours and minutes (HH:MM) in a 24-hour format. 1:00pm will display as 13:00. The clock will need to be manually reset for Daylight Saving Time.

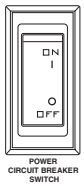
The date and time should be checked and, if necessary, reset when powering ON the warmer for the first time. When the warmer is turned on for the first time, an "E-60" code is displayed on the main LED display if the time and date has not yet been programmed. Once programmed, the clock/calendar will maintain the correct date and time for up to 30 days after power has been disconnected from the unit. After 30 days of continuous disconnection, the date and time must be reprogrammed.

To set or reset the clock, turn the controller off and follow these steps: (If E-60 is displayed, do not turn controller OFF.)

1. Press the OVERTEMP button to enter the clock set mode.
2. The main display shows the current programmed time in 24-hour format.
3. The 24-hour clock increases or decreases in 1 minute steps by pressing and holding either the UP ARROW or DOWN ARROW.
4. The 24-hour clock increases from 00:00 to 23:59 and decreases from 23:59 to 00:00 depending on which arrow key is pressed.
5. Press the OVERTEMP button to confirm the 24-hour time setting and switch to programming the calendar year.
6. The main display shows "YEAr". The secondary display shows the currently programmed year.
7. Pressing either the UP ARROW or DOWN ARROW increases or decreases the year.
8. Press the OVERTEMP switch to confirm the year setting and switch to programming the calendar month.
9. The main display shows "Mon". The secondary display shows the currently programmed month.
10. Pressing either the UP ARROW or DOWN ARROW increases or decreases the month.
11. Press the OVERTEMP switch to confirm the month setting and switch to programming the day of month.
12. The main display shows "DAY". The secondary display shows the currently programmed day.
13. Pressing the UP ARROW increases the date from the first of the month. Pressing the DOWN ARROW decreases the date from the last day of the month.
14. Press OVERTEMP to exit clock set mode and enter normal operation mode.

FLUID CHAMBER OPERATIONAL PROCEDURES

1. The appliance must be plugged into an appropriate hospital grade receptacle as specified on the electrical information page.



POWER CIRCUIT BREAKER SWITCH

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.

   NOTICE: 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).

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

NOTICE: 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.

P-2140
Fluid Warming Chamber

P-2148
Fluid Warming Chamber

P-2145
Fluid Warming Chamber

⚠ WARNING

Refer to fluid manufacturer's labeling for recommended warming procedures.

⚠ WARNING

Injection fluid manufacturer suggests not to warm injection fluids ABOVE 40°C (104°F).

If fluids are warmed ABOVE suggested temperature, they should be discarded.

⚠ WARNING

Transport shall only be done with the doors closed.

⚠ CAUTION

The unit may tip over if more than one basket is extended simultaneously.

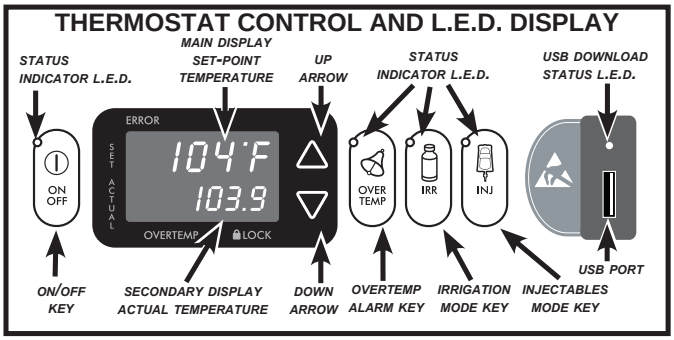
Open only one basket at a time when loading or unloading fluids.

NOTICE: DO NOT load the metal basket beyond the recommended maximum capacity. 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.

WarmWatch® USB DOWNLOAD OPERATION

WarmWatch® fluid warmers records cavity temperature data one time every hour. Each recorded data sample includes:

- Time/date stamp
- Current set-point for the chamber
- Air temperature measured by control RTD
- Air temperature measured by data logging RTD
- State of the door (open or closed)
- Warmer type
- Error logging



DOWNLOAD DATA TO A USB FLASH DRIVE

NOTICE: Do not remove the USB flash drive, turn off warmer, or change warming modes while downloading data or writing reports to the USB drive

Recorded data can be downloaded from the warmer at any desired interval of up to six months between downloads. (See "Full Memory Information" below.)

A USB flash drive with memory capacity of at least 1 MB is required. (Not included.) This unit works with most FAT32 formatted USB flash drives.

1. Press ON button if warmer is not already turned on. Do not turn off or change warming mode while downloading data.
2. Insert USB flash drive into the USB port located next to the "INJ" button on the front panel of the warmer.
3. The main display will show "USB" when it detects a USB flash drive plugged into unit.
4. The main display will change to "wrt" and the secondary display will change to "log" prior to downloading the data.
5. When the data download begins, the main display will change to "dmP" and the secondary display will show the percentage of download completed. The download will take approximately 2 minutes to complete.
6. After the recorded data is downloaded, the main display will show "wrt" and the second display will show "rPt". The log report is being downloaded to the USB drive while these messages are displayed.
7. When the download is complete, the main display will show "USb" and the second display will show "donE" until the USB flash drive is removed.
8. After the USB flash drive is removed, the display returns to normal operation status and the memory is automatically cleared.
9. Plug USB flash drive into a USB-compatible computer to access the downloaded report files. **See "Reports" section for more information about the downloaded reports.**

FULL MEMORY INFORMATION

When the data storage memory nears capacity (4,000 data records or five months since the last download), the control will indicate that download is needed by alternately flashing the actual temperature and the word "Full"on the lower LED display. Data will continue to be stored until the memory is full (4,800 records or six months since last download). If the data is not downloaded before this time, the oldest data will be overwritten by new data.

Follow steps in "Download Data Via USB Flash Drive" to download recorded data and clear memory.

CAUTION

THIS UNIT IS SENSITIVE TO ELECTROSTATIC DISCHARGE. OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.

REPORT INFORMATION

The raw data report downloaded to the USB flash drive by *WarmWatch* is written in a comma delimited (CSV) format. The files are downloaded to a directory identified by the last eight (8) digits of the warmer's serial number. The report and data files are named by the date of download and .csv extension. (e.g., 00000000/ 20080101.csv)

The .csv raw data report includes the following categories for each hourly temperature sample: Entry Number, Year, Month, Day, Hour, Minute, Second, Warmer Type, Set point, Control RTD, Logging RTD, Temp Units, Error Bits, Door, and Warmer State. The .csv raw data report can be opened in spreadsheet software (such as Microsoft® Excel or OpenOffice Calc) for analysis and charting.

An accuracy report indicating how the data was collected is also provided. The report is a text file with a file name of the date and an extension of .txt located under the system serial number folder. (e.g., 00000000/ 20080101.txt)

All temperature samples taken within two (2) hours of an open door event or within two (2) hours of warmer being turned on are excluded from the accuracy report.

ACCURACY .TXT REPORT EXAMPLE

```
20080307.TXT
Fluid Warmer Accuracy Report
Type: Enthermics
Model: 770L
Serial number: 481691
Date of Manufacture: 17-SEP-2007
Date of Report: 07-MAR-2008 13:00:32
Software version: 1.000Final
Frequency of readings: 1.000000 per hour

Period of evaluation: 2008-MAR-05 20:46:45 to
2008-MAR-07 09:05:00
Number of days: 3
Number of readings evaluated: 4118
Number of excluded readings (door open): 242
Mode of warming: injection
Setpoint temperature: 104F
Average temperature: 102.6F
Temperature range: 102.6F -102.7F
Accuracy specification: +0 deg. F., -2 deg. F.
Accuracy evaluation: PASS

Period of evaluation: 2008-MAR-07 09:05:44 to
2008-MAR-07 09:05:44
Number of days: 1
Number of excluded readings (door open): 1
Mode of warming: irrigation
Setpoint temperature: 130F
Too few points exist to generate an accuracy
report for this period of evaluation.

Period of evaluation: 2008-MAR-07 09:06:14 to
2008-MAR-07 12:45:15
Number of days: 1
Number of readings evaluated: 196
Number of excluded readings (door open): 242
Mode of warming: irrigation
Setpoint temperature: 129F
Average temperature: 127.3F
Temperature range: 126.6F -127.7F
Accuracy specification: +0 deg. F., -3 deg. F.
Accuracy evaluation: PASS

Note: The temperature specification is stated for
a warmer in a steady-state condition with the
door closed for at least 2 hours.
```

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 per day. Always thoroughly rinse surfaces after using a cleaning agent and wipe standing water as quickly as possible after rinsing.

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. Failure to observe this will void the warranty. Always use the proper cleaning agent at the manufacturer's recommended strength. Contact your local cleaning supplier for product recommendations.

CLEANING MATERIALS

Cleaning can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods are needed, use a non-abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of surface metal to avoid surface scratches. Never use wire brushes, metal scouring pads, or scrapers to remove residue. Failure to observe this will void the warranty.

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.

PREVENTATIVE MAINTENANCE

Daily Checklist:

- ❑ Ensure that the correct operation and care manual is available to all users.
- ❑ Ensure that all people using this appliance have been properly trained in the operation and safety instructions.
- ❑ **DO NOT** overload cabinet.
  - **Blanket Warmer:** 1" (25mm) from top interior of unit and/or shelf
  - **Fluid Warmer:** See electrical/capacity page

Weekly Checklist:

- ❑ Inspect condition of plug and cord. Replace if damaged.
- ❑ Clean dust from under inserts, outer vents surrounding the unit and around top of bonnet (if applicable).
- ❑ 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?
- ❑ Check that all control and interior LEDs light up.

Monthly Checklist:

- ❑ Check door gasket integrity. Are there any tears? Is the gasket worn or loose? Ensure seal is tight to unit body. Replace gasket if integrity is compromised.
- ❑ Check air temperature sensor mount on the interior of chamber. Is the guard in place and is it fully secured to the unit?
- ❑ Check condition of casters or feet. Ensure components are secure and tightly threaded.
- ❑ Check control panel overlay condition. Are there any tears or excessive wear on the graphic? Does the control work properly when buttons are pushed?
- ❑ 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.

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 blanket support assembly and shelf for the blanket chamber and the metal basket and basket rail supports for the fluid chamber. Clean these items separately.

NOTICE: Never use 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 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 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 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.

DANGER

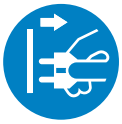
To prevent SERIOUS PERSONAL INJURY, DEATH, or PROPERTY DAMAGE:

DO NOT steam clean, hose down or flood the interior or exterior with water or liquid solution of any kind. DO NOT use water jet to clean.

Failure to observe this precaution will void the warranty.

(IP X0 - Listed as Ordinary)

WARNING



To prevent SERIOUS INJURY, DEATH, OR PROPERTY DAMAGE, ALWAYS disconnect unit from power source before cleaning or servicing.

NOTICE: 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.

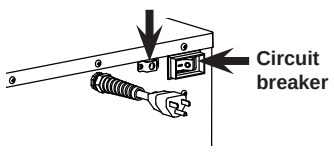
This chart is provided for the assistance of qualified technicians only and is not intended for use by untrained or unauthorized service personnel.

TROUBLE SHOOTING GUIDE

ERROR	DESCRIPTION	ACTION REQUIRED
E-10 or E-20	**Sensor Short**	• **Fluid cavity warmer control (CC-34581):** 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. If Ohm reading is 1000, replace display. If Ohm reading is ±100, replace sensor. • **Blanket cavity warmer control (CC-34765):** 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. If Ohm reading is 100 Ω, replace display. If reading is ±100 Ω, 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 or E-21	**Sensor Open**	• 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. If reading is 1000 Ω, replace display. If reading is ±100 Ω, 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 Temp Error (BLANKET WARMERS ONLY)**	• Blanket chamber temperature has been lower than the set temperature for 90 minutes or longer. • Check that door is closed.
E-31	**Over Temp**	• Unit may be overloaded. Redistribute inventory. ***Do not exceed height of basket assembly.*** • Reconnect senor wires at control board and terminal block. • Check sensor at 32°F (0°C) using a container of ice water. The sensor reading for the fluid cavity should be 1000Ω and for the blanket cavity it should be 100Ω. • Control may be defective. • Relay may be defective. • Loose sensor connections. • If error continues call Service.
E-60	**Depleted Electrical Charge**	• Unit has been unplugged for an extended period of time and the charge has weakened. Make sure that the circuit breaker switch at the rear of unit and the control are turned ON and the control displays the E-60 error for a minimum of 30 minutes. Reset date and time. Leaving the control ON, flip the circuit breaker switch on the rear of the unit OFF for approximately 10 seconds. Flip the circuit breaker switch back ON, and when the control reinitializes the error code should clear. 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. • Loose capacitor on board. • If error continues, replace control.
E-82	**Calibration Data Error**	• Call Service.
E-86	**Configuration Error**	• Call Service.
E-97	**Data Key Missing**	• Check if data key has come loose. Tighten if loose. • If error continues call Service.
E-98	**RTD Error**	• Inspect sensors. Follow instructions for E-10 error code. • If error continues call Service.
E-99	**Hardware Over Temp**	• Inspect connections and condition of high limit bimetal thermostat and the fan switch. • If error continues call Service.
Data does not transfer when USB flash drive is inserted into USB port		• Make sure V-Drive Cable is plugged in correctly to rear of control. • Try another brand of USB flash drive. • If error continues call Service.

NOTICE: 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

ACCESSORY SERVICE PARTS LIST* *NOT SHOWN

ACCESSORY SERVICE PARTS		P-2148	P-2140	P-2145
Built-in Trim Kit, Reach-In		5013968	5013889	5013968
Built-in Trim Kit, Pass-Through		—	—	5013968 (x2)
Combination Lock		REFER TO COMBINATION LOCK MANUAL MN-28753		
Leg Kit Upgrade Kit, 6" (152mm)		—	CONTACT FACTORY	CONTACT FACTORY
Lock for Door Handle		LK-22567	LK-22567	LK-22567
Solid Door Assembly	LOWER	5012103	5012572	5012103
	UPPER	5012104	5012572	5012104

HEATING CABLE REPLACEMENT KITS (1 KIT PER CHAMBER)* *NOT SHOWN

		P-2148	P-2140	P-2145
CABLE REPLACEMENT KIT NUMBER		4875	14228	4875
SERVICE KIT INCLUDES:				
CB-3045	CABLE HEATING ELEMENT	—	280 ft (85m)	—
CB-3044	CABLE HEATING ELEMENT	150 ft (46m)	—	150 ft (46m)
BU-3106	CUP BUSHING	6	12	6
TA-3540	ELECTRICAL TAPE	1 ROLL	1 ROLL	1 ROLL
NU-2215	HEX NUT	12	24	12
IN-3488	INSULATION CORNER	8 ft (2m)	8 ft (2m)	8 ft (2m)
SL-3063	INSULATING SLEEVE	6	12	6
CR-3226	RING CONNECTOR	6	12	6
BU-3105	SHOULDER BUSHING	6	12	6
ST-2439	STUD, 10-32	6	12	6

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

SERVICE - FULL ASSEMBLY PARTS LIST (DRAWINGS SHOWN ON THE FOLLOWING PAGES)

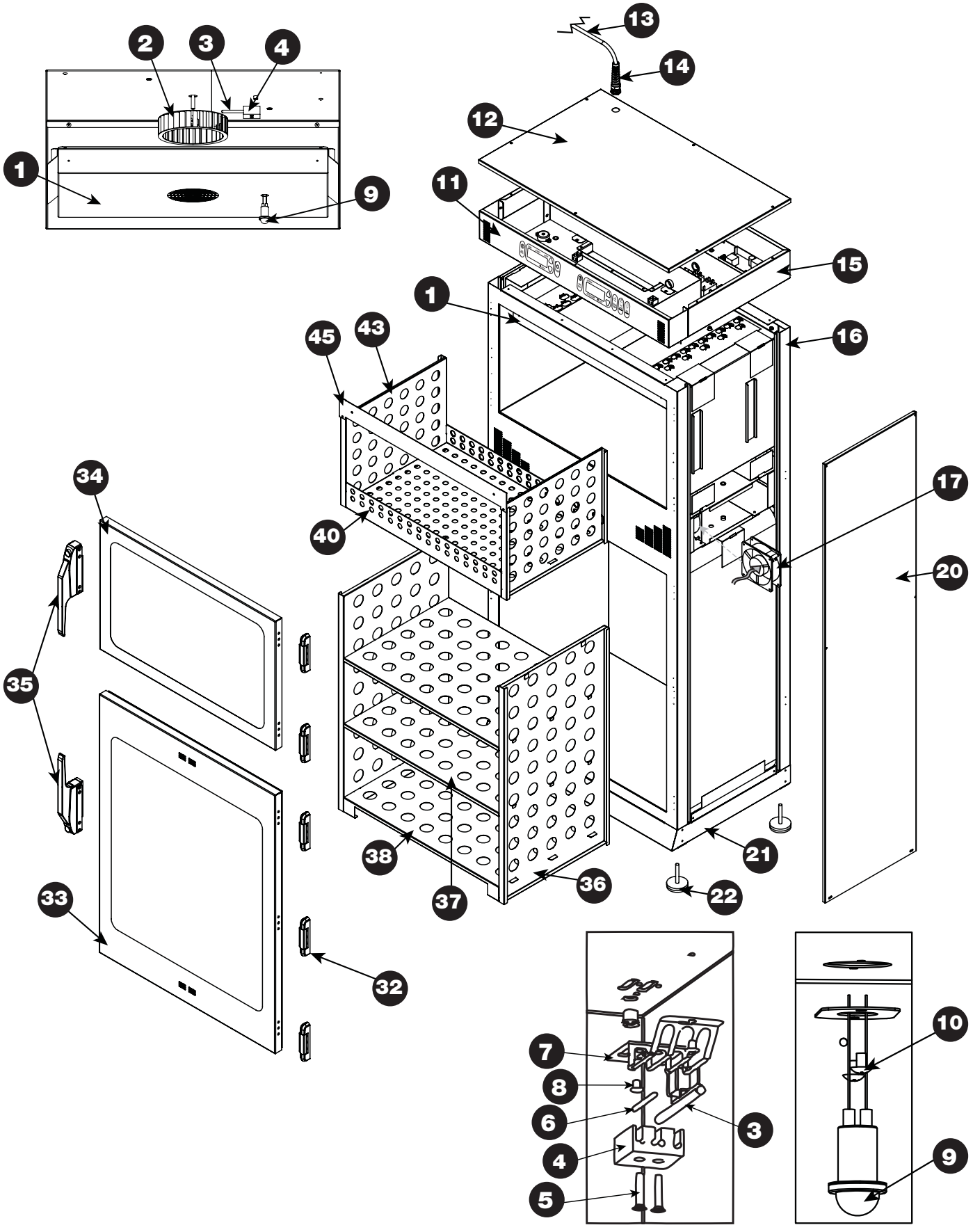
LOC	DESCRIPTION	QTY	P-2148	QTY	P-2140	QTY	P-2145
1.	INTERIOR FAN HOUSING/GUARD	1	1010254	1	1012557	1	1010844
2.	FAN BLADE	1	E3045FA	1	FA-34603	1	E3045FA
3.	THERMOSTAT, MANUAL RESET, FLUID	1	E3030TT	1	TT-34644	1	E3030TT
	THERMOSTAT, MANUAL RESET, BLANKET	1	TT-34600	1	TT-33476	1	TT-34600
4.	SENSOR BLOCK	2	BK-28344	2	BK-28344	2	BK-28344
5.	SCREWS, SENSOR BLOCK (8-32 x 1" FH PHH)	4	SC-22138	4	SC-22138	4	SC-22138
6.	SENSOR	2	SN-33541	2	SN-33541	2	SN-33541
7.	SENSOR GUARD	1	1010539	1	1010539	1	1010539
8.	SCREWS, SENSOR GUARD & TOP COVER	**	SC-2459	**	SC-2459	**	SC-2459
9.	LED LAMP	2	LP-34578	2	LP-34578	2	LP-34578
10.	LED LAMP SCREWS (8-32 x 1/4" PHH)	2	SC-2459	2	SC-2459	2	SC-2459
11.	CONTROL PANEL OVERLAY	1	PE-29087	1	PE-28575	1	PE-28530
	PASS THROUGH	—	—	—	—	1	PE-29087
12.	TOP COVER	1	1010247	1	5003367	1	1010846
13.	CORDSET, HOSPITAL GRADE, 10FT (3M)	1	E3029CD	1	E3029CD	1	E3029CD
14.	STRAIN RELIEF BUSHING	1	BU-34836	1	BU-34836	1	BU-34836
15.	BONNET	1	5009658		5008861		5010865
16.	REAR COVER	1	5010856	1	5009112	1	5010855
17.	FAN, BOX MOTOR COOLING	1	FA-3973*	1	FA-3973	1	FA-3973*
	AMBIENT	1	FA-3599	1	FA-3973	1	FA-3599
18.	FAN MOTOR†	1	E3044FA*	1	E3044FA	1	E3044FA*
19.	MOTOR BOX	—	—	1	1004301	—	—
*	MOTOR MOUNT	—	—	1	1004300	—	—
*	MOTOR SPACER	—	—	1	1004303	—	—
20.	SIDE COVERS	2	1010248	2	1010698	2	1010847
*	SCREWS, SIDE COVERS (8-32 x 5/8" PHH)	12	SC-2077	—	—	12	SC-2077
21.	BOTTOM/BUMPER ASSEMBLY	1	5012154	1	5010873	1	1010845
22.	FEET, LEVELING	4	FE-28909	—	—	—	—
*	FEET INSERTS	4	FT-28910	—	—	—	—
23.	CASTERS, 5" (127mm) RIGID	—	—	2	CS-24874	2	CS-24874
24.	CASTERS, 5" (127mm) SWIVEL W/ BRAKE	—	—	2	CS-24875	2	CS-24875
25.	FAN SWITCH	—	—	1	SW-33907	—	—
26.	SCREWS, FAN SWITCH (8-32 x 1" FH PHH)	—	—	2	SC-22138	—	—
27.	SCREWS, FAN SWITCH BRACKET (8-32 x 1/4" FH PHH)	—	—	2	SC-2459	—	—
28.	BRACKET, FAN SWITCH	—	—	1	1011008	—	—
29.	WASHER, FLAT, M3	—	—	2	WS-22293	—	—
30.	WASHER, SPLIT LOCK, M3	—	—	2	WS-22299	—	—
31.	NUT, M3-0.5 HEX NUT	—	—	2	NU-22285	—	—
32.	HINGE SET (1 SET OF 2 HINGES)	2.5	HG-2015	2	HG-22338	2.5	HG-2015
*	SCREWS, HINGE (10-32 x 3/4" FH)	30	SC-2072	—	—	30	SC-2072
*	SCREWS, HINGE (M5 x 0.8 x 20MM FH PHH)	—	—	12	SC-23868	—	—
*	SCREWS, HINGE (10-32 x 1" FH)	—	—	12	SC-2713	—	—
33	WINDOW DOOR ASSEMBLY LOWER	1	5014342	1	5001253	1	5014342
*	GASKET, DOOR LOWER	1	GS-26892	1	GS-23794	1	GS-26892
34.	WINDOW DOOR ASSEMBLY UPPER	1	5014222	1	5001253	1	5014222
*	GASKET, DOOR UPPER	1	GS-26321	1	GS-23794	1	GS-26321
35.	HANDLE, DOOR	2	HD-24171	2	HD-24171	2	HD-24171
*	SCREWS, STRIKER PLATE (10-32 x 3/4" PH)	4	SC-2071	4	SC-2071	4	SC-2071
*	SCREWS, HANDLE (M5 x 0.8 x 50MM FH PHH)	8	SC-35259	8	SC-35259	8	SC-35259
36.	BLANKET SUPPORT SIDE	2	5012209	1	5012173	1	5012131
37.	BLANKET SUPPORT SHELF	2	5012213	1	5012177	2	5012133
38.	BLANKET SUPPORT BASE	1	5012211	—	—	—	—
39.	FLUID INSERT ASSEMBLY	1	5012206	1	5014019	1	5002273
40.	BASKET	1	1011898	3	BS-28516	1	5015874
41.	DRAWER SLIDE GUIDE	—	—	3	GI-25942	2	GI-26237*
42.	PANEL BOTTOM, INSERT	—	—	—	—	1	1002983
43.	PANEL SIDE, INSERT	1	1011900	—	—	2	1002984
44.	RIVETS, INSERT	—	—	—	—	10	RI-2100
45.	FLUID INSERT SUPPORT HEADER	1	1003076	—	—	1	1003076

* NOT SHOWN
** VARIES

† 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.

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

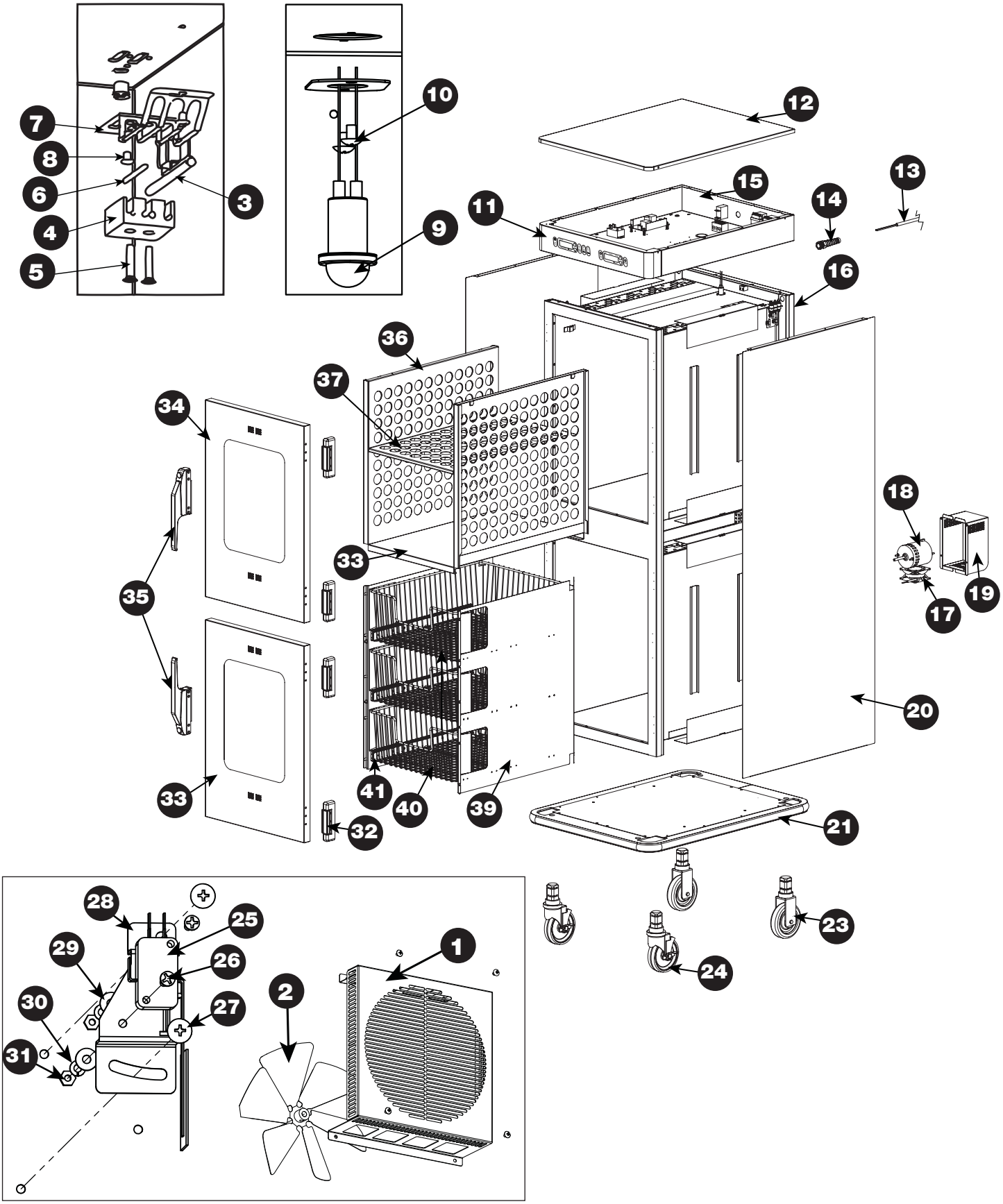
P-2148 FULL ASSEMBLY VIEW



PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

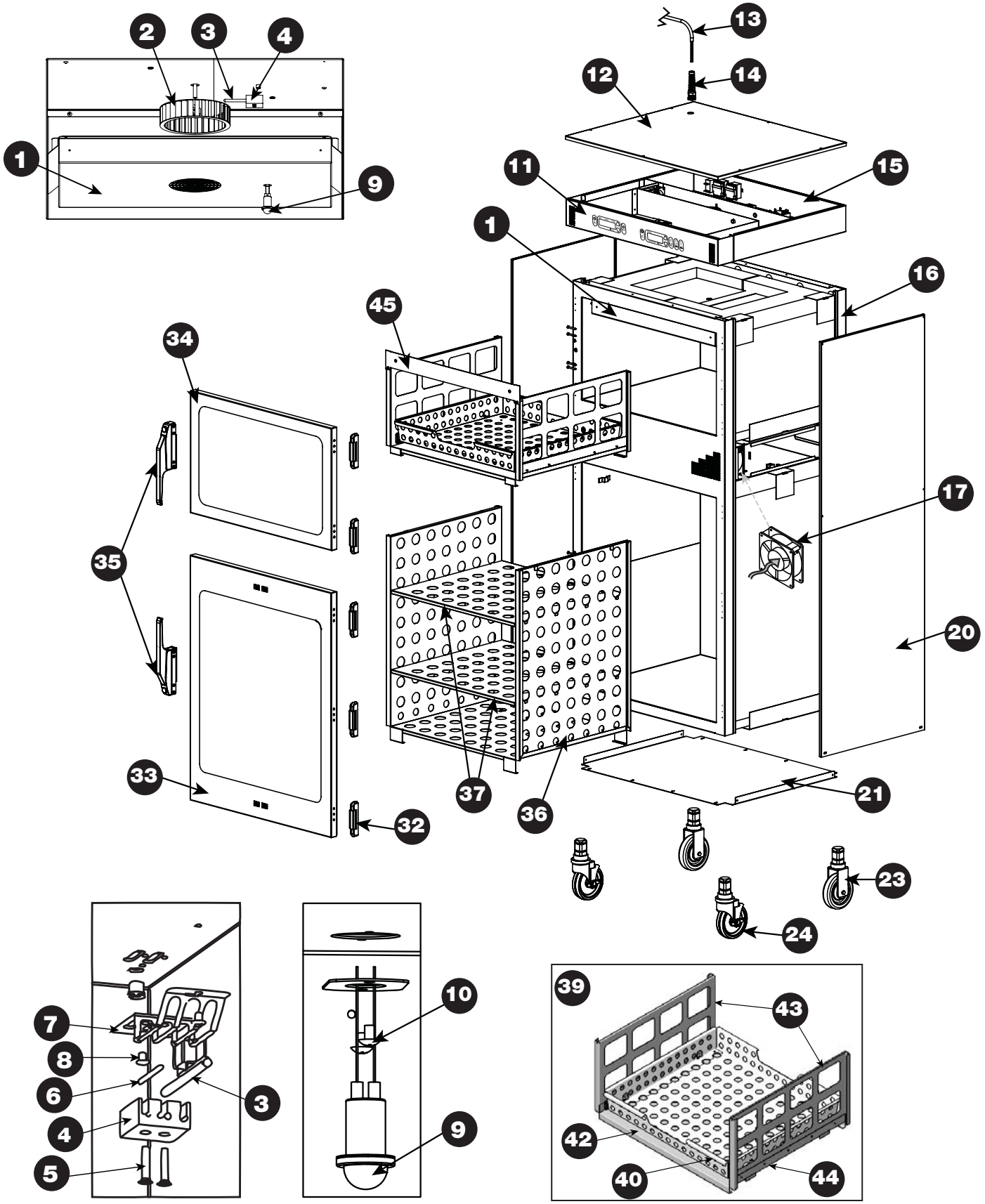
SERVICE

P-2140 FULL ASSEMBLY VIEW



PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

P-2145 FULL ASSEMBLY VIEW



PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

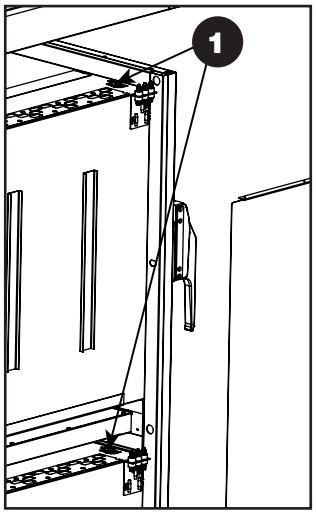
ELECTRICAL VIEW PARTS LIST

LOC	DESCRIPTION	QTY	P-2148 P/N	QTY	P-2140 P/N	QTY	P-2145 P/N
1.	THERMOSTAT, AUTO HI-LIMIT UPPER	1	E3040TT	1	TT-34350	1	E3040TT
	LOWER	1	TT-34350	1	E3040TT	1	TT-34350
2.	OVERLAY, V-DRIVE	1	PE-28735	1	PE-28735	1	PE-28735
3.	FILTER, ELECTRONIC NOISE	1	FI-34625	1	FI-34625	1	FI-34625
4.	BEEPER, SOLID STATE	1	BP-3567	1	BP-3567	1	BP-3567
5.	POWER SUPPLY BOARD	1	BA-34596	1	BA-34596	1	BA-34596
6.	FILTER, EMI-RFI, 20 AMP	1	E3047FI	1	E3047FI	1	E3047FI
7.	TERMINAL BLOCK, 3 FORM COMPRESS	1	BK-3019	1	BK-3019	1	BK-3019
8.	SWITCH, CIRCUIT BREAKER	1	SW-33858	1	SW-33858	1	SW-33858
9.	THERMOSTAT, MANUAL HI-LIMIT UPPER	1	E3030TT	1	TT-33476	1	E3030TT
10.	THERMOSTAT, MANUAL HI-LIMIT LOWER	1	TT-34600	1	TT-34644	1	TT-34600
11.	GROUND SCREW	1	SC-2190	1	SC-2190	1	SC-2190
12.	RELAY, 25A	1	RL-33829	1	RL-33829	1	RL-33829
13.	CONTROL ASSEMBLY, BLANKET CHAMBER	1	CC-34765	1	CC-34765	1	CC-34765
14.	CONTROL ASSEMBLY, FLUID CHAMBER	1	CC-34581	1	CC-34581	1	CC-34581
15.	DATA CABLE, FLUID CHAMBER	1	CB-34564	1	CB-34564	1	CB-34564
16.	V-DRIVE, DATA LOGGING DEVICE	1	5009722	1	5009722	1	5009722
17.	CONNECTORS	2	CR-33717	2	CR-33717	2	CR-33717
18.	CONNECTORS	2	CR-33718	2	CR-33718	2	CR-33718
19.	CONNECTORS	1	CR-33763	1	CR-33763	1	CR-33763
20.	CONNECTORS	1	CR-33720	1	CR-33720	1	CR-33720
21.	HARD DRIVE, 2MB SOFTWARE KEY	1	DS-28334	1	DS-28334	1	DS-28334
22.	TERMINAL BLOCK, PORCELAIN	2	BK-34616	1	BK-33546	2	BK-33546
23.	FAN, BOX MOTOR COOLING	1	FA-3973	1	FA-3973*	1	FA-3973
	AMBIENT	1	FA-3599*	1	FA-3973*	1	FA-3599*
24.	FAN MOTOR†	1	E3044FA	1	E3044FA*	1	E3044FA
25.	RELAY, 12V DC, COIL	3	RL-34434	–	–	3	RL-34434
26.	COVER, HI-LIMIT	2	1009751	2	1009751	2	1009751
29.	WIRE DIAGRAM	1	77252	1	77254	1	77256

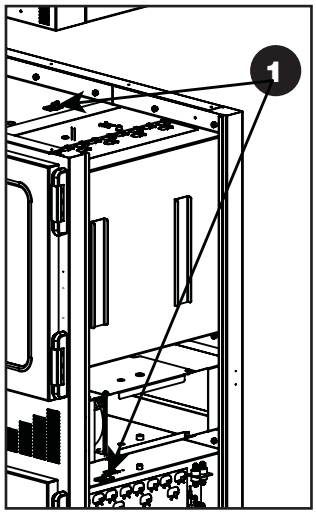
*NOT SHOWN

† 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.

THERMOSTAT, AUTO HI-LIMIT



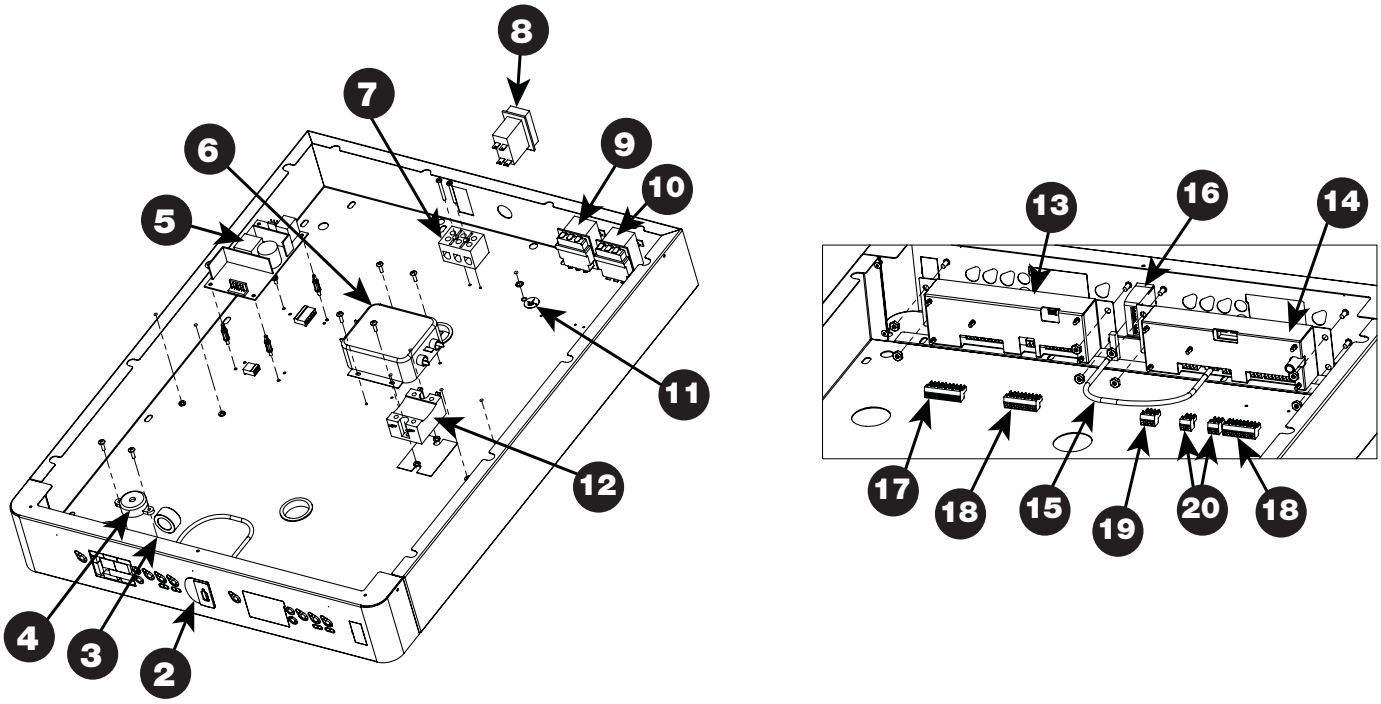
P-2140



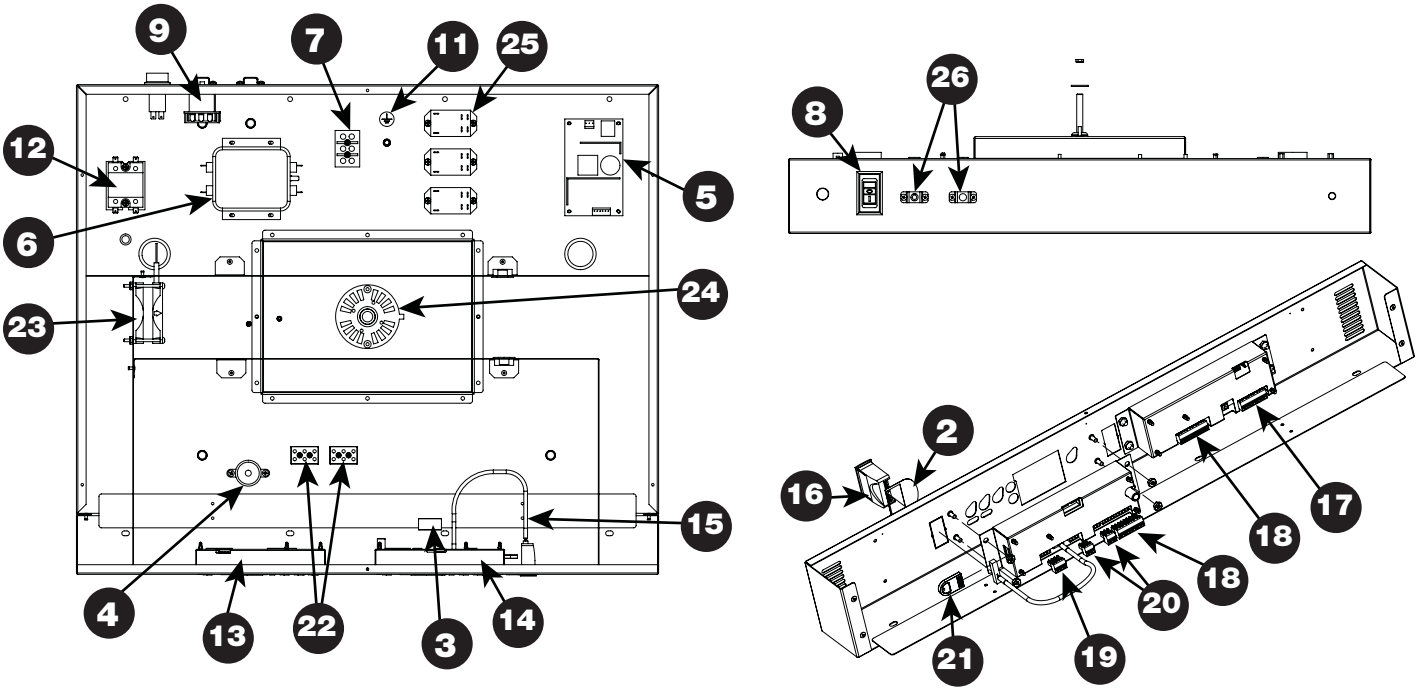
P-2148/P-2145

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

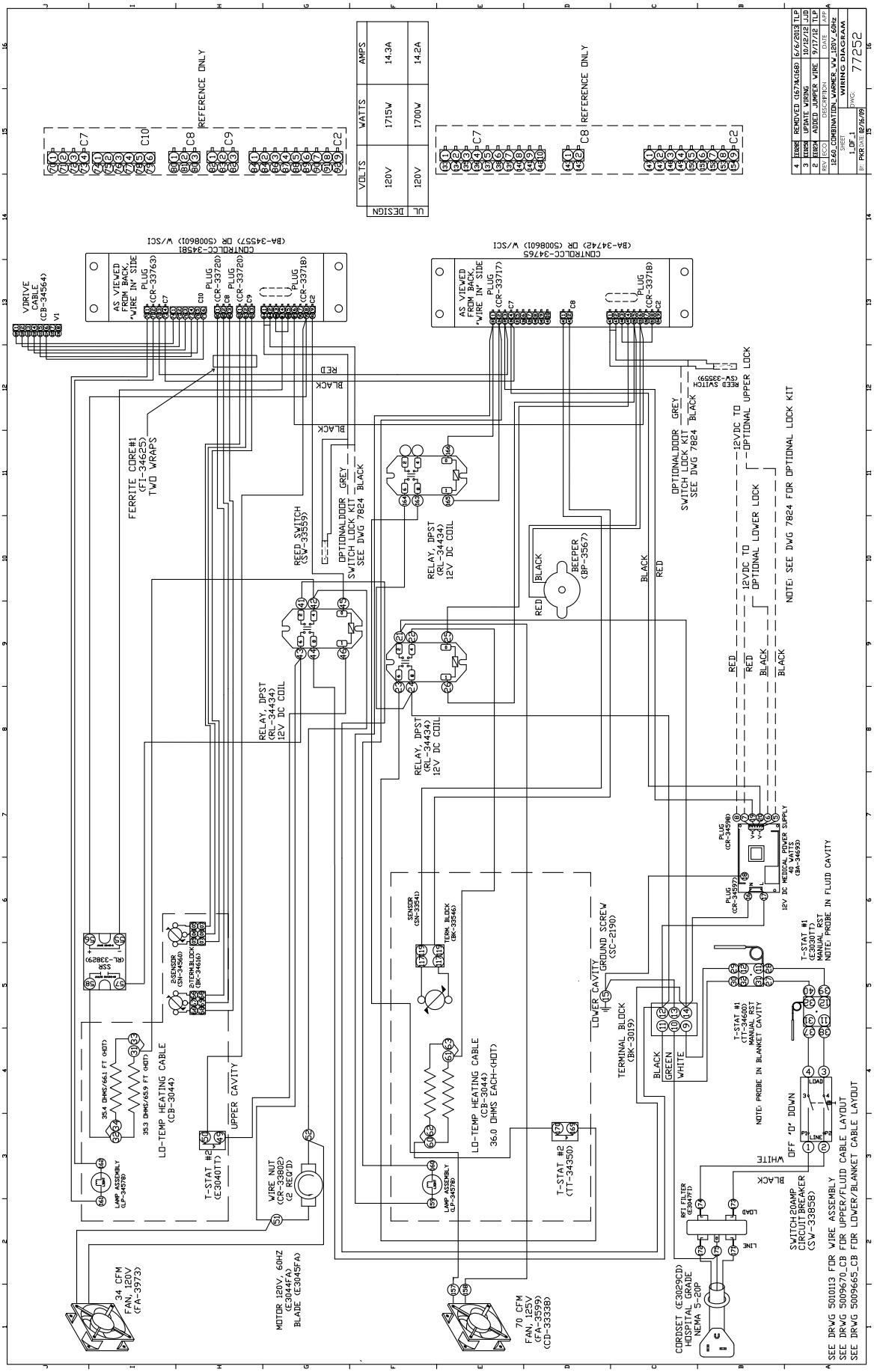
P-2140 ELECTRICAL VIEW



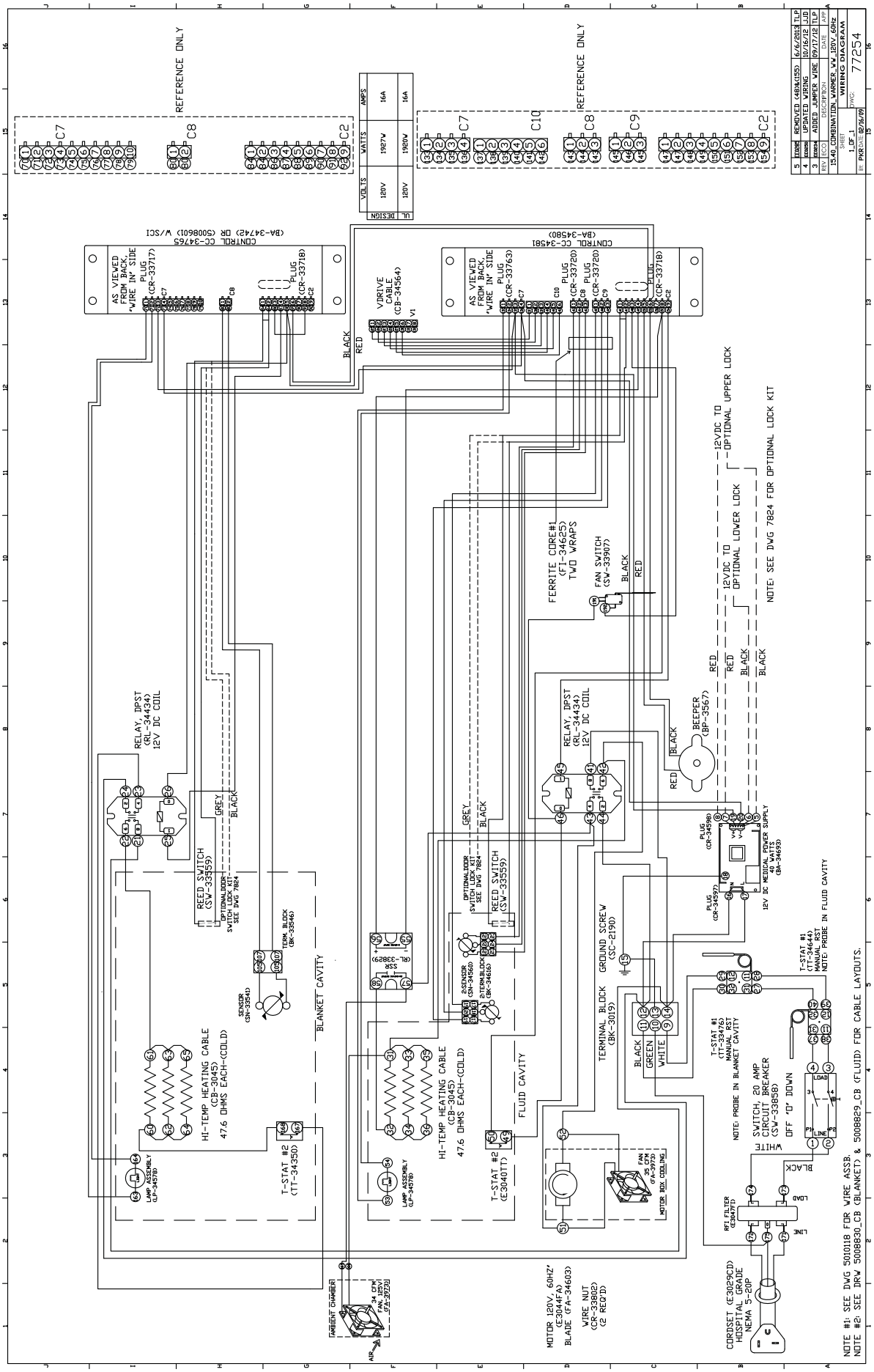
P-2148/P-2145 ELECTRICAL VIEW



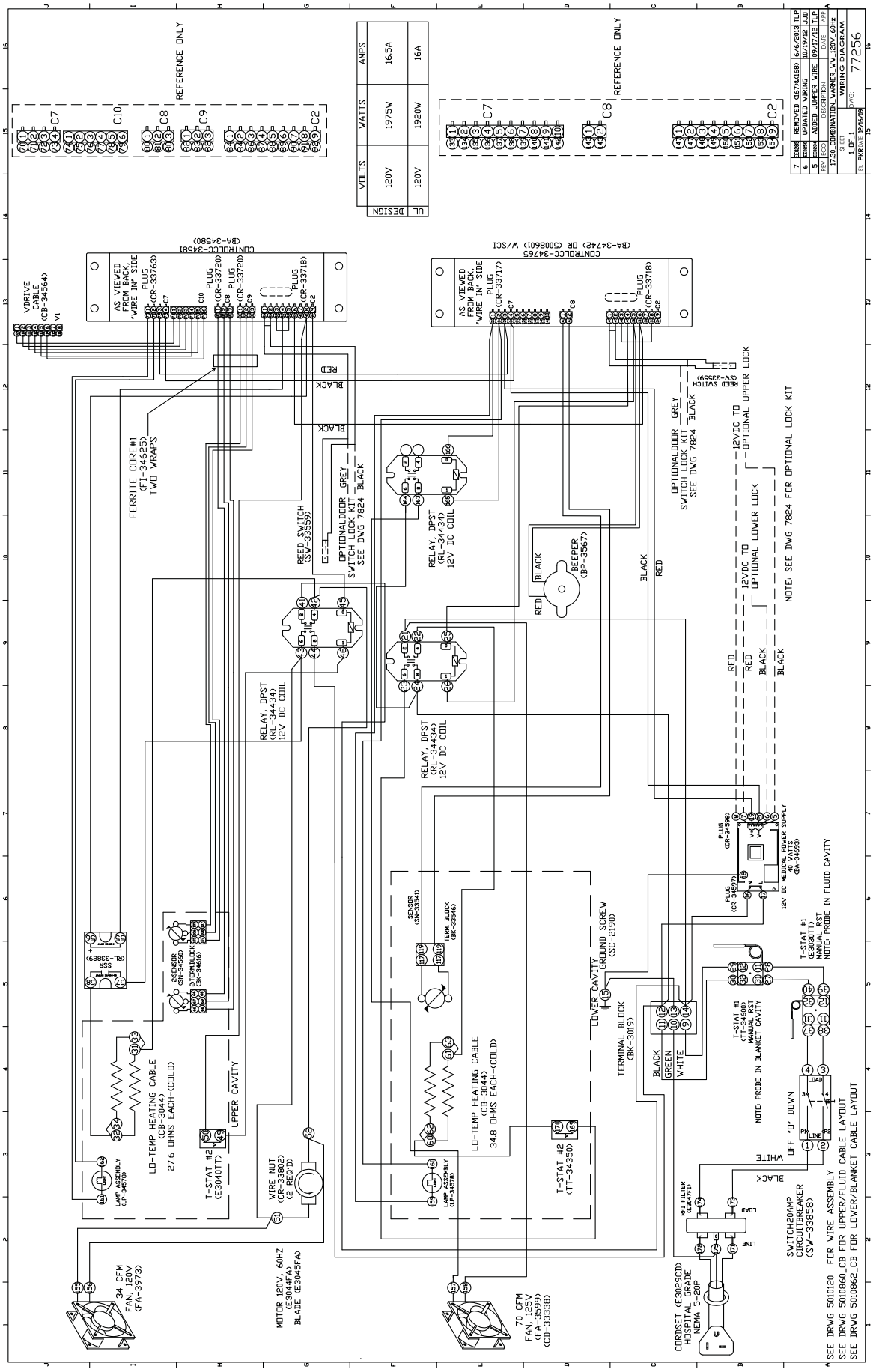
Refer to wire diagram included with the unit.



Refer to wire diagram included with the unit.



Refer to wire diagram included with the unit.



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.

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

Always include 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®