

SINGLE-DECK ISLAND MERCHANDISER INSTALLATION & OPERATIONS MANUAL

OWZGG OEWZ



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To ensure proper functionality and optimum performance, it is STRONGLY recommended that Hill PHOENIX display cases be installed/serviced by qualified technicians who have experience working with commercial refrigerated display merchandisers and storage cabinets. For a list of Hill PHOENIX-authorized installation/service contractors, please visit our Web site at www.hillphoenix.com.



Important

At Hill PHOENIX[®], 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 Hill PHOENIX 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.

\Lambda D A N G E R

Indicates an immediate threat of death or serious injury if all instructions are not followed carefully.

\Lambda WARNING

Indicates a potential threat of death or serious injury if all instructions are not followed carefully.

ACAUTION

Indicates that failure to properly follow instructions may result in case damage.



LIABILTY NOTICE

For Cases with Shelf Lighting Systems

Hill PHOENIX 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 Hill PHOENIX 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 Hill PHOENIX 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



R-744 (CO₂) NOTICE

For Systems Utilizing R-744 (CO₂) Refrigerant

For refrigeration units that utilize R-744 (CO_2), pressure relief and pressure-regulating relief valves may need to be installed based on the system capacity. The valves need to be located such that no stop valve is positioned between the relief valves and the parts or section of the system being protected.

When de-energizing refrigeration units containing R-744 (CO_2), venting of the R-744 (CO_2) refrigerant may occur through the pressure regulating relief valves. *These valves are located on the refrigeration system and not on the case model.* If venting does occur, the valve must not be defeated, capped, or altered by any means.

WARNING: Under no circumstances should any component be replaced or added without consulting Hill PHOENIX Field Service Engineering. Utilizing improper components may result in serious injury to persons or damage to the system.

ENERGY DATA _____

OWZGG

Electrical Data

			Standa	rd Fans	High-Ef Fa	ficiency Ins			ass ater		Defrost	Heaters	
		Fans per	120	Volts	120 VOIts		Fans per	120	Volts	208	Volts	240	Volts
Model		Case	Amps	Watts	Amps	Watts	Case	Amps	Watts	Amps	Watts	Amps	Watts
OWZGG	8'	2	0.68	34	0.30	22	1	0.70	188.9	7.69	1600	8.87	2130
	12'	3	1.02	51	0.45	33		1.06	253.1	11.54	2400	13.31	3195

Guidelines & Control Settings

Model	^{2,3} BTUH/ft	Evaporator (F°)	Superheat Set Point @ bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge Air Velocity ⁴ (FPM)
OWZGG	382	-22	3 - 5	-10	12	255

Defrost Controls

			Electri	c Defrost	Timed	Off Defrost	Hot Ga	as Defrost	Reverse	e Air Defrost
Model	Defrosts Per Day	Run-Off Time (min)	Fail-Safe (min)	Termination Temp (°F)						
OWZGG	3	5	50	45			20	60		

1 "---" indicates feature is not an option with this case.

2 BTUH/ft listing is for parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.12.

3 Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.



CASE DIMENSIONS _





NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL SUCTION LINE - 7/8"; LIQUID LINE - 1/2"

Energy Data _____

OEWZ

Electrical Data

		Standa	rd Fans	U U	ficiency ns			ass ater		Defrost	Heaters	
	Fans per	120	Volts	120	Volts	Fans per	120 '	Volts	208	Volts	240	Volts
Model	Case	Amps	Watts	Amps	Watts	Case	Amps	Watts	Amps	Watts	Amps	Watts
OEWZ	1	0.34	17	0.15	11	1	0.68	82	3.84	800	4.44	1065

Guidelines & Control Settings

Model	^{2,3} BTUH/ft	Evaporator (F°)	Superheat Set Point @ bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge Air Velocity ⁴ (FPM)
OEWZ	325	-22	3 - 5	-10	12	255

Defrost Controls

			Electri	c Defrost	Timed	Off Defrost	Hot Ga	as Defrost	Reverse	e Air Defrost
Model	Defrosts Per Day	Run-Off Time (min)	Fail-Safe (min)	Termination Temp (°F)						
OEWZ	3	5	50	45			20	60		

1 "---" indicates feature is not an option with this case.

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3 Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

CASE DIMENSIONS _





* NOTE: DEPENDING ON WHICH END OF THE OWZGG THE CASE IS ATTACHED

GENERAL INFORMATION

Thank you for choosing Hill PHOENIX for your food merchandising needs. This handbook contains important technical information that will assist you with the installation of your new Hill PHOENIX display 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 toll-free number listed below. Thank you for choosing Hill PHOENIX, and we wish you the very best in outstanding food merchandising.

CASE DESCRIPTION

This manual specifically covers the OWZGG and OEWZ single-deck island merchandisers.

STORE CONDITIONS

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

REFRIGERATION SYSTEM OPERATION

Air-cooled condensing units require adequate ventilation for efficient performance. Machine-room temperatures must be maintained at a minimum of 65°F in winter and a maximum of 95°F in summer. Minimum condensing temperatures should be no less than 70°F.

CONTACTING THE FACTORY

If you need to contact Hill PHOENIX to obtain parts or warranty information, please call toll free 1-800-283-1109 and ask for a Service Parts Representative. For technical questions regarding Hill PHOENIX display cases, please call toll free 1-800-283-1109 and ask for Technical Support. For questions regarding our refrigeration systems or electrical distribution centers, please call our Systems Division Customer Service Department at 1-770-285-3100.

SHIPPING DAMAGE

Claims for obvious shipping 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.

HILL PHOENIX Case Division

1925 Ruffin Mill Rd. Colonial Heights, VA 23834 Mon.-Fri. (8 a.m to 5 p.m EST) Tel: 1-800-283-1109/Fax: 804-526-7450 Web site: www.hillphoenix.com

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. Leveling is necessary to ensure proper case alignment and to avoid potential case damage. 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.
- **4.** Locate basehorse positions along the chalk line. Spot properly leveled shim packs at each basehorse location.

LINE-UP & INSTALLATION

- 1. Remove anything from the cases that may interfere with case joining (e.g. shipping braces).
- 2. Roll the first case into position. Using a "J" bar , raise the end of the case (under cross support), remove the casters, and place the base frame on the shim packs. Repeat on the other end of the case.
- 3. Once the base frame is properly placed on the shim packs, check the vertical level by placing a bubble level plumb to the rear edge of the case; then add/remove shim levels as needed. To check the horizontal level, repeat this process after placing the bubble level on the rear sill.
- 4. For multi-case line-ups, roll the next case to a position that is approximately 3' from the adjoining case. Remove the casters on the end that is closest to the first case and place the base frame on the shim packs. From the opposite end, push the case to a position that is approximately 6" from the first case, then remove the remaining casters and position on the shim packs. Repeat this sequence for all the remaining cases and be certain to properly level the cases as described in Step 3.
- 5. Apply the foam tape (supplied) to the end breakers on each side of the case. Run a bead of silicone sealant and foam rubber around the end that will be joined to the next case in the line-up. Repeat this step wherever there is a case-end that will be joined to another case.
- 6. Push the cases tightly together, then lightly bolt them together through the holes that are provided. Tighten all the joining bolts until all margins are equal. Be careful not to over tighten.

7. Repeat steps 2-6 of this sequence for all remaining cases. Be certain to properly level all cases.

TRIM OUT

- 1. Tighten all of the joint bolts. Draw up tightly, but do not over tighten.
- 2. Using a screw driver in the hole provided, slide the case-to-case joint to the center of the joint between the two cases.
- 3. Seal the joints along the pipe-chase seam with the caulk provided, then apply acrylic tape (supplied) over the pipe-chase seam (see Fig. 1). The tape acts as a watershed preventing water from settling in case joint.
- 4. Attach the kick plate to the retainer using the screws provided (Fig. 2).



Fig. 1 Sealing the pipe chase



Fig. 2 Attaching the kick plate

\Lambda WARNING

Be certain that your hands and feet are out of the way before lowering the case after the removal of the casters. Failure to do so may result in serious injury.

CASE CONNECTIONS

REFRIGERATION

There are two refrigeration piping options for the OWZGG: standard and rear. Standard piping penetration is located at the front, right-hand side of the case, fully visible in front of the fan plenum. Rear piping penetration is located at the rear, right-hand side, consisting of a pre-cut access hole filled with foam material that must be cut out prior to pipe joining. For the OEWZ, the piping can be located on either side of the case according to which end of the island the OEWZ is located (see floor plan on page 5).

The expansion valve and other controls are located on the left-hand side of the case and are accessible without lifting the fan plenum. The controls cluster may be reached by lifting only the left-hand deck pan, minimizing the need to unload product.

At the owner's option, specially designed piping hangers are available. The hangers, which are located along the front of the case under the return air grill, are used to suspend the case-to-case piping up and out of the drain trough.

Before operating the case, be certain to remove the shipping blocks that protect the refrigeration lines during shipping. If it becomes necessary to penetrate the case bottom, be certain to seal it afterwards with canned-foam sealant and white RTV.

PLUMBING

For the OWZGG, the drain outlet is located front and center of the cases. For the OEWZ, the drain outlet is located at the front, right-hand side. The "P" trap – furnished with the cases - is constructed of schedule 40 PVC pipe. The drain lines can be run left or right of the tee with the proper pitch to satisfy local drainage requirements. Be certain that all connections are water tight and sealed with the appropriate PVC or ABS cement.

The kick plate is shipped loose with the case for field installation, thus providing you with open access to the drain line area. If the kick plate has been installed, it is easily removed. Please see the instructions below or the Trim Out section of this manual on page 7.

ELECTRICAL

Electrical hookups are made to a junction box that is located at the bottom-front-left of the case.

For case-to-case wiring, run conduit between the junction boxes (Fig. 14). When connecting to the junction box on the bottom-left side of the case, field wiring should exit box from the right side (furthest away from case wiring) to allow more room inside for wiring connections.

ACAUTION

If any brazing is necessary, place wet rags around the area to avoid tank damage.



ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL SUCTION LINE - 7/8"; LIQUID LINE - 1/2"

AIR FLOW, DEFROST & TEMP CONTROL

Defrost & Temperature Controls

Cases are equipped with either Electric or Hot Gas defrost. The rear baffle (Fig. 3) contains the sensor bulb and probe for electric defrost termination; the sensor bulb for temperature control; and the discharge air probe. If hot gas defrost is utilized, the dump line (see diagram below) contains the hot gas defrost termination sensor bulb and probe and is located to the front-left of the case.

The defrost termination control thermostat and the temperature control thermostat are located in the junction box underneath the case on the bottom-left side (see diagram below). To access the thermostats, you must first remove the kick plate, then remove the junction box cover. For instructions on removing the kick plate and lower front panel, see the Trim Out section of this manual on page 7. It is important to consult the control setting guidelines shown on pages 2-4 before setting the defrost schedule. Further adjustments may be required depending on store conditions.

Air Flow & Product Load

Cases have been designed to provide maximum product capacity within the refrigerated air envelope. Please keep products within the load limit line shown on the diagram below.

It is important that you do not overload the food product display so that it impinges on the air flow pattern. Overloading will cause malfunction and the loss of proper temperature levels, particularly when discharge and return air sections are covered.



Use & Maintenance

CASE CLEANING

Cases are designed to facilitate cleaning. All surfaces pitch to a deep-drawn drain trough that angles toward the front-center of the case where the waste outlet is located for easy access.

The coil is covered to prevent waste fluids from entering, but it is easily accessible for cleaning: simply remove the two coil-cover fasteners, then lift and remove the coil cover. With the coil cover removed, be certain to exercise extreme caution when working in the case - the coil has many sharp edges that can result in serious injuries. When cleaning is complete, be certain that both the plenum and coil cover are properly closed in order to avoid air leaks.

FANS

The fan blades are 8" in diameter. It is important that the blade pitch be maintained as specified. Do not attempt a field modification by altering the blades.

Fan motors may be changed with an easy two-step process that does not require lifting up the plenum, thereby, avoiding the necessity to unload the entire product display to make a change:

- 1. Unplug the fan motor, easily accessible outside the plenum.
- 2. Remove 6 fasteners, then lift out the entire fan basket.



FAN ASSEMBLY

CLEANING PROCEDURES

- 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 cleaning once a week.
- 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.
- Check waste outlet to insure it is not clogged before starting the cleaning process and avoid introducing water faster than the case drain can carry it away.
- Avoid spraying cleaning solutions directly on fans or electrical connections.
- Allow cases to be turned off long enough to clean any frost or ice from coil and flue areas.
- Use mild detergent and warm water. When necessary, water and baking soda solution will help remove case odors. Avoid abrasive scouring powders or pads.
- Remove front panels 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.



SHOCK HAZARD

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

\Lambda W A R N I N G

Exercise extreme caution when working in a case with the coil cover removed. The coil contains many sharp edges that can result in severe cuts to the hands and arms. **1.** Contact the Service Parts Department at:

1-800-283-1109

- 2. 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

*Serial plate is located on the right-hand side of the rear baffle, inside the product area.

3. If the parts are to be returned for credit, ask the Parts Department to furnish you with a Return Material Authorization Number. APPENDIX A: Wiring Information

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AIR DEFROST FAN 74 59 0 0 0 0 SECONDARY COOLANT PUMP 76 61 61 0	~	MAIN SECONDARY FLUID SOLENOID	73 220V	73		72				
SECONDARY COOLANT PUMP 76 61 0 0 0 TANK FLUSH SOLENOID B7 220V B7 0 0 0 0 0 MISTING SOLENOID B7 220V B7 0 0 0 0 0 0 0 DRIP DOWN TIMER B7 220V B9 220V B9 220V B9 0<		AIR DEFROST FAN	74	59						
TANK FLUSH SOLENOID 87 0 0 MISTING SOLENOID 87 0 8 0 MISTING SOLENOID 89 200V 89 88 0 0 DRIP DOWN TIMER 89 200V 89 90 88 0 0 REAR STORAGE BOX FANS 94 95 0 90 0 0 0 GROUND TO INTERIOR LINER 91 95 0 0 0 0 0 0 0 GROUND TO JUNCTION BOX 0 <td>-</td> <td>SECONDARY COOLANT PUMP</td> <td>76</td> <td>61</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	-	SECONDARY COOLANT PUMP	76	61						
MISTNG SOLENOID 89 88 81 DRIP DOWN TIMER 89 220V 89 88 91 REAR STORAGE BOX FANS 94 95 90 91 REAR STORAGE BOX FANS 94 95 91 91 GROUND TO INTERIOR LINER 94 95 91 91 91 GROUND TO UNTERIOR LINER 94 95 91 91 91 91 GROUND TO UNTERIOR LINER 94 95 91 91 91 91 91 91 GROUND TO UNTERIOR LINER 94 95 91		TANK FLUSH SOLENOID	87 220V	87						86
DRIP DOWN TIMER DRIP DOWN TIMER 90 <		MISTING SOLENOID	89 220V	89			88			
REAR STORAGE BOX FANS 94 95 96 GROUND TO EXTERIOR/FRAME 94 95 96 GROUND TO INTERIOR LINER 94 95 96 GROUND TO UNTERIOR LINER 94 95 96 GROUND TO UNCTION BOX 94 95 96 GROUND TO LIGHTS 94 95 96		DRIP DOWN TIMER					06			
GROUND TO EXTERIOR/FRAME GROUND TO INTERIOR LINER GROUND TO INTERIOR LINER Model GROUND TO JUNCTION BOX Model GROUND TO LIGHTS Model		REAR STORAGE BOX FANS	94	95						
GROUND TO INTERIOR LINER GROUND TO JUNCTION BOX GROUND TO JUNCTION BOX Model		GROUND TO EXTERIOR/FRAME								81
GROUND TO JUNCTION BOX GROUND TO JUNCTION BOX GROUND TO LIGHTS GROUND TO LIGHTS	<u> </u>	GROUND TO INTERIOR LINER								83
	P901598E - R4	GROUND TO JUNCTION BOX								85
		GROUND TO LIGHTS								97

WIRE ID



RACEWAY (FRONT) C END (OPT)ONAL) 31HW HEATED GLASS URPLE IT-COND, HTP. (BUMPER) FANS CDNTROL END GLASS PERMETER HEATER IFSTAT (KLUXON) TENP BLACK ፟ኯኈ፼፝ቜ SUCTION LINE SOLENGIO (OPTIONAL) MBT HOI OLOW TEMP PMB B TEMP LOW FAN MOTOR (STO OR HI-EFF) HEATED DASS (1) dbl. Pole. Dbl. Throw Switch FAN NUTOR (STD DR H-EFF) 4 + DEFRIDST HEATER (COIL) (ICE-CREAM CNLY) ANTI-CONDENSATE HEATERS (FRT SILL CAP) (1) TI 200 M1 FAN MUTUR (STU OR HI-EFF) · DEFROST HEATER [FRONT FLUE] ANTI-COND. HEATER (CTR SILL NOSE CAP) **CRDER** SPECIAL ANTI-COND, HEATER (BUMPER) ANTI-COND. HEATER (BUMPER) ZI 25 TO DEF. TERM. RELAY OR TINE CLOCK DEF. CONT. HIDT COMP. NOTE: FOR HOT GAS DEFROST OMIT ALL DEFROST HEATERS NOTE: FOR SOLID FRONT CASES, OMIT HEATED GLASS AND GLASS CAP HEATERS TSTAT TEMP CONTROL TEMP. T HEATED DLASS NOCK NHK MHL SNGLE POLE. SNGLE THROW SWTCH SWTCH DFEN/OFF = HI TEMP CLOSED/ON = LO TEMP SOLENDID (OPTICANL) Ì 120 \ AJTAJH AJTAMAJA 22AJD ONJ I ± 55 € (0) BTVCK (0) BTVCK (0) MH1 S (JANQIT90) RETACH NIA A COPILING CONTRACTOR ANTI-COND, HTR. (BUMPER) WRAP-ARDUND END (DPT(DNAL) * * 224JO D3TA3H

OWZGG - 12'





Rev:



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WARRANTY HEREINAFTER REFERRED TO AS MANUFACTURER

FOURTEEN MONTH WARRANTY. MANUFACTURER'S PRODUCT IS WARRANTED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USE AND MAINTENANCE FOR A PERIOD OF FOURTEEN MONTHS FROM THE DATE OF ORIGINAL SHIPMENT. A NEW OR REBUILT PART TO REPLACE ANY DEFECTIVE PART WILL BE PROVIDED WITHOUT CHARGE, PROVIDED THE DEFECTIVE PART IS RETURNED TO MANUFACTURER. THE REPLACEMENT PART ASSUMES THE UNUSED PORTION OF THE WARRANTY.

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

The fourteen month warranty shall not apply:

1. To any unit or any part thereof which has been subject to accident, alteration, negligence, misuse or abuse, operation on improper voltage, or which has not been operated in accordance with the manufacturer's recommendation, 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. Outside the continental United States.
- 4. To labor cost for replacement of parts, or for freight, shipping expenses, sales tax or upgrading.
- 5. When the operation is impaired due to improper installation.
- 6. When installation and startup forms are not properly complete or returned within two weeks after startup.

THIS PLAN DOES NOT COVER CONSEQUENTIAL DAMAGES. Manufacturer shall not be liable under any circumstances for any consequential damages, including loss of profit, additional labor cost, loss of refrigerant or food products, or injury to personnel or property caused by defective material or parts or for any delay in its performance hereunder due to causes beyond its control. The foregoing shall constitute the sole and exclusive remedy of any purchases and the sole and exclusive liability of Manufacturer in connection with this product.

The Warranties are Expressly in Lieu of All Other Warranties, Express of Implied and All Other Obligations or Liabilities on Our Part. The Obligation to Repair or Replace Parts or Components Judged to be Defective in Material or Workmanship States Our Entire Liability Whether Based on Tort, Contract or Warranty. We Neither Assume Nor Authorize Any Other Person to Assume for Us Any Other Liability in Connection with Our Product.

MAIL CLAIM TO:

Hill PHOENIX Display Merchandisers 1925 Ruffin Mill Road Colonial Heights, VA 23834 1-800-283-1109 Hill PHOENIX Refrigeration Systems & Electrical Distribution Products 709 Sigman Road Conyers, GA 30013 770-285-3200

<u>Warning</u> 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.



Tel: 1-800-283-1109

1925 Ruffin Mill Road, Colonial Heights, VA 23834 Due to our commitment to continuous improvement all specifications are subject to change without notice. Hill PHOENIX is a Sustaining Member of the American Society of Quality. Visit our web site at www.hillphoenix.com