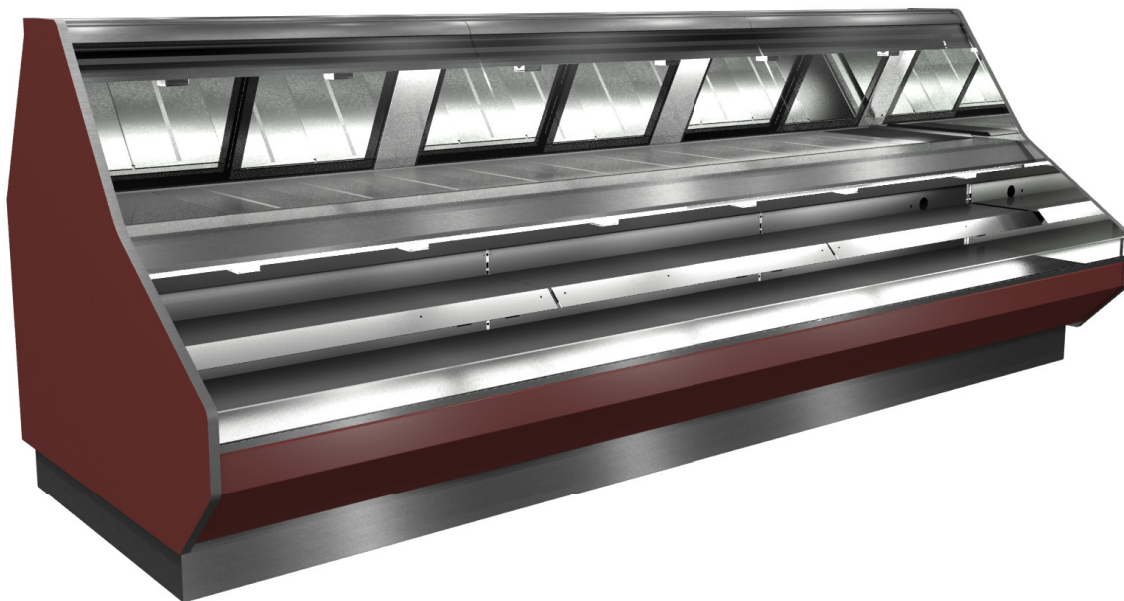


# MULTI-DECK MERCHANDISER

## INSTALLATION & OPERATIONS MANUAL

# PTD-H-H/DELI



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To ensure proper functionality and optimum performance, it is STRONGLY recommended that Hillphoenix specialty cases be installed/serviced by qualified technicians who have experience working with commercial refrigerated display merchandisers and storage cabinets. For a list of Hillphoenix-authorized installation/service contractors, please visit our website at [www.hillphoenix.com](http://www.hillphoenix.com).

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## **LIABILITY NOTICE**

### **For Cases with Shelf Lighting Systems**

Hillphoenix does NOT design any of its shelf lighting systems or any of its display cases with shelf lighting systems for direct or indirect exposure to water or other liquids. The use of a misting system or water hose on a display case with a shelf lighting system, resulting in the direct or indirect exposure of the lighting system to water, can lead to a number of serious issues (including, without limitation, electrical failures, fire, electric shock, and mold) in turn resulting in personal injury, death, sickness, and/or serious property damage (including, without limitation, to the display itself, to the location where the display is situated [e.g., store] and to any surrounding property). DO NOT use misting systems, water hoses or other devices that spray liquids in Hillphoenix display cases with lighted shelves.

If a misting system or water hose is installed or used on a display case with a shelf lighting system, then Hillphoenix shall not be subject to any obligations or liabilities (whether arising out of breach of contract, warranty, tort [including negligence], strict liability or other theories of law) directly or indirectly resulting from, arising out of or related to such installation or use, including, without limitation, any personal injury, death or property damage resulting from an electrical failure, fire, electric shock, or mold.

P079211M, REVO

## Important

At Hillphoenix<sup>®</sup>, the safety of our customers and employees, as well as the ongoing performance of our products, are top priorities. To that end, we include important warning messages in all Hillphoenix installation and operations handbooks, accompanied by an alert symbol paired with the word "DANGER", "WARNING", or "CAUTION".

All warning messages will inform you of the potential hazard; how to reduce the risk of case damage, personal injury or death; and what may happen if the instructions are not properly followed.



## Revision History

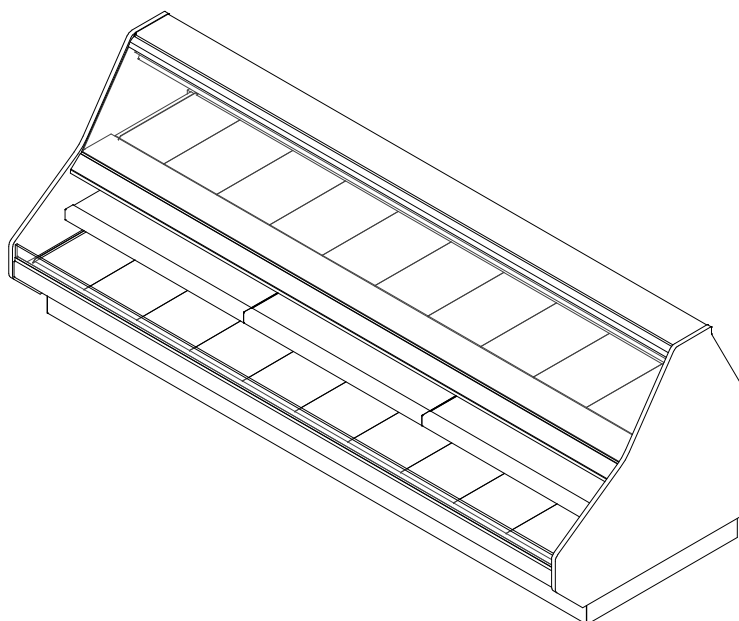
- new manual format\_09/21
- technical reference\_01/23
- technical reference, LED lighting, heat control settings and parts list\_08/23
- controller parameter update\_10-23

## PTD-H-H

Self-Service Open Multi-Deck Merchandiser w/ Service Dome & DRS  
4', 6', 8', 10' & 12' (Deli)

### GENERAL NOTES:

- "---" Indicates that the feature is not an option on this case model and/or the data is not yet available at this time.
- (DRS) Dry Rear Storage
- Curved glass (optional)



SHIPPING WEIGHT	
Case	Weight
PTD-H-H	---

2017  
**DOE**  
COMPLIANT



ENGINEERED FOR STORES WITH AMBIENT CONDITIONS NOT TO EXCEED 75° AND 55% RELATIVE HUMIDITY. DUE TO ENGINEERING IMPROVEMENTS SPECIFICATIONS MAY CHANGE WITHOUT NOTICE. ALL MEASUREMENTS ARE TAKEN PER ASHRAE-72 SPECIFICATIONS. HILLPHOENIX REFRIGERATED DISPLAY CASES FOR SALE IN THE UNITED STATES MEET OR EXCEED DEPARTMENT OF ENERGY 2017 REQUIREMENTS. NUMBERS ARE BASED ON STANDARD CASE SIZES. CONSULT ENGINEERING.

### PTD-H-H

Rev. Date	Rev. #	Rev. Title
08-29-23	5	ENDVIEW UPDATE
03-15-22	4	DATA UPDATE

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# PTD-H-H

Self-Service Open Multi-Deck Merchandiser w/ Service Dome & DRS  
4', 6', 8', 10' & 12' (Deli)

**SERVICE DATA (DOME)**

Case Length	Top Heaters		Bottom Heaters		Lights		Shelves		Total Amps (120/208-1-60)		Total Amps (120/208-3-60)		
	Qty	Watts (Each)	Qty	Watts (Each)	Qty	Watts (Each)	Qty	Watts (Each)	L1	L2	L1	L2	L3
4'	3	400	3	400	2	40	---	---	12.34	11.67	3.84	9.61	10.38
6'	4	400	4	400	3	40	---	---	16.66	15.66	7.70	11.55	12.55
8'	6	400	5	400	6	40	---	---	22.73	21.40	13.81	17.77	13.48
10'	7	400	6	400	5	40	---	---	27.01	25.34	19.44	15.13	17.52
12'	8	400	7	400	6	40	---	---	31.29	29.29	21.50	17.77	21.77

**SELF-SERVICE (BASE)**

Case Length	Top Heaters		Bottom Heaters		Lights		Shelves		Total Amps (120/208-1-60)		Total Amps (120/208-3-60)		
	Qty	Watts (Each)	Qty	Watts (Each)	Qty	Watts (Each)	Qty	Watts (Each)	L1	L2	L1	L2	L3
4'	3	250	3	400	2	40	1	590	12.21	12.88	12.88	7.03	5.88
6'	4	250	4	400	3	40	2	426	16.61	17.61	13.16	9.40	8.60
8'	6	250	5	400	4	40	2	590	23.84	22.51	17.18	12.96	17.26
10'	7	250	6	400	5	40	2	720	26.87	28.54	17.18	21.37	17.40
12'	8	250	7	400	6	40	3	590	31.71	33.71	21.16	24.21	20.41

**SERVICE/SELF-SERVICE**

Case Length	Total Amps (120/208-1-60)		Total Amps (120/208-3-60)		
	L1	L2	L1	L2	L3
4'	24.69	24.87	16.72	16.64	16.26
6'	31.48	31.48	20.86	20.95	21.15
8'	46.23	46.23	30.99	30.73	30.74
10'	54.02	54.02	36.62	36.50	34.92
12'	63.11	63.11	42.66	41.98	42.18

**ELECTRICAL DATA**

Case Length	Fans Per Case	Control Fans			
		Dome		Base	
		208 Volts		208 Volts	
		Amps	Watts	Amps	Watts
4'	2	0.22	0.22	0.22	0.22
6'	3	0.22	0.22	0.22	0.22
8'	4	0.33	0.33	0.33	0.33
10'	4	0.44	0.44	0.44	0.44
12'	6	0.66	0.66	0.66	0.66

**NOTES:**

- "----" Indicates that the feature is not an option on this case model and/or the data is not yet available at this time.



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**PTD-H-H**

Rev. Date	Rev. #	Rev. Title
08-29-23	5	ENDVIEW UPDATE
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## PTD-H-H

Self-Service Open Multi-Deck Merchandiser w/ Service Dome & DRS  
4', 6', 8', 10' & 12' (Deli)

LIGHTING DATA						
Case Length	Lights Per Row	Light Length	Fluorescent Lighting (Per Light Row)			
			Dome		Base	
			Amps	Watts	Amps	Watts
4'	1	3'	---	---	0.09	18.7
6'	2	2'	---	---	0.10	20.8
8'	2	3'	---	---	0.15	31.2
10'	2	4'	---	---	0.20	41.6
12'	3	3'	---	---	0.24	49.9



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### PTD-H-H

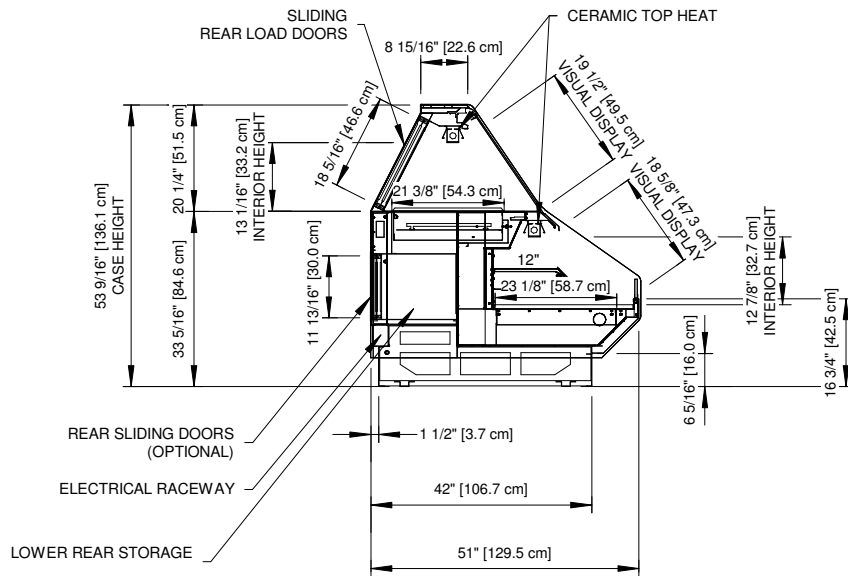
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08-29-23	5	ENDVIEW UPDATE
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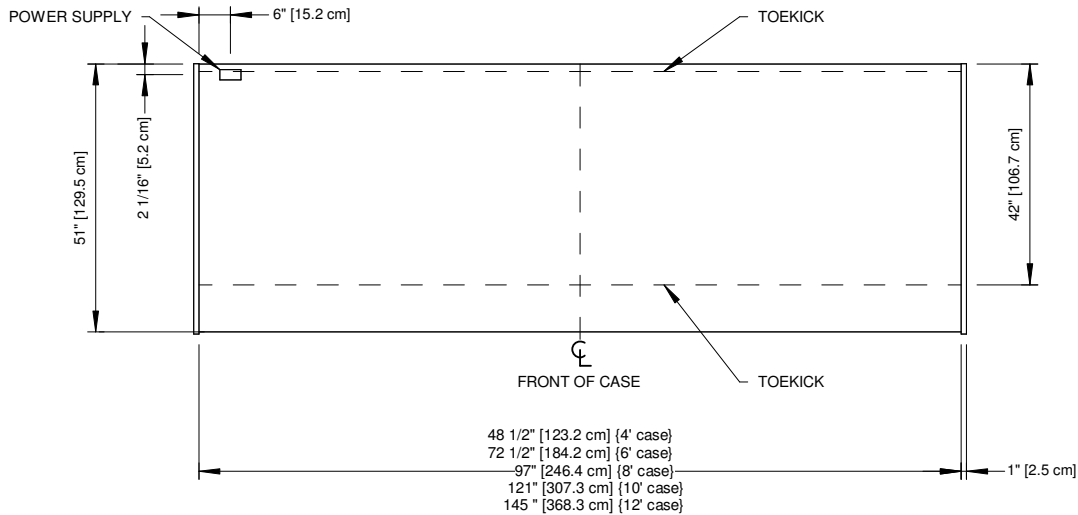


# PTD-H-H

Self-Service Open Multi-Deck Merchandiser w/ Service Dome & DRS  
4', 6', 8', 10' & 12' (Deli)



## FLAT GLASS



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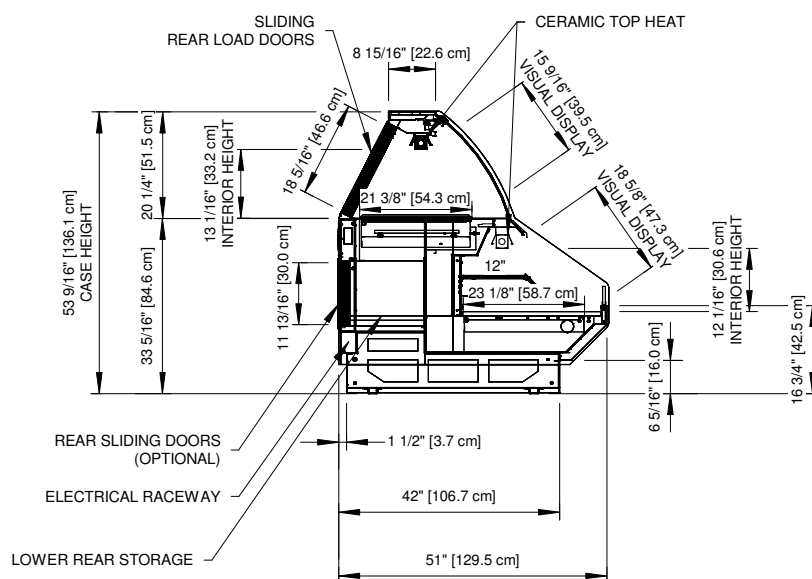
## PTD-H-H

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03-15-22	4	DATA UPDATE

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## PTD-H-H

Self-Service Open Multi-Deck Merchandiser w/ Service Dome & DRS  
4', 6', 8', 10' & 12' (Deli)



### CURVED GLASS (OPTIONAL)



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08-29-23	5	ENDVIEW UPDATE
03-15-22	4	DATA UPDATE

**Hillphoenix**  
a DOVER company

Thank you for choosing Hillphoenix for your food merchandising needs. This handbook contains important technical information and will assist you with the installation and operation of your new Hillphoenix specialty cases. By closely following the instructions, you can expect peak performance; attractive fit and finish; and long case life.

We are always interested in your suggestions for improvements (e.g. case design, technical documents, etc.). Please feel free to contact our Marketing Services group at the number listed below. Thank you for choosing Hillphoenix, and we wish you the very best in outstanding food merchandising.

### CASE DESCRIPTION

This manual specifically covers the PTD-H-H deli application self-service open multi-deck hot merchandiser with service dome.

### STORE CONDITIONS

Hillphoenix cases are designed to operate in an air-conditioned store that maintains a 75°F (24°C) store temperature and 55% (max) relative humidity (ASHRAE conditions). Case operation will be adversely affected by exposure to excessively high ambient temperatures and/or humidity.

### SHIPPING CASES

Transportation companies assume all liability from the time a shipment is received by them until the time it is delivered to the consumer. Our liability ceases at the time of shipment.

### RECEIVING CASES

Examine fixtures carefully and in the event of shipping damage and/or shortages, please contact the Service Parts Department at the number listed below.

### CASE DAMAGE

Claims for obvious damage must be 1) noted on either the freight bill or the express receipt and 2) signed by the carrier's agent; otherwise, the carrier may refuse the claim. If damage becomes apparent after the equipment is unpacked, retain all packing materials and submit a written request to the carrier for inspection within 14 days of receipt of the equipment.

**Failure to follow this procedure will result in refusal by the carrier to honor any claims with a consequent loss to the consumer.**

If a UPS shipment has been damaged, retain the damaged material, the carton and notify us at once. We will file a claim.

### LOST/MISSING ITEMS

Equipment has been carefully inspected to insure the highest level of quality. Any claim for lost/missing items must be made to Hillphoenix within 48 hours of receipt of the equipment. When making a claim please use the number listed below.

### SERVICE PARTS & TECHNICAL SUPPORT

**For service parts questions regarding our cases, please contact our Service Parts Department at 1-844-HPX-PART (1-844-479-7278) or [dfr-ia-parts@doverfoodretail.com](mailto:dfr-ia-parts@doverfoodretail.com)**

**For technical questions regarding our cases, please contact our Technical Support Department at 1-833-280-5714.**

### CONTACTING THE FACTORY

If you need to contact Hillphoenix regarding a specific fixture, be certain that you have both the case model number and serial number. (This information can be found on the data tag, located at the top-left interior, rear exterior panel or interior rear lower storage of the case. *Location may vary based on case design.*)

**Hillphoenix Specialty Products**  
**703 Franklin Street, PO Box 478**  
**Keosauqua, IA 52565**  
**Website: [www.hillphoenix.com](http://www.hillphoenix.com)**

## CASE INSTALLATION

### LOCATION

This hot display case has been designed for displaying and storing perishable food product. It is engineered for air-conditioned stores with a maximum ambient of 75 °F and 55% relative humidity.

When selecting the location for placement of this case, avoid the following conditions:

#### Excessive Air Movement

1. Doors
2. Air-conditioned vents
3. Other air sources

#### FLOOR PREP

1. Ask the general contractor if your current copy of the building dimensions are the most recently issued. Also, ask for the points of reference from which you should take dimensions to locate the cases.
2. Using chalk lines or a laser transit, mark the floor where the cases are to be located for the entire lineup. The lines should coincide with the outside edges of the case feet.
3. Move case as close as possible to its permanent location. Remove all crating and shipping braces above the shipping pallet. Loosen the plastic dust cover from the pallet, but leave cover over the case to protect it while removing the case from the pallet.
4. Shipping braces with a sled runner construction can either have metal brackets that can be removed with a screw gun, or wood blocks that can be removed with a J-bar.  
**Note: Shipping braces are normally located at each corner of the case. (Shipping braces used vary and are based on case design for best transport.)**
5. Carefully, if horizontal supports, lift case up and off the pallet. Remove dust cover. Installation hardware ships in a marked packet located inside the case.
6. Leveling is necessary to ensure proper operation. Locate the highest point on the positioning lines as a reference for determining the proper height of the shim-pack levelers. A laser transit is recommended for precision and requires just one person. Level adjustable feet by twisting, if applicable, or shim as necessary under horizontal supports as this will help ensure that the case is not settling over time.

7. Locate horizontal support positions along the chalk line (Fig. 1). Spot properly leveled shim packs at each support location.
8. If necessary, drill a hole in each end of every horizontal support (Fig. 2) and fasten to the floor with concrete anchors. **Note: The holes do not need to be in the exact locations specified here. Be sure that the anchors are close to the end of the horizontal supports and at each corner of the case.**

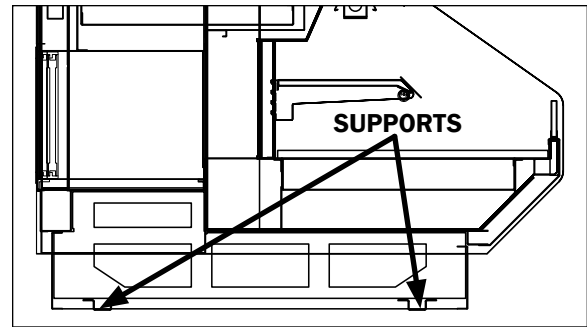


Fig. 1 Horizontal supports

### CAUTION

Locate the horizontal supports under unit before removing from pallet. Failure to do so will damage the finished metal if correct lift points are not identified prior to removal.

### CAUTION

These cases are not designed for excessive external weight. Do not walk on top or inside of cases. Doing so may result in case damage and/or personal injury.

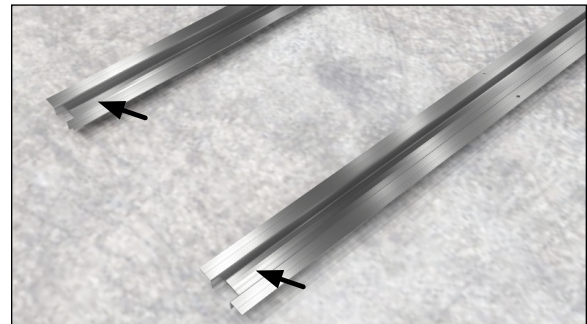


Fig. 2 Seismic anchoring locations

### LINE-UP & INSTALLATION

#### Single Case

1. Move the case into position. Using a "J" bar, raise the end of the case (under cross support), and lower the horizontal support on to the shim packs. Repeat on the other end of the case.
- ### WARNING
- Be certain that your hands and feet are out of the way before lowering the case. Failure to do so may result in serious injury.
2. Once the case is properly placed on the shim packs, check the horizontal level of the case by placing a bubble level on the front sill. Add/remove shim packs as needed.

3. Install the bumper, if applicable, into pre-attached bumper track and snap into place.
4. After sufficient time has passed to allow for bumper shrinkage, cut away the excess bumper for final fit and finish. Be certain to use an appropriate cutting tool (tubing- or PVC-cutter) to ensure a smooth cut.
5. Install case shelves and reconnect lights with the white power cord(s) and the heat with the black power cord(s). Color matching white/black receptacles can be found at opposite ends of the inside back of the case. Be aware that differing shelf configurations will affect energy consumption and case performance.
6. Install toekick back onto the base of case.
8. After sufficient time has passed to allow for bumper shrinkage, cut away the excess bumper for final fit and finish. Be certain to use an appropriate cutting tool (tubing- or PVC-cutter) to ensure a smooth cut.
9. Install case shelves and reconnect lights. Be aware that differing shelf configurations will affect energy consumption and case performance.
10. Install toekick back onto the base of case.



## CAUTION

Installation of 3rd-party materials may result in diminished case performance.

### Multi-Case

1. Remove any shelves (discard the shelf clips) and/or loose items from the cases that may interfere with case joining. Keep all loose items as they will be used later in the installation process.
2. Follow the single-case installation instructions for the first case, excluding #6, then position the next case in the line-up approximately 3' away.
3. Move the second case to a position that is approximately 6" from the first case, then position case on the shim packs.
4. Push the cases tightly together, then lightly bolt them together through the holes provided (Fig. 3). Tighten all the joining bolts until all margins are equal. Be careful not to over tighten.

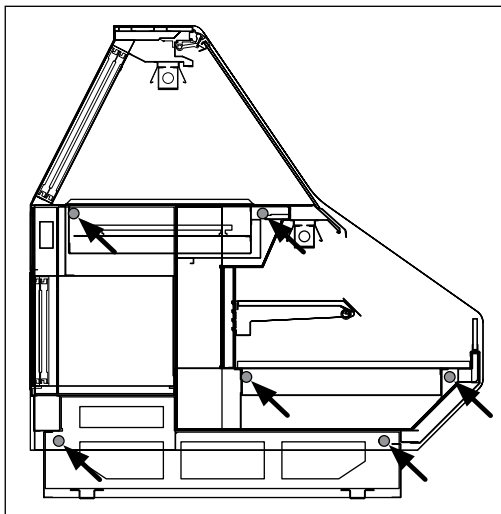


Fig. 3 Bolt locations

### ELECTRICAL

Electrical hookups are made through the electrical raceway that can be accessed by removing the rear raceway panel.

For case-to-case wiring, run conduit between the power supply boxes or run wiring through the raceway. When connecting to the power supply on the case, field wiring should exit box from the side furthest away from case wiring to allow more room inside for wiring connections. Always check the data tag located on left end exterior panel or top interior of the case. The case must be grounded. *For more detailed electrical wiring information (see Appendix A1).*



## CAUTION

Be certain that all electrical connections are compliant with local codes.

5. Repeat steps 3 and 4 of this sequence for all remaining cases. Be certain to properly level all cases.
6. Properly align the front panels as needed, then install, if applicable, front panel trim (supplied).
7. Install the bumper into pre-attached bumper track and snap into place.

## GENERAL LIGHTING INFORMATION

Hillphoenix cases are equipped with LED luminaires and feature specially designed light reflectors in the cornice to improve the illumination of products. LED power supplies operate both the cornice and shelf lights and are located above the cornice reflectors.

The lighting system has an ON/OFF switch located in the raceway, power box or at the inside back of the case. Once a case has been properly positioned in the store and an electrician has connected the lighting circuit, the lights may be turned on to verify that they are connected and functioning properly.

To ensure peak performance, it is advisable to run the lighting systems only when the store climate control is on and case refrigeration is started. **Note: It is highly recommended that the ambient store temperature not exceed 80°F.**



### DANGER

#### SHOCK HAZARD

Always disconnect power to case when cleaning, servicing or configuring components of the lighting system. Failure to do so may result in serious injury or death.



### WARNING

Using improper DC power supplies may damage the luminaires, resulting in sub-standard operation and increased chances of safety issues/injury.



### WARNING

Never replace a 24V DC power supply with a T8 or T5 ballast of any kind! Ballasts use alternating current (AC) instead of direct current (DC) and operate at a much higher voltage than is used by this LED system. Doing so will damage the LED system and increases the chance of safety issues/injury.

## LED DRIVER/POWER SUPPLY ACCESS

To gain access to the LED driver or power supplies remove the raceway cover (Fig. 4). The power supply can be located at the customer left side of the case.

## REPLACING LED LIGHTS

Once store power is connected and the light circuit is energized, the Clearvoyant LED system should operate without the

need for any significant maintenance for several years. Should a power supply need to be removed and/or replaced, turn off the power to the case before proceeding. Be certain to replace the power supply with genuine Hillphoenix parts or a comparable UL-listed Class-2 rated regulated 24V DC power supply with 100W output capacity.

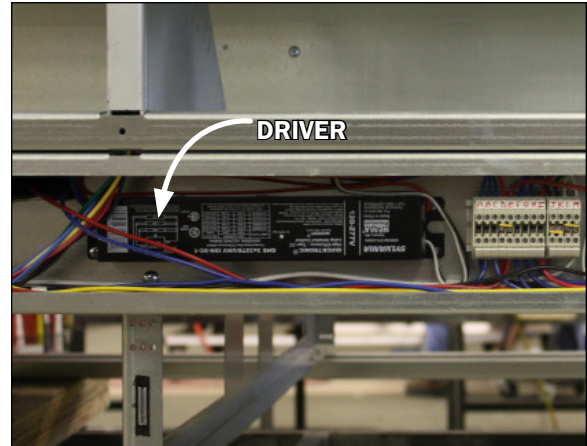


Fig. 4 Clear view of the drivers

## LED LUMINAIRES

### Removing LED luminaires:

1. Unplug the luminaire (Fig. 5).

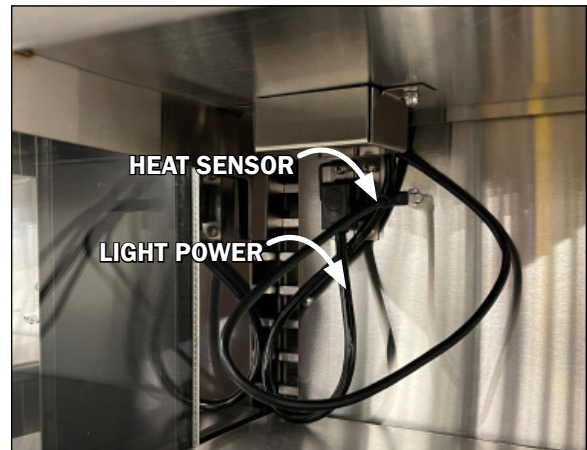


Fig. 5 LED light power cord & heat sensor

2. Remove the screws from the light clamps (Fig. 6) while keeping ahold of the light. Once the screws are removed the light rod will come away from the case with the clamps still holding to the light.
3. Remove the closed clamps and inner rings (Fig. 7) by unclipping the clamp ends located above the screw opening. This will release the grip around the inner ring (Fig. 8) and allow for the two pieces to be separated from one another.
4. Carefully remove the inner rings from around the light rod.



## ⚠ CAUTION

Too much tension on the inner clamp rings while removing them from an LED light rod may cause breakage. Use only enough tension for removal.

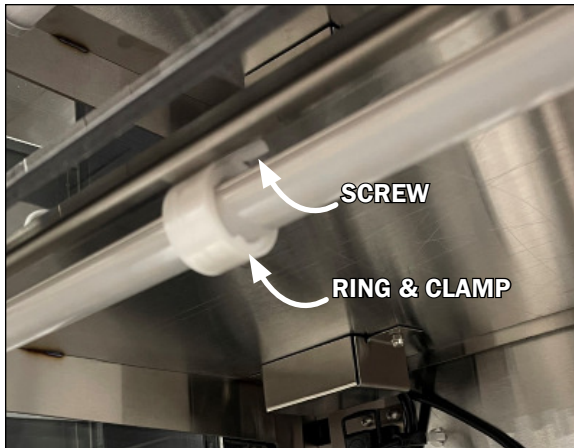


Fig. 6 LED light & ring/clamp



Fig. 9 LED ring and clamp

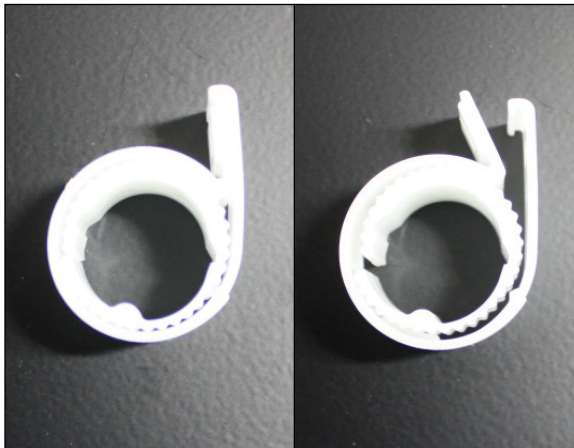


Fig. 7 Closed clamp

Fig. 8 Open clamp

### Re-installing LED luminaires:

1. Place a ring (Fig. 9) around each end of the light rod and rotate until both edges of the rod line-up and snap ahold to the ridges in the ring.
2. Slide a clamp (Fig. 9) over each ring and close them tight around the rings by clipping together the clamp ends located above the screw opening.
3. Line-up the closed clamps (Fig. 7) and light rod with the existing screw holes on the case and re-attach.
4. Rotate the light rod into desired position after the clamps are firmly re-attached.

## PRE-POWER CHECKLIST

**Before powering-up the case, be certain that all of the steps listed below have been completed to ensure proper case functionality, safety and compliance with warranty terms.**

- ☐ **Have you thoroughly examined the case for shipping damage? (see pg. 7)**
- ☐ **Have you checked the horizontal level of the case?  
(see pg. 8)**
- ☐ **Have you applied the sealant to the end breakers of adjoining cases?  
(see pg. 9)**
- ☐ **Have you sealed the case-to-case joints by applying caulk and acrylic tape to the end frame seam? (see pg. 9)**
- ☐ **Have you installed the toekick? (see pg. 9)**
- ☐ **Have you checked that all T-8 light caps and holders are positively engaged?  
(see pg. 10)**

**After powering-up the case, be certain that all of the steps listed below have been completed to ensure proper case functionality, safety and compliance with warranty terms.**

- 1. Check all lights and heating elements to ensure they are all functioning properly.**
- 2. Check case temperature and adjust controller as needed.**



## HEAT CONTROLS

Hillphoenix hot cases are equipped with digital controls (Fig. 10). There is one control per shelf/deck for individual functions.



Fig. 10 Digital heat controls & hinged cornice access panel

### Hinged Cornice Access Panel

To access the heat controls you must first lift the hinged cornice access panel (Fig. 10) at the top of the case.

### CAUTION

Be certain to use caution when lifting the hinged cornice access panel. Best practice would be to have one person at each end of the hinged panel when lifting. Failure to do so may result in case damage.

## BLUETOOTH® FUNCTIONALITY

Follow the steps below (modify parameters):

1. Download the CAREL "Applica" or "Control Ia" app from Apple Store or Google Play.
2. (On the mobile device) enable NFC and/or Bluetooth® communication and mobile data.
3. Open Applica (or Control Ia).
4. Select NFC or Bluetooth® communication, depending on the model of iJF model.
5. Move the mobile device near to the user terminal, maximum distance 10 mm (for NFC only), so as to recognise the configuration.
6. Select the access profile and enter the required password (\*); set the parameters as needed.
7. Move the mobile device near to the user terminal again to upload the configuration parameters (for NFC only).

The terminal features wireless connectivity and an NFC (Near

Field Communication) or Bluetooth® interface (depending on the model) for interaction with mobile devices (on which the CAREL "Applica" app has been installed, available on Google Play for the Android operating system and on the Apple Store for iOS devices (Bluetooth® only).

**Bluetooth® connection has been made when the image below is shown.**



## PREHEATING

Let unit operate with empty shelves for 60 minutes before loading with product. Adjust controls to desired levels before loading case with product. Putting hot food in a case that has not reached full temperature will cause product temperature to drop quickly. All product must be preheated to 175°F. It is essential that product be fully cooked and heated prior to stocking the case, and that it meets in accordance to FDA Food Code for food safety. Check product temperature of larger pieces when cooking different size items. It takes longer for larger pieces to reach desired temperature.

## PRODUCT DISPLAY & SETTINGS

### Load Limits

1. Product must be 6" below the top heater in self-service cases and contained in the tile or well area.
2. The well must be completely covered with tiles or pans whether filled with product or empty.

### WARNING

Always keep product within the designated heated areas. Failure to do so may result in case malfunction and product losing proper temperature, resulting in sub-standard operation and increased chances of food contamination.

### WARNING

All product must be fully cooked prior to being stocked in the case. Failure to do so may result in serious illness or death.



## CAUTION

**DO NOT RELY ON THERMOMETERS OR THERMOSTATS FOR PRODUCT (FOOD) TEMPERATURES.**

- Thermometers and thermostats reflect air temperature only.
- For ACTUAL product (food) temperatures, use a calibrated food probe thermometer ONLY.
- For accurate readings, DO NOT use infrared food thermometers.

### Common Settings

Product that is immersed in liquid is easier to keep hot. Products like fried foods are the hardest to maintain temperature.

Allow 1-2 hours for the case temperature to even out before continuing. The settings will need to be adjusted to your specific product and store conditions.

Once the correct setting is found, the controls may be left at

that setting, and turned ON and OFF using the power switch on the main control. The case must be turned on 1 hour before placing the product. Be sure that all wells are covered with pans or tiles all times whether filled with product or empty. **Note: For more detailed settings; see the PARAMETER SETTINGS table below.**

### CASE AIR TEMPERATURE

The case air temperature may not be as high as the desired product temperature. This case is designed to produce long wave radiant heat. This type of heat penetrates the food and keeps it warm from the inside out. Therefore, the air temperature may not be the same as the product temperature. Measure product interior temperature to determine the correct settings, not the air temperature for the best results.

### UNIT SHUTDOWN

Turn case power to OFF. It is not necessary to adjust well or overhead heat controls. Remove product, turn off case lights and allow the case to cool completely before cleaning.

PARAMETER SETTINGS		
/5	Temperature Unit	°F
/P1	Configuration of probes S1, S2, S3, S4, B5	NTC-HT
/P5	Assign Analog Output for Generic Modulating Function	Y1
GFM_1	Configuration of Analog Output Y1	PWM
GFM_CD	Generic Modulating Function, Control Probe 1	Outlet Temperature (Sm)
GFM_D	Generic Modulating Function, Differential	0.1
GFM_E	Generic Modulating Function, Enable	1
GFM_H	Generic Modulating Function, Hysteresis	0.1
GFM_kp	Generic Modulating Function, Proportional gain	1
GFM_max	Generic Modulating Function, Max Output Value	100
GFM_min	Generic Modulating Function, Min Output Value	0
GFM_S	Generic Modulating Function, Set Point	As needed
GFM_T	Generic Modulating Function, Type	reverse
GFM_Td	Generic Modulating Function, Derivative Time	0
GFM_Ti	Generic Modulating Function, Integral Time	1

## PRODUCT DISPLAY & SETTINGS

This merchandiser is designed to operate without water in the well. Adding water will cause the case to expend many BTU's in order to heat the water and not the product. This may cause condensation to collect on the front glass (if applicable) of service cases.

For best results product should be arranged by product type with groupings of like product together.

### Load Limits

1. Product must be 6" below the top heater in self-service cases and contained in the tile or well area.
2. The well must be completely covered with tiles or pans whether filled with product or empty.

### Common Settings

Product that is immersed in liquid is easier to keep hot. Products like fried foods are the hardest to maintain temperature.

To adjust temperatures, change the heat setting one number at a time by holding the UP or DOWN button 2-3 seconds to ensure change made. Allow 1-2 hours for the case temperature to even out before continuing. The settings will need to be adjusted to your specific product and store conditions. Use these settings as a starting point.

Once the correct setting is found, the controls may be left at that setting, and turned ON and OFF using the power switch on the main control. The case must be turned on 1 hour before placing the product. Be sure that all wells are covered with pans or tiles all times whether filled with product or empty.

**Recommended:**      **5-6 = Overhead Controls**  
                              **5-6 = Fried Foods**  
                              **2-5 = Immersed Foods**

## CASE AIR TEMPERATURE

The case air temperature may not be as high as the desired product temperature. This case is designed to produce long wave radiant heat. This type of heat penetrates the food and keeps it warm from the inside out. Therefore, the air temperature may not be the same as the product temperature. Measure product interior temperature to determine the correct settings, not the air temperature for the best results.

## UNIT SHUTDOWN

Turn case power to OFF on Control #1. It is not necessary to adjust well or overhead heat controls. Remove product, turn off case lights and allow the case to cool completely before cleaning.

## CASE CLEANING

### CASE CLEANING

A periodic cleaning schedule should be established to maintain proper sanitation, insure maximum operating efficiency, and avoid the corrosive action of food fluids on metal parts that are left on for long periods of time. We recommend that all heated surfaces be kept clear of excess food daily and a complete cleaning take place once a week. Further suggestions for case cleaning include the following:

- To avoid shock hazard, be sure all electrical power is turned off before cleaning. In some installations, more than one disconnect switch may have to be turned off to completely de-energize the case.
- Allow cases to be turned off long enough to cool before starting the cleaning process.
- Clean from top to bottom when cleaning the display case to avoid cross contamination.
- If any potentially harmful cleaners are used, be certain to provide a temporary separator (e.g., cardboard, plastic wrap, etc.) between those cases that are being cleaned and those that may still contain product.
- Avoid spraying any cleaning liquids directly on the electrical connections, steam cleaning or using excessive amounts of water.
- If the case is equipped with doors be sure to leave them open until the case is completely dry.
- Remove toekick and clean underneath the case with a broom and a long-handled mop. Use warm water and a disinfecting cleaning solution when cleaning underneath the cases.

#### CAUTION

Be certain to use caution when lifting the hinged cornice access panel. Best practice would be to have one person at each end of the hinged panel when lifting. Failure to do so may result in case damage.

#### DANGER

##### SHOCK HAZARD

Always disconnect power to case when servicing or cleaning. Failure to do so may result in serious injury or death.

#### WARNING

Always let the case cool before cleaning. Failure to do so may result in sub-standard operation and increased chances of safety issues/injury.

### Sliding Control Doors & Hinged Cornice Access Panel

1. Remove the sliding doors on the front of the case and clean. To remove: push up and pull out (Fig. 11). The cornice access panel is on a hinge and is lifted open for cleaning (Fig. 12.)

#### CAUTION

Be certain to use caution when lifting the hinged cornice access panel. Best practice would be to have one person at each end of the hinged panel when lifting. Failure to do so may result in case damage.



Fig. 11 Front heat control door removal



Fig. 12 Hinged cornice access panel

2. Use a spray bottle filled with an approved mild detergent and warm water.
3. Use a clean, disposable cloth (approved item) to thoroughly clean all areas of the case.
4. Wipe down area with a clean, disposable cloth (approved item)
5. Place the cleaned doors on a clean sanitized surface until they are dry and leave the hinged access panel open until confirmed that it is dry.

ISSUE	CAUSE	ACTION
Dome temperature too warm.	Temperature settings too high on main controller.	Adjust controls down - case temps should come down accordingly.
Product in dome not 140°.	Internal temperature when placed in the case should be 175°. Check case surface temp for proper control setting. Should be 190° - 200° to hold proper product temperature.	Adjust settings to 8 on top and 7 on bottom.
Self-service bunker of case not holding temperature.	Ambient conditions may be affecting the case operation.	Check case position in store. Is the case located near an open door or air conditioning vent? RH should not be over 50% and temperature above 75°.
	Condensing coil clogged or dirty.	Clean condensing unit - check settings and cycle defrost.
Water has pooled under the case. *Self-Contained Model Only	Ambient conditions may be affecting the dissipater pan.	Could potentially up the size to a larger condensate pan which can evaporate more water.
Case lights and controls are pulsating or controls #'s and LED's are fading across the panel.	Wrong power hookup or voltage drop to the case.	Have electrician confirm that case has correct power and voltage.
Not holding product temperature. (150°F is recommended)  Its is important to ask the right questions to determine the correct solution.	Cause Unknown. (Refer to action.)	<ul style="list-style-type: none"> <li>-What temperatures are they trying to maintain?</li> <li>-What is the heat level set at?</li> <li>-Did they preheat case for 1-1/2 hours?</li> <li>-Confirm product temp going into the case. (Minimum FDA requirement is 165°F - 175°F.) (Hillphoenix recommendation: 175°F)</li> <li>-What kind of packaging are they using?</li> <li>-Is it resting flat on heated surface?</li> <li>-Are they using the wrong bowls or platters?</li> <li>-Is product stacked too high?</li> <li>-Are they melting packaging?</li> </ul>
Criteria met, but still not holding product temperature.	Cause Unknown. (Refer to Action.)	<ul style="list-style-type: none"> <li>-Call service</li> <li>-Check surface temperature. Should be 200°F or higher.</li> <li>-Change heat range on control board. (Dip switches)</li> </ul>

***Hillphoenix***<sup>®</sup>

a **DOVER** company

**Contact the Service Parts Department at:**

**1-844-HPX-PART (1-844-479-7278)**

**or**

**dfr-ia-parts@doverfoodretail.com**

**Provide the following information about the part you are ordering:**

- **Model number and serial number\*** of the case for which the part is intended.
- **Length of the part** (if applicable).
- **Color of part** (if painted) or color of polymer part.
- **Whether part is for left or right-hand application.**
- **Quantity**

**\*Data tag is located on the left end exterior panel or top interior of the case.**

**If the parts are to be returned for credit, contact the Parts Department. Do not send parts without authorization.**

**A1** ..... Wiring Information

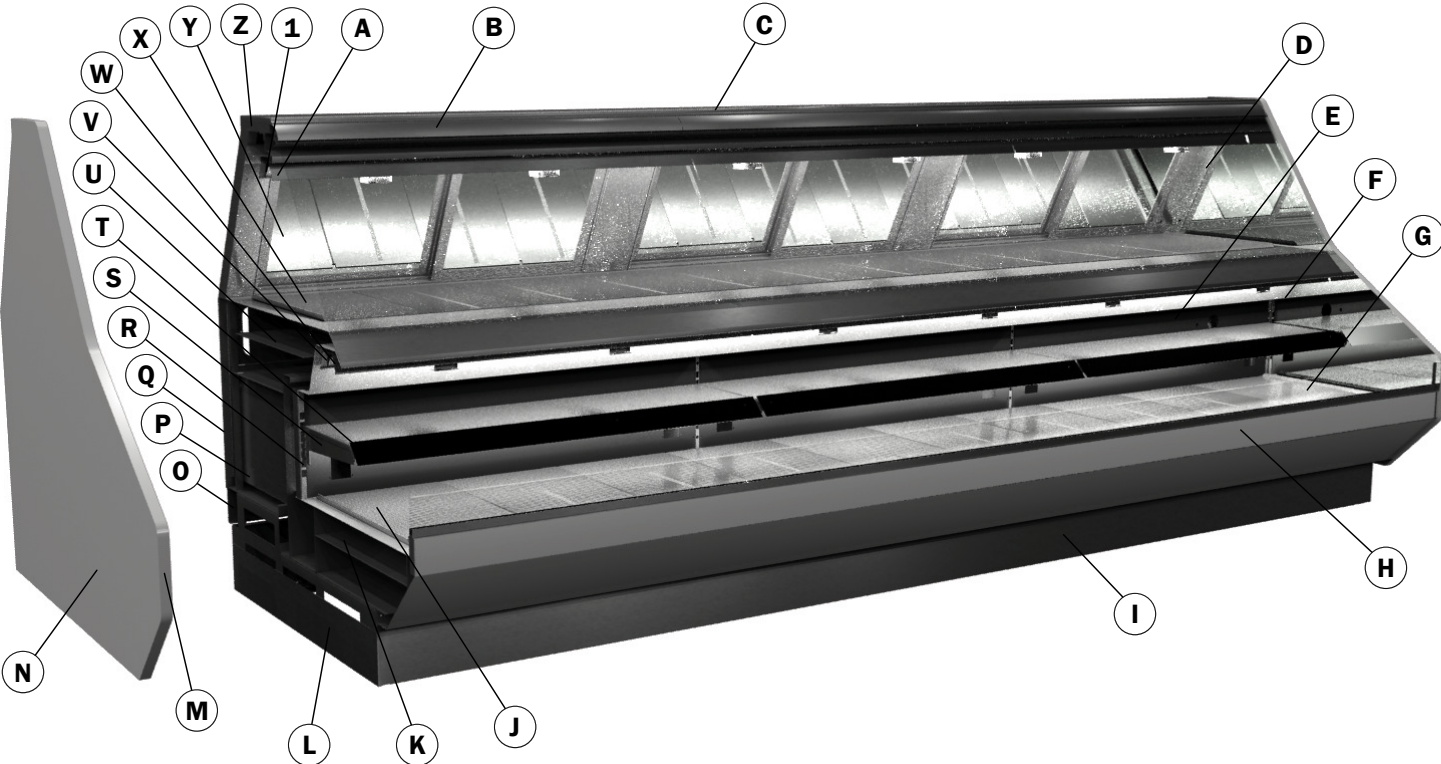
**B1** ..... Parts List

**A1: WIRING DIAGRAM**

TBD



**B1: PARTS LIST**



<b>A</b>	<b>Dome Ceramic Top Heat Guard</b>	<b>1</b>	<b>Dome Ceramic Top Heat</b>
<b>B</b>	<b>Lift Glass Hardware</b>		
<b>C</b>	<b>Case Top</b>		
<b>D</b>	<b>Front Lift Glass</b>		
<b>E</b>	<b>Base Inside Back</b>		
<b>F</b>	<b>Interior End Panel</b>		
<b>G</b>	<b>Die Board Plex</b>		
<b>H</b>	<b>Die Board</b>		
<b>I</b>	<b>Front Toekick</b>		
<b>J</b>	<b>Base Heated Bottom Deck</b>		
<b>K</b>	<b>Base Insulated Lower Deck</b>		
<b>L</b>	<b>End Toe Kick</b>		
<b>M</b>	<b>End Panel Trim</b>		
<b>N</b>	<b>End Panel</b>		
<b>O</b>	<b>Electrical Raceway</b>		
<b>P</b>	<b>Lower Rear Storage</b>		
<b>Q</b>	<b>Outside Back</b>		
<b>R</b>	<b>Shelf Standard</b>		
<b>S</b>	<b>Adjustable Shelf Bracket</b>		
<b>T</b>	<b>Shelf Light Guard</b>		
<b>U</b>	<b>Dome Insulated Lower Deck</b>		
<b>V</b>	<b>Base Ceramic Top Heat</b>		
<b>W</b>	<b>Base Ceramic Top Heat Guard</b>		
<b>X</b>	<b>Dome Heated Bottom Deck</b>		
<b>Y</b>	<b>Dome Sliding Rear Load Doors</b>		
<b>Z</b>	<b>Dome Strut</b>		



Hill PHOENIX, Inc.  
Hereinafter Referred To As Manufacturer

## LIMITED WARRANTY

### GENERAL WARRANTY

Manufacturer's products are warranted to be free from defects in materials and workmanship under normal use and maintenance for fourteen months from date of shipment from manufacturer (the "Base Warranty Period"). In the event of a qualifying warranty claim, a new or rebuilt part to replace any defective part will be provided without charge. The replacement part is covered under this warranty for the remainder of the applicable Base Warranty Period. In order to be eligible for warranty coverage, customer must: (i) notify Manufacturer promptly upon discovery of a warrant defect, and (ii) comply with the warranty claim procedures provided by Manufacturer from time to time.

This equipment warranty does not include labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing, or handling of either defective parts or replacement parts.

The warranty shall not apply:

1. To any unit or any part thereof which has been subject to accident, alteration, negligence, misuse or abuse, or which has not been operated in accordance with the manufacturer's recommendations, or in conditions outside of Manufacturer's specifications, or if the serial number of the unit has been altered, defaced, or removed.
2. When the unit, or any part thereof, is damaged by fire, flood, or other act of God.
3. To products that are impaired or damaged due to improper installation.
4. When installation and startup forms are not properly completed or returned within two weeks after startup.
5. If the defective part is not returned to the Manufacturer.
6. To service, maintenance or wear and tear parts (such as lights, starters and ballasts)

### MODIFICATIONS TO GENERAL WARRANTY

The following sets forth certain modifications to the General Warranty for specific products of Manufacturer:

#### DISPLAY CASE AND SPECIALTY PRODUCTS CLEARVOYANT® LED LIGHTING

The warranty period for Clearvoyant LED lighting components within the Clearvoyant lighting system is five years from date of shipment.

#### REMEDY LIMITATION/DAMAGES EXCLUSION

THE REMEDY OF REPAIR OR PROVISION OF A REPLACEMENT PART WITHOUT CHARGE SHALL BE THE EXCLUSIVE REMEDY FOR ANY WARRANTY CLAIM HEREUNDER. WITHOUT LIMITING THE FOREGOING, MANUFACTURER SHALL NOT BE LIABLE UNDER ANY CIRCUMSTANCES FOR INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF PROFIT, LABOR COST, LOSS OF REFRIGERANT OR FOOD PRODUCTS.

#### EXCLUSIVE WARRANTY

THE FOREGOING WARRANTY IS THE EXCLUSIVE WARRANTY WITH RESPECT TO THE PRODUCTS. ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED AND EXCLUDED. NO IMPLIED WARRANTY SHALL BE DEEMED CREATED BY COURSE OF DEALING OR USAGE OF TRADE. NO OTHER PERSON IS AUTHORIZED TO EXPAND OR CREATE ANY OBLIGATION GREATER THAN OR MORE EXPANSIVE THAN THE WARRANTY PROVIDED HEREIN.

Submit warranty claims to:

#### **Hillphoenix Refrigeration & Power**

##### **Systems Division**

2016 Gees Mill Road

Conyers, GA 30013

Warranty / Service

Phone: 1-833-280-5714

#### **Hillphoenix Display Case Division**

1925 Ruffin Mill Road

Colonial Heights, VA 23834

Warranty / Service

Phone: 1-833-280-5714

#### **Hillphoenix Specialty Products Division**

703 Franklin Street

Keosauqua, IA 52565

Warranty / Service

Phone: 1-833-280-5714

## **Warning**

### **Maintenance & Case Care**

**When cleaning cases the following must be performed PRIOR to cleaning:**

**To avoid electrical shock, be sure all electric power is turned off before cleaning. In some installations, more than one switch may have to be turned off to completely de-energize the case.**

**Do not spray cleaning solution or water directly on fan motors or any electrical connections.**

**All lighting receptacles must be dried off prior to insertion and re-energizing the lighting circuit.**

**Please refer to the Use and Maintenance section of this installation manual.**

***Hillphoenix***®

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**703 Franklin Street, PO Box 478, Keosauqua, IA 52565**

Due to our commitment to continuous improvement, all specifications are subject to change without notice.

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Visit our website at [www.hillphoenix.com](http://www.hillphoenix.com)

