

OPERATION & CARE MANUAL

P-2012

P-2022

P-2032



P-2012Shown with optional lock & solid door



P-2022 Shown with optional solid door, casters and plate



Shown with optional lock and left hinged door

OPERATION & CARE

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Wire Diagrams refer to wire diagram included with the unit (under top lid)

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 have been delivered in one or more packages. Check to ensure that all standard items and options have been received with each model as ordered.

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

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

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES							
Always include both model and serial numbers in your correspondence regarding the unit.							
Model:	Model:						
Serial Number:	Serial Number:						
Purchased From:	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, 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.

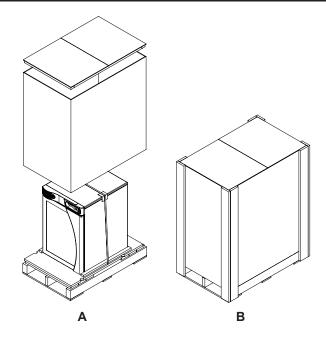
- Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.
- Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all 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.
- 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 (A) or crate (B).
 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.



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.



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.

ACAUTION

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 blanket warmer is intended for warming DRY, cotton blankets ONLY. No other use for this device 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, PACU, 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.

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.

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.

CAUTION



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

WARNING

Transport shall only be done with the doors closed.

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.



P-2012

120 V.A.C. — 60 Hz, 1 ph 0.6 kW, 5.0 Amps Safety Class I Equipment

No Applied Parts Mode of Operation: Continuous **NEMA 5-15P** 15A - 125V Plug Hospital Grade



P-2022

120 V.A.C. — 60 Hz, 1 ph 0.8 kW, 6.7 Amps Safety Class I Equipment

No Applied Parts Mode of Operation: Continuous **NEMA 5-15P** 15A - 125V Plug Hospital Grade



P-2032

120 V.A.C. — 60 Hz, 1 ph 0.8 kW, 6.7 Amps Safety Class I Equipment

No Applied Parts Mode of Operation: Continuous

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



*Other international plugs are available. Contact factory for more information.

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



Medical Equipment classified by Underwriters Laboratories with Respect to Electrical Shock, Fire and Mechanical Hazards only in Accordance with UL 61010-1, 3rd Edition and CAN/CSA C22.2 No. 61010-1, 3rd Edition







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

(Not category AP or APG equipment)





ENSURE POWER SOURCE MATCHES VOLTAGE IDENTIFIED ON APPLIANCE RATING TAG.

GENERAL INFORMATION

Specifications:

- Single-chamber warming cabinet.
- Stainless steel exterior and white epoxy-coated interior insert.
- Door is fully gasketed with a magnetic closure.
- The heating system incorporates a multiple zone warming technology that heats where and when it is needed. All chamber surface temperatures are monitored, providing an efficient balance of heat, low energy consumption and minimal heat loss.
- P-2022 & P-2032 include a heated center shelf to further optimize heat distribution throughout the cavity.
- Four (4) non-skid rubber feet are standard.

Control:

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

Additional features:

- Safety: In the event of a power failure the cabinet will remember its programming and begins to operate as before when power is restored.
- Safety: A warming shut-off system, separate from the electronic control, prevents overheating.
- Convenience: Access point and removable cover have been added to the back panel that allows the addition of data logging or temperature management hardware.

Clearance requirements:

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

P-2012

Dimensions (HxWxD)			
With feet (STANDARD):	21.9" x 18.5" x 26.2"	(557mm x 470mm x 666mm)	
With casters & plate (OPTIONAL):	26.2" x 18.5" x 26.2"	(666mm x 470mm x 666mm)	
With bumper and casters (OPTIONAL):	26.2" x 21.3" x 26.5"	(666mm x 540mm x 673mm)	
With casters (OPTIONAL):	25.5" x 18.5" x 26.2"	(647mm x 470mm x 666mm)	
Capacity	2.5 ft ³		
Weight** (est.)	NET 67 lbs (30 kg)	SHIP, CRATED 135 lbs (62 kg)	

P-2022

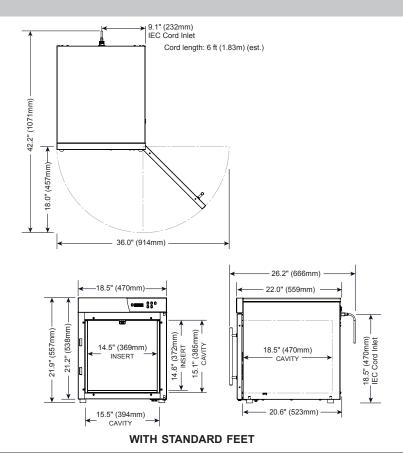
Dimensions (HxWxD)		
With feet (STANDARD):	27.9" x 18.5" x 26.3"	(709mm x 470mm x 669mm)
With casters & plate (OPTIONAL):	32.2" x 18.5" x 26.3"	(818mm x 470mm x 669mm)
With bumper and casters (OPTIONAL):	32.2" x 21.3" x 26.5"	(818mm x 540mm x 674mm)
With casters (OPTIONAL):	31.5" x 18.5" x 26.3"	(799mm x 470mm x 669mm)
Capacity	3.5 ft ³	
Weight** (est.)	NET 91 lbs (41 kg)	SHIP, CRATED 143 lbs (65 kg)

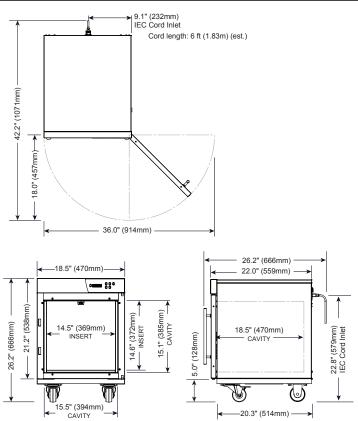
P-2032

Dimensions (HxWxD)	
With feet (STANDARD):	35.5" x 24.0" x 28.6" (901mm x 610mm x 726mm)
With casters & plate (OPTIONAL):	39.3" x 24.0" x 28.6" (998mm x 610mm x 726mm)
With bumper and casters (OPTIONAL):	39.3" x 26.8" x 28.8" (998mm x 679mm x 732mm)
With casters (OPTIONAL):	40.7" x 24.8" x 28.6" (1033mm x 631mm x 726mm)
Capacity	7.5 ft³
Weight** (est.)	NET 134 lbs (61 kg) SHIP, CRATED 219 lbs (99 kg)

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

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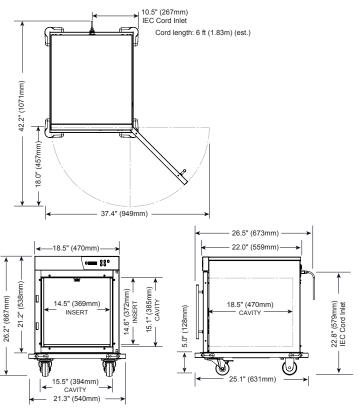




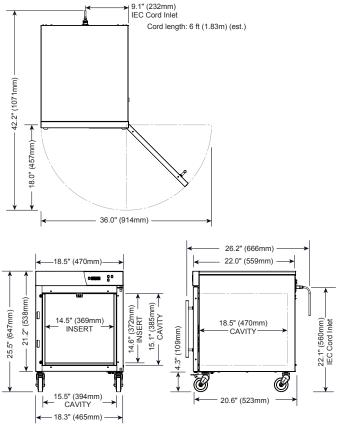
WITH OPTIONAL CASTERS WITH PLATE #5017544 - 3" (76mm) CASTERS (2 RIGID, 2 SWIVEL W/BRAKE)

DIMENSIONS

P-2012 (CONTINUED)

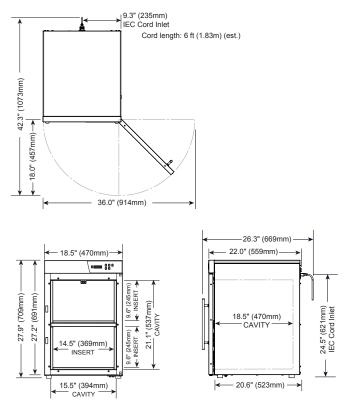


WITH OPTIONAL BUMPERS AND CASTERS #5017548 - 3" (76mm) CASTERS (2 RIGID, 2 SWIVEL W/BRAKE)

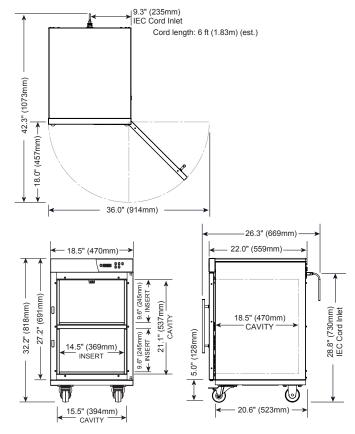


WITH OPTIONAL CASTERS #5012693 - 3" (76mm) CASTERS (4 SWIVEL W/BRAKE)

P-2022



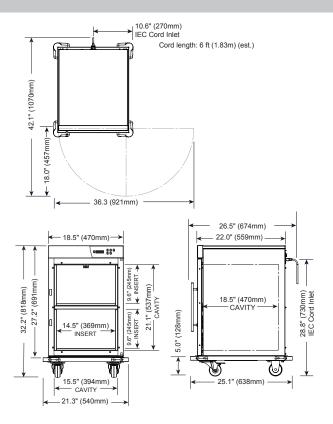
WITH STANDARD FEET



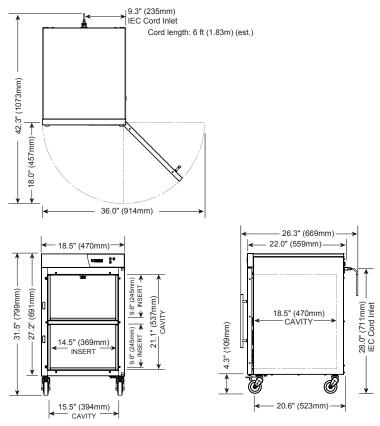
WITH OPTIONAL CASTERS WITH PLATE #5017544 - 3" (76mm) CASTERS (2 RIGID, 2 SWIVEL W/BRAKE)

DIMENSIONS

P-2022 (CONTINUED)



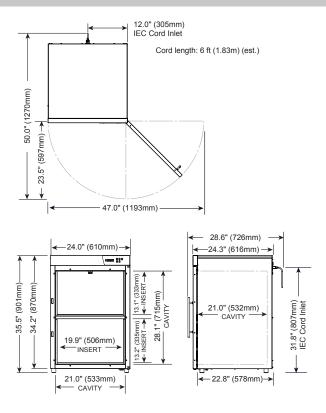
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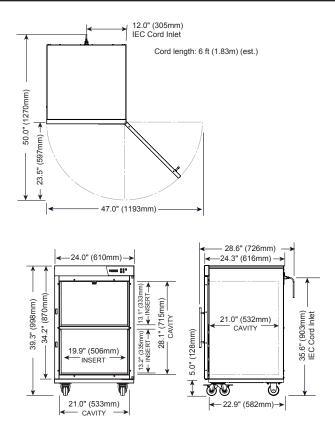
WITH OPTIONAL CASTERS #5012693 - 3" (76mm) CASTERS (4 SWIVEL W/BRAKE)

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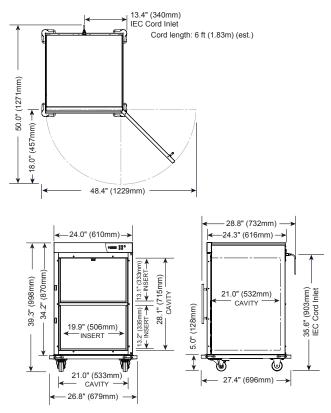
WITH STANDARD FEET



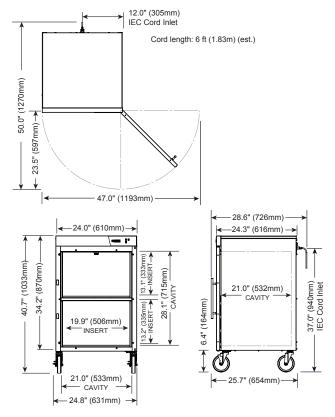
WITH OPTIONAL CASTERS WITH PLATE #5017545 - 3" (76mm) CASTERS (2 RIGID, 2 SWIVEL W/BRAKE)

DIMENSIONS

P-2032 (CONTINUED)

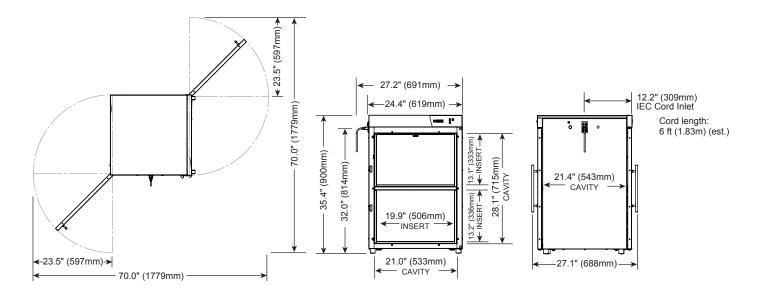


WITH OPTIONAL BUMPERS AND CASTERS #5017549 - 3" (76mm) CASTERS (2 RIGID, 2 SWIVEL W/BRAKE)

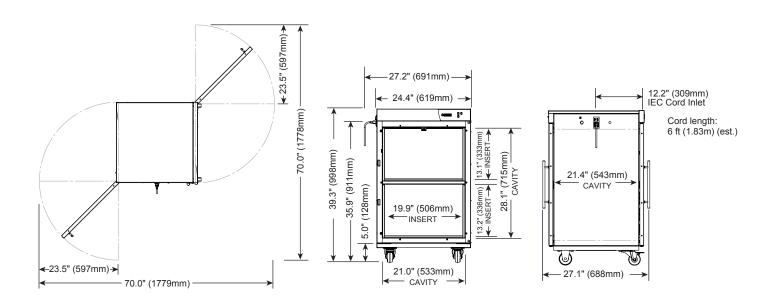


WITH OPTIONAL CASTERS #5018646 - 5" (127mm) CASTERS (4 SWIVEL W/BRAKE)

P-2032/PT

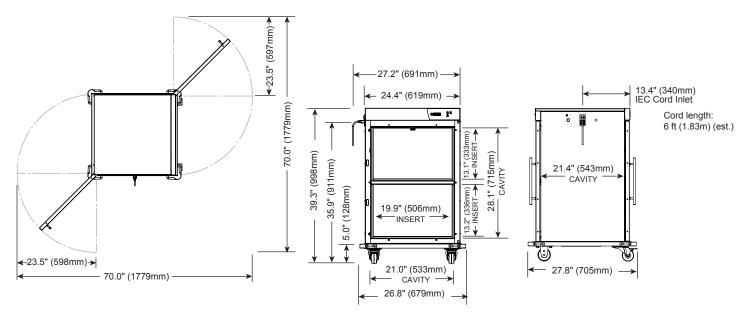


WITH STANDARD FEET

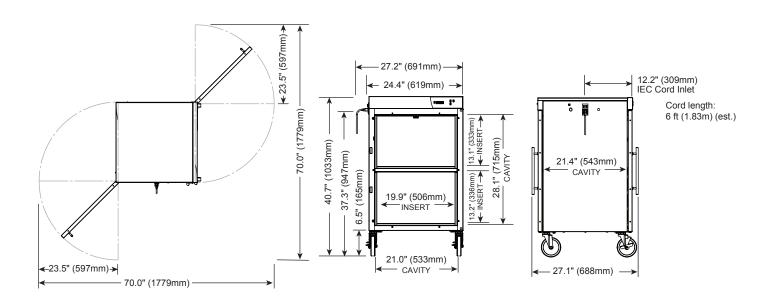


WITH OPTIONAL CASTERS WITH PLATE #5018124 - 3" (76mm) CASTERS (2 RIGID, 2 SWIVEL W/BRAKE)

P-2032/PT (CONTINUED)



WITH OPTIONAL BUMPERS AND CASTERS #5018180 - 3" (76mm) CASTERS (2 RIGID, 2 SWIVEL W/BRAKE)



WITH OPTIONAL CASTERS #5018647 - 5" (127mm) CASTERS (4 SWIVEL W/BRAKE)

GENERAL WARNINGS

A 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	supply hetwork that supplies buildings used for domestic purposes.		
Voltage fluctuations/Flicker emissions IEC 61000-3-3	Complies			

Guidance and manufacturer's declaration - electromagnetic immunity

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

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

The essential performance of the unit is to not exceed an internal temperature of 180° F (+10%) for blanket warmers or 150° F (+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	3 V/m	3 V/m	d = [3.5/3] √P 80 MHz to 800 MHz	
IEC 61000-4-3	80 MHz to 2.5 GHz		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, should be less than the compliance level in each frequency range.	
			Interference may occur in the vicinity of equipment marked with the following symbol: (((•)))	

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

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

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

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

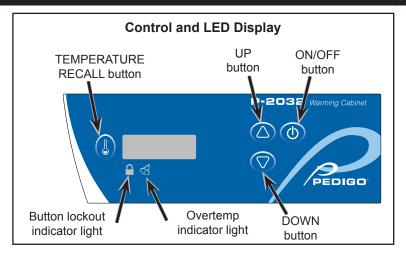
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output rating of the transmitter in watts (W) according to the transmitter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

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

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

BLANKET CONTROL FEATURES





CONTROL PANEL BUTTONS

ON/OFF BUTTON



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

UP AND DOWN ARROW BUTTONS



Used to increase or decrease the temperature set-point. On units with optional timer installed the arrow buttons



are used to increase or decrease time, date, auto-start, and auto-stop times.

TEMPERATURE RECALL BUTTON



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

L.E.D. DIGITAL DISPLAY

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

AUDIBLE BUTTON FUNCTION

The warmer's audible button function can be turned ON or OFF.



1. While the control is in OFF state, press and hold the DOWN ARROW button for four (4) seconds.



The display will show the current audible button status, 0 (OFF) or 1(ON). Press the UP or DOWN arrows to toggle between the two states.

L.E.D. DISPLAY STATUS INDICATORS

OVERTEMP INDICATOR LIGHT



This indicator will illuminate and an alarm will sound if the control senses a temperature of 71 °C (160°F) or higher. The alarm can be muted by pressing the ON/OFF button.

ERROR ACKNOWLEDGEMENT



To clear or acknowledge an error, press the ON/OFF button. Press the ON/OFF button to acknowledge the periodic alarm. If the alarm continues or returns, the warmer is still experiencing an error and may need service.

BUTTON LOCKOUT INDICATOR LIGHT



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

POWER FAIL DETECTION

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

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

TEMPERATURE FORMAT SELECTION



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

BLANKET CHAMBER OPERATION PROCEDURES



- 1. The appliance should be plugged into an appropriate hospital grade receptacle as specified on the electrical information page.
- 2. **TURN ON THE POWER SWITCH**, which is located at the back or side of the appliance just above power cord.



- 3. ACTIVATE CONTROL BY PRESSING THE ON/OFF BUTTON ON CONTROL PANEL ONCE.
- 4. SET DESIRED TEMPERATURE.
 - To set the blanket warming temperature, press and hold the UP or DOWN ARROW keys to change the value shown in the display. The
 - temperature set-point range is 32 71°C (90 160°F).
- 5. LOAD THE CHAMBER WITH DRY, COTTON BLANKETS. DO NOT WARM ITEMS CONTAINING PLASTIC, RUBBER OR METAL SNAPS, STUDS, HOOKS, ETC. Check that the epoxy-coated blanket insert is in place. This blanket insert MUST be used to hold blankets when unit is in use. Make certain the cabinet door is securely closed during use.



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.

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



CAUTION

Blanket support inserts must be used when warmer is in use.

CAUTION

DO NOT OVERLOAD CABINET.

Allow 1" (25mm) gap between blankets and interior of cavity or shelf.

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.

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.



ANNUAL PREVENTATIVE MAINTENANCE (perform maintenance checks as needed)



- 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 under inserts, outer vents surrounding the unit and around top of bonnet (if applicable).
- 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?
- 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.

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

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.

CARE AND CLEANING

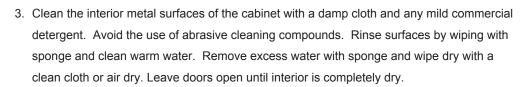


The cleanliness and appearance of this equipment will contribute considerably to its operating efficiency. Make certain the cabinet and door gasket are kept free of any debris that may accumulate. Good equipment that is kept clean works better and lasts longer.

CLEAN THE UNIT REGULARLY:

- 1. Disconnect the cabinet from the power source.
- 2. Remove all detachable items such as blanket insert. 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 surfaces.





- 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 blanket support assembly.
- 5. Wipe down the exterior of the cabinet with an appropriate cleaner recommended for the surface material.
- 6. Clean the window glass with a standard commercial glass cleaner.
- 7. Wipe control panel, door vents, door buttons, and door gaskets thoroughly since these areas can harbor debris.
- 8. Wipe door gaskets and control panel dry with a clean, soft cloth.

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



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)

TROUBLESHOOTING GUIDE

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

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.

Blanket warmer temperature may fluctuate ±10° from set point.

Code	Refers to	Action Required
E-10 ES10 ES20 ES30 ES40 ES50 ES60 ES70	Cavity sensor Sensor 1 Sensor 2 Sensor 3 Sensor 4 Sensor 5 Sensor 6 Sensor 7	Sensor is shorted. Software disengages heating pads. User must acknowledge error by pressing ON/OFF button. If error persists, a qualified service technician should test sensor. • To test sensor: Detach the sensor from unit. Use an Ohm meter to measure the resistance of the sensor. Check sensor at 0°C (32°F) using a container of ice water. If reading is 32.6 KOhm ±1.5 KOhm, replace display. If reading is ±2 KOhm, replace sensor. • Check wires for integrity. Check for proper and secure connections at the control and terminal block. If necessary, re-secure the faulty connections. • Call service if error persists.
E-11 ES11 ES21 ES31 ES41 ES51 ES61 ES71	Cavity sensor Pad sensor 1 Pad sensor 2 Pad sensor 3 Pad sensor 4 Pad sensor 5 Pad sensor 6 Pad sensor 7	Sensor is open. Software disengages heating pads. User must acknowledge error by pressing ON/OFF button. If error persists, a qualified service technician should test sensor. • To test sensor: Detach the sensor from unit. Use an Ohm meter to measure the resistance of the sensor. Check sensor at 0°C (32°F) using a container of ice water. If reading is 32.6 KOhm ±1.5 KOhm, replace display. If reading is ±2 KOhm, replace sensor. • Check wires for integrity. Check for proper and secure connections at the control and terminal block. If necessary, re-secure the faulty connections. • Call service if error persists.
P130 P230 P330 P430 P530 P630 P730	Pad 1 Pad 2 Pad 3 Pad 4 Pad 5 Pad 6 Pad 7	Heating pad has not reached set-point temperature. User must acknowledge error by pressing ON/OFF button. If error persists, a qualified service technician should test the heater pad(s). • Turn unit OFF and unplug it from AC power. • Use Ohm meter to measure resistance between L:(Line) & N:(Neutral) leads of a cold heater pad. - The Ohm readings shall be: 120V = 72 Ohm ±10% or 230V = 288 Ohm ±10% • Call service if error persists.
*E-31	Cavity sensor	 Sensor reading is above maximum allowable temperature set-point. Fluid Warmers, triggers at 5° over set point. Blanket Warmers, triggers at 15° over set point Call service.
P131 P231 P331 P431 P531 P631 P731	Pad sensor 1 Pad sensor 2 Pad sensor 3 Pad sensor 4 Pad sensor 5 Pad sensor 6 Pad sensor 7	Heater pad over-temp error Software disengages heating pads. User must acknowledge error by pressing ON/OFF button. Allow unit to cool. Call service if error persists.
*E-33	Cavity sensor	 Sensor reading is above maximum allowable temperature set-point and over temp value Fluid Warmers, triggers at 71°C (160°F). Blanket Warmers, triggers at 79°C (175°F) Contact service
*E-50	Analog to Digital Convertor Error	 Remove product and allow unit to cool down. Inspect fluid and discard if necessary. If error persists after cool down and reset, control assembly should be replaced by a qualified service technician. Contact service.
E-60	Real Time Clock Checksum Error	(Blanket Warmers Only) Real Time Clock rechargeable battery backup has discharged. Plug unit into outlet for 30 minutes. See "Timer Control Panel" section in blanket manual to reset clock.
*E-61	Real Time Clock	(Blanket Warmers Only) Real Time Clock not responding. Call service if error persists.
E-62	Real Time Clock	Timer overlay is present, but no real time clock is detected. Call service.
*E-70	Pad Count Error	More heater pads detected than set for. Hold ON/OFF button for 12 seconds until display shows "PAd#" (# = number of pads selected [3-7]). Press UP or DOWN arrow to adjust to correct number of pads. - Fluid Warmers: DC250L & DC400L = 3 pads - Blanket Warmers: DC150, DC250, & EC250 = 3 pads, DC350, DC400, EC350, DC750 & EC750 = 4 pads
*E-71	Personality Error	Call service
E-80	EEPROM Error	EEPROM not responding. Call service if error persists.
*E-81	Calibration not locked	Call service
*E-83	EEPROM Error	Call service for help resetting the control.
E-87	EEPROM Error	Stored offsets corrupted. Offsets reset to 0. Control may need to be recalibrated. Possible bad EEPROM. Call service if error persists.
E-90	Button stuck	A button has been held down for >60 seconds. Adjust control. Error will reset when the problem has been resolved.

TROUBLESHOOTING GUIDE

E-95	Factory Test pin short detected.	Ensure no debris is causing a short between the test pins. If pins are good, replace control.
*E-98	Temperature Delta Error	(Fluid Warmers Only) Temperature of cavity sensors 1 and 2 differ by more than 1.7°C (3°F). Remove product and allow unit to cool down. Verify that product sensor is clean and operating correctly. Press power button to clear error code. If error persists, the sensor switch assembly should be replaced by a qualified service technician. Contact service.
E-99	Hardware Over Temp	Inspect connections and condition of high limit bimetal thermostat. If error continues call service.
*EFAn	Fan or Fan Sensor failure	 (Fluid Warmers Only) If the fan is operating, ensure that the lens on the sensor is not blocked or dirty. If error persists after cleaning sensor, use an Ohm meter to ensure sensor wires are good. A good wire will have a reading of <1 Ohm. If wires are good, replace sensor. If error persists after replacement, check sensor mount location. If error still persists, replace control.

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

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

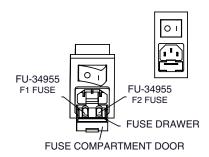
PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

SERVICE

FUSE REPLACEMENT

Fuse replacement:

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



WARNING!



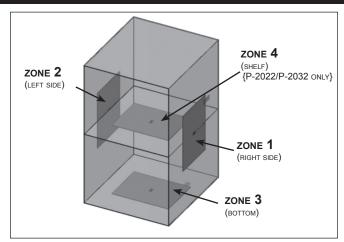
FOR PROTECTION AGAINST FIRE AND ELECTRICAL SHOCK USE ONLY UL LISTED 10A, 250V FAST ACTING FUSES, 5MM X 20MM (F1, F2). ACCESS SHOULD BE MADE BY QUALIFIED SERVICE TECHNICIANS ONLY.



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

LA-29452

ZONE HEATING ELEMENT LOCATIONS



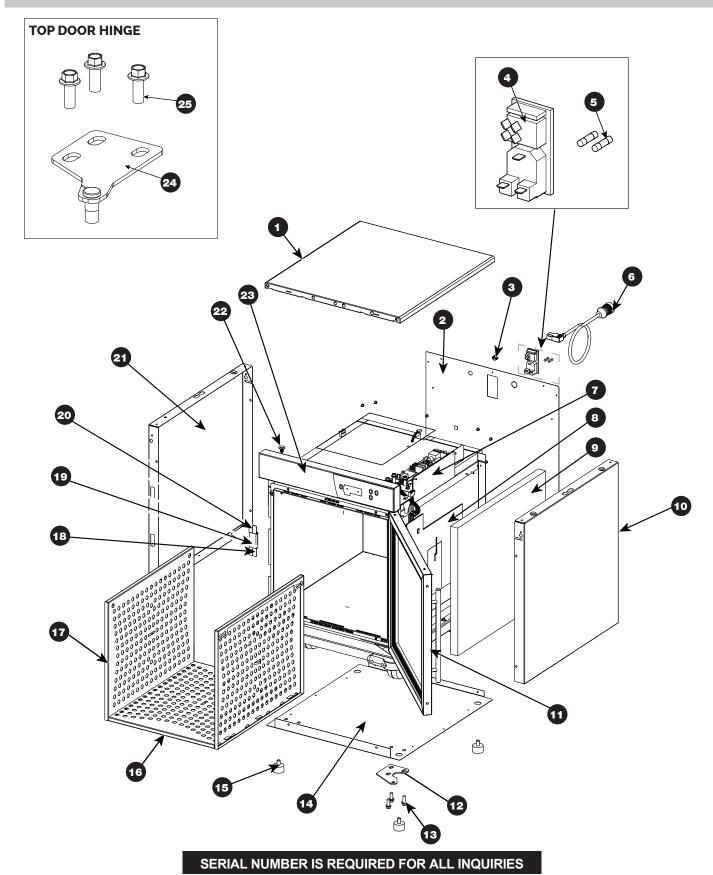
OPTIONS & ACCESSORIES PARTS LIST

OPTIONS AND ACCESSORIES		P-2012	P-2022	P-2032	P-2032/PT
BUMPER & CASTER ASSEMBLY	3" (76mm) CASTER	5017548	5017548	5017549	5018180
CASTER PACKAGE WITH PLATE	3" (76mm) CASTER	5017544	5017544	5017545	5018124
CASTER PACKAGE WITHOUT PLATE	3" (76mm) CASTER	5012693	5012693	_	_
	5" (76mm) CASTER	_	_	5018646	5018647
DOOR, RIGHT OR LEFT HINGED					
Windowed door with manual door lock	5018007	5018008	5018009	5018009	
Solid door with manual door lock		5018001	5018002	5018003	5018003
Solid door without manual door lock	5017762	5017763	5017764	5017764	
SEISMIC MOUNTING BRACKETS (special installation requirements apply)		CONTACT FACTORY	CONTACT FACTORY	CONTACT FACTORY	CONTACT FACTORY
STACKING HARDWARE					
P-2012 or P-2022 over P-2012 or P-2	022	5017272	5017272	_	_
P-2012 or P-2022 triple stacked		5017539	5017539	_	_

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

FULL ASSEMBLY (P-2012 SHOWN)



PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

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SERVICE

FULL ASSEMBLY PARTS LIST

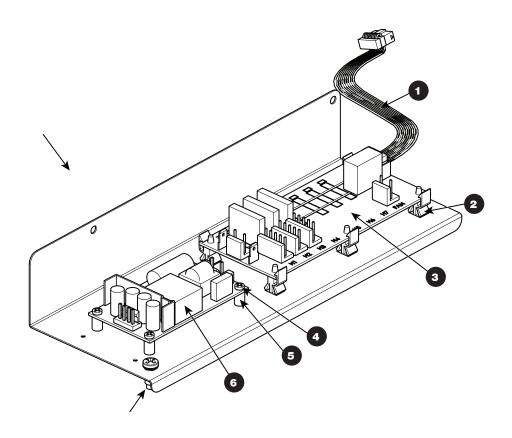
ITEM	DESCRIPTION	DADT	OTV	
ITEM	DESCRIPTION	PART	QTY	
1.	PANEL, TOP COVER, S/S P-2012/P-2022	1014271	1	
	P-2032	1014285	1	
- 0	P-2032/PT	1016410	1	
2.	PANEL, REAR COVER, S/S P-2012	1014269	1	
	P-2022	1014276	1	
	P-2032	1014290	1	
3.	1/2" HOLE PLUG	PG-3344	1	
4.	SWITCH, FUSE BOX	SW-34911	1	
5.	FUSE, GLASS	FU-34955	2	
6.	CORD, NEMA 5-15P	CD-35030	1	
7.	ELECTRICAL CHASSIS	NEXT PAGE	1	
8.	ELEMENT, HEATER PAD P-2012/P-2022	EL-37009	4	
	P-2032	EL-36992	4	
9.	INSULATION KIT P-2012/P-2022	5018011	1	
	P-2032	5018012	1	
10.	SIDE PANEL, RIGHT-HAND P-2012	1014268	1	
	P-2022	1014275	1	
	P-2032	1014289	1	
	P-2032/PT	1016409	1	
11.	DOOR ASSEMBLY, WINDOW DOOR WITH HANDLE P-2012	5017998	1	
	P-2022	5017999	1	
	P-2032	5018000	1	
12.	PLATE, LOWER HINGE RIGHT HINGED DOOR 5015523			
	LEFT HINGED DOOR	5018611	1	
13.	SCREW, M8 x 1.25 x 20mm, HEX FLG	SC-27406	3	
14.	BOTTOM COVER P-2012/P-2022	1014270	1	
	P-2032	1014284	1	
	P-2032/PT	1016407	1	
15.	FEET 3/4" TALL; P-2012/P-2022	FE-29203	4	
	1-1/4" TALL; P-2032	BM-22606	4	
16.	PANEL, BLANKET INSERT BOTTOM P-2012/P-2022	1011268	1	
	P-2032	1011471	1	
17.	PANEL, INSERT SIDE, BLANKET P-2012	1012866	2	
	P-2022	1011358	2	
	P-2032	1011587	2	
18.	MAGNET-SMCO, SILVER P-2012/P-2022	MA-27568	2	
	P-2032	MA-27568	3	
19.	BRACKET, MAGNET SUPPORT P-2012/P-2022	1016805	2	
	P-2032	1016805	3	
20.	TAPE, VHB, FOAM, 1/2" P-2012/P-2022	TA-24637	2	
	P-2032	TA-24637	3	
21.	SIDE PANEL, LEFT HAND P-2012	1014268	1	
	P-2022	1014275	1	
	P-2032	1014289	1	
	P-2032/PT	1016408	1	
22.	CLIP PANEL RETAINER	CL-29193	4	
23.	INTERFACE ASSEMBLY, 18.5" P-2012	5018715	1	
	P-2022	5018717	1	
	INTERFACE ASSEMBLY, 24" P-2032	5018718	1	
24.	PLATE, UPPER HINGE RIGHT HINGED DOOR	5015522	1	
	LEFT HINGED DOOR	5018610	1	
25.	SCREW, M8 x 1.25 x 20mm, HEX FLG	SC-27406	3	
	, , , , , , , ,			

*Other international plugs are available. Contact factory for more information.

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ELECTRICAL CHASSIS

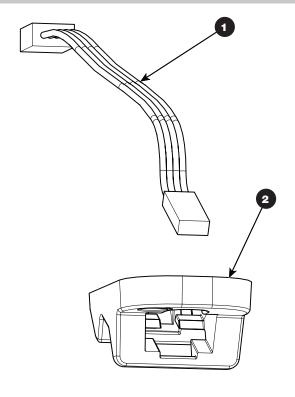


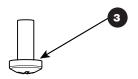
ITEM	DESCRIPTION	PART	QTY
1.	CABLE, RELAY BOARD	CB-35193	1
2.	CLIP, EDGE HOLDING	CL-35031	1
3.	RELAY BOARD P-2012	BA-35106	1
	P-2022/ P-2032	BA-35107	1
4.	SCREW, M3-0.5 x 16mm, PH HD	SC-22270	4
5.	SPACER, 1/4" DIA x 3/8" NYLON	SP-29425	4
6.	POWER SUPPLY, 20W, 5 VOLTS DC OUTPUT	BA-34965	1

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

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CAVITY SENSOR



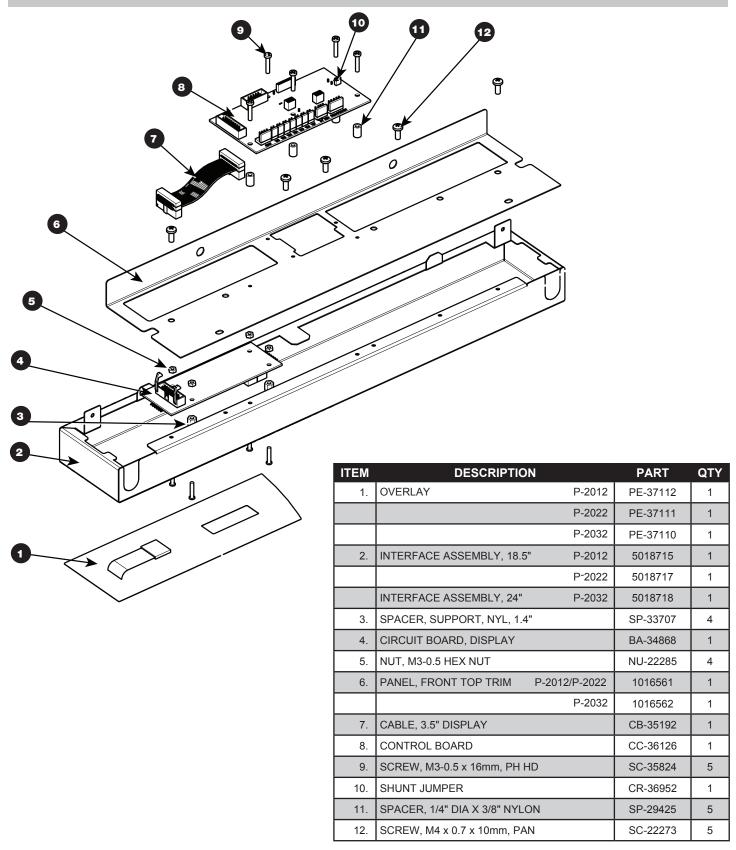


ITEM	DESCRIPTION	PART	QTY
1.	PROBE, DUAL J-TYPE THERMISTOR	PR-35492	1
2.	BLOCK, SENSOR	BK-29882	1
3.	SCREW, M4 x 0.7 x 10mm PAN	SC-35259	4

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

SERVICE

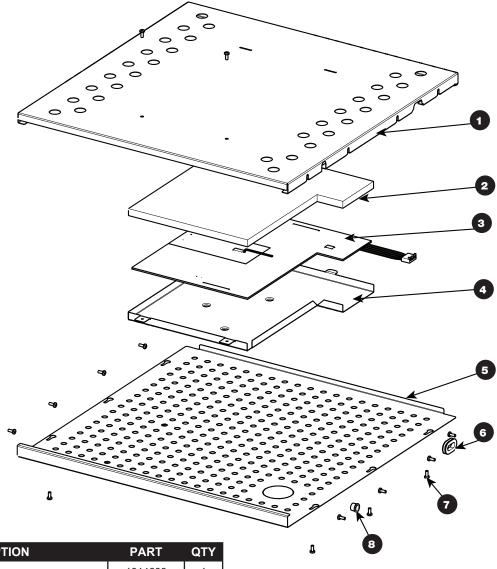
CONTROL INTERFACE (P-2012/P-2022 SHOWN)



SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

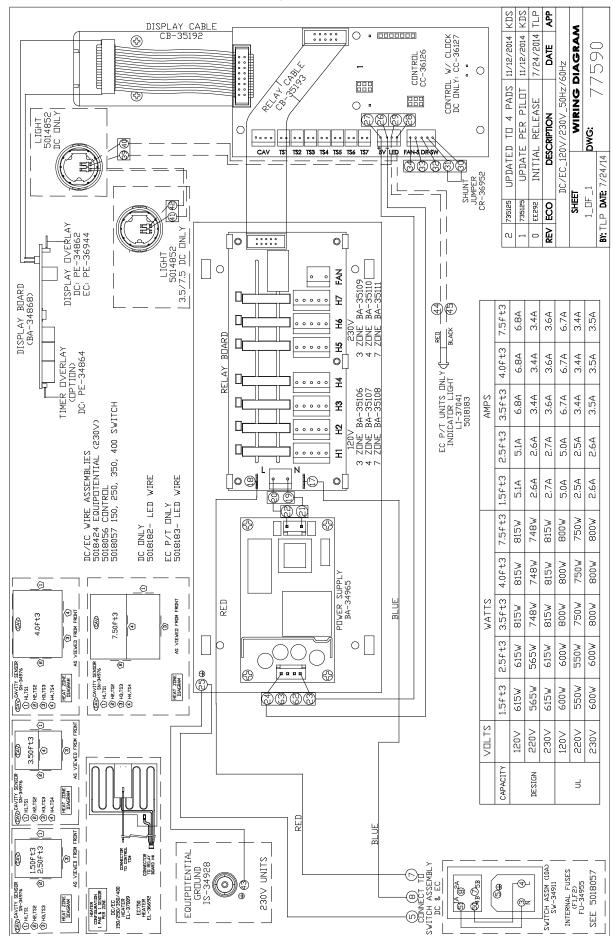
SHELF (P-2022/P-2032 ONLY)



ITEM	DESCRIPTION		PART	QTY
1.	PANEL, TOP		1014609	1
2.	INSULATION		1016823	1
3.	ELEMENT, HEATER PAD	P-2022	EL-37009	1
		P-2032	EL-36992	1
4.	PANEL, HEAT PAD MOUNT	P-2022	1014610	1
		P-2032	1016316	1
5.	PANEL, BOTTOM	P-2022	1011230	1
		P-2032	1011597	1
6.	GROMMET, NEOPRENE, BLACK		BU-36408	1
7.	SCREW, M4 x 0.7 x 10mm PAN		SC-22273	17
8.	1/2" HOLE BUSHING		BU-3006	1

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

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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.

- 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.
- Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.
- 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.

- 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.
- 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.
- 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.
- 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

