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.
At Hillphoenix®, 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.

This manual must be stored near the display case where it can be easily consulted. If this manual does not provide the information you require please contact Hillphoenix for more information.
Revision History

- new manual format_04/22
GENERAL NOTES:
- "---" indicates that feature is not an option on this case model and/or the data is not yet available.
**System Requirements**

<table>
<thead>
<tr>
<th>Case Length</th>
<th>Overall Size</th>
<th>Volts</th>
<th>Frequency (Hz)</th>
<th>Phase</th>
<th>Plug*</th>
<th>TLA</th>
<th>MCA</th>
<th>MOP</th>
<th>Product Weight (lbs)</th>
<th>Gross Weight (lbs)</th>
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<tbody>
<tr>
<td>4’</td>
<td>56.7” x 34.5” x 36.6”</td>
<td>120</td>
<td>50/60</td>
<td>1</td>
<td>NEMA 5-15</td>
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<td>12.9</td>
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<td>98.7” x 34.5” x 36.6”</td>
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<td>NEMA 5-15</td>
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**Guidelines and Control Settings**

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<thead>
<tr>
<th>Application</th>
<th>Set Point St (°F)</th>
<th>Defrost Termination Temp (°F)</th>
<th>Defrost Interval (hr)</th>
<th>Fail Safe (Min)</th>
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<tbody>
<tr>
<td>Dairy</td>
<td>39</td>
<td>50</td>
<td>24</td>
<td>10</td>
</tr>
<tr>
<td>Meat</td>
<td>36</td>
<td>50</td>
<td>24</td>
<td>10</td>
</tr>
<tr>
<td>Frozen Food</td>
<td>5</td>
<td>50</td>
<td>24</td>
<td>10</td>
</tr>
<tr>
<td>Ice Cream</td>
<td>-9</td>
<td>50</td>
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<td>10</td>
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**24hr Energy**

<table>
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<td>Frozen Food, Ice Cream</td>
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<td>8’</td>
<td>Dairy, Meat</td>
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<td>Frozen Food, Ice Cream</td>
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**Condensing Unit Data**

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<tr>
<th>Case Length</th>
<th>Volts</th>
<th>Phase</th>
<th>Hysteresis (Min)</th>
<th>Max Capacity (hp)</th>
<th>Running Load Amps (RLA)</th>
<th>Locked Rotor Amps (LRA)</th>
<th>Refrigerant</th>
<th>Refrigerant Charge (grams)</th>
<th>Noise Limit (dBA)</th>
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<tbody>
<tr>
<td>4’</td>
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<td>R290</td>
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<td>60</td>
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<tr>
<td>7’</td>
<td>120</td>
<td>1</td>
<td>2</td>
<td>1.25</td>
<td>7</td>
<td>Electronic Cut Off</td>
<td>R290</td>
<td>140</td>
<td>60</td>
</tr>
<tr>
<td>8’</td>
<td>120</td>
<td>1</td>
<td>2</td>
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<td>7</td>
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<td>R290</td>
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**Lighting Data**

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<th>Amps</th>
<th>Watts</th>
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<td>8’</td>
<td>2</td>
<td>0.12</td>
<td>15</td>
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</table>

**Notes:**
- "---" indicates that feature is not an option on this case model and/or the data is not yet available.
- Minimum clearance for single unit installation = 3.9” (100mm).
- Minimum clearance for island arrangement: Rear = 5.5”; Side = 0”.
- NEMA L5-15P locking plug available upon request.
CNEZLA
Endcap Case Coldwall R290 Merchandiser
Beverage/Dairy/Meat/Frozen Food/Ice Cream

GENERAL NOTES:
• "---" indicates that feature is not an option on this case model and/or the data is not yet available.

<table>
<thead>
<tr>
<th>Shipping Weight</th>
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<tr>
<td>Case</td>
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2017 DOE COMPLIANT

CNEZLA
Rev. Date | Rev. # | Rev. Title
--- | --- | ---
03-17-23 | 1 | DATA UPDATE
08-10-22 | 0 | NEW STANDARD
CNEZLA
Endcap Case Coldwall R290 Merchandiser
Beverage/Dairy/Meat/Frozen Food/Ice Cream

TECHNICAL REFERENCE

SYSTEM REQUIREMENTS

<table>
<thead>
<tr>
<th>Case Length</th>
<th>Overall Size</th>
<th>Volts</th>
<th>Frequency (Hz)</th>
<th>Phase</th>
<th>Plug*</th>
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<th>MCA</th>
<th>MOP</th>
<th>Product Weight (lbs)</th>
<th>Gross Weight (lbs)</th>
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</thead>
<tbody>
<tr>
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GUIDELINES AND CONTROL SETTINGS

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<tr>
<th>Application</th>
<th>Set Point St (°F)</th>
<th>Defrost Termination Temp (°F)</th>
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<th>Fail Safe (Min)</th>
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<td>Dairy</td>
<td>39</td>
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</tr>
<tr>
<td>Meat</td>
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<td>10</td>
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<tr>
<td>Frozen Food</td>
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<tr>
<td>Ice Cream</td>
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24hr Energy

<table>
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<tr>
<th>Case Length</th>
<th>Application</th>
<th>(kWh)</th>
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</thead>
<tbody>
<tr>
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CONDENSING UNIT DATA

<table>
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<tr>
<th>Case Length</th>
<th>Volts</th>
<th>Phase</th>
<th>Hysteresis (Min)</th>
<th>Max Capacity (hp)</th>
<th>Running Load Amps (RLA)</th>
<th>Locked Rotor Amps (LRA)</th>
<th>Refrigerant</th>
<th>Refrigerant Charge (grams)</th>
<th>Noise Limit (dBA)</th>
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</thead>
<tbody>
<tr>
<td>6'</td>
<td>120</td>
<td>1</td>
<td>2</td>
<td>0.75</td>
<td>7</td>
<td>Electronic Cut Off</td>
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LIGHTING DATA

<table>
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<tr>
<th>Case Length</th>
<th>Lights per case</th>
<th>Amps</th>
<th>Watts</th>
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</thead>
<tbody>
<tr>
<td>6'</td>
<td>2</td>
<td>0.10</td>
<td>13</td>
</tr>
</tbody>
</table>

NOTES:

- "---" indicates that feature is not an option on this case model and/or the data is not yet available.
- Minimum clearance for single unit installation = 3.9" (100mm).
- Minimum clearance for island arrangement: Rear = 5.5"; Side = 0".
- NEMA L5-15P locking plug available upon request.

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.
TECHNICAL REFERENCE

CNEZLA
Endcap Case Coldwall R290 Merchandiser
Beverage/Dairy/Meat/Frozen Food/Ice Cream

2017 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.

CNEZLA

<table>
<thead>
<tr>
<th>Rev. Date</th>
<th>Rev. #</th>
<th>Rev. Title</th>
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<tbody>
<tr>
<td>03-17-23</td>
<td>1</td>
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</tr>
<tr>
<td>08-10-22</td>
<td>0</td>
<td>NEW STANDARD</td>
</tr>
</tbody>
</table>

Hillphoenix 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 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 CNZLA and CNEZLA (R-290) deli, meat, frozen food and ice cream application self-service single-deck merchandiser with sliding doors.

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.

REFRIGERATION SYSTEM OPERATION
Air-cooled condensing units require adequate ventilation for efficient performance.

THIS UNIT CONTAINS R-290 FLAMMABLE REFRIGERANT. USE CAUTION WHEN HANDLING, MOVING OR SERVICING THE DISPLAY CASE. AVOID DAMAGING THE REFRIGERANT TUBING WHICH COULD INCREASE THE RISK OF A LEAK.

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-caseclaims@doverfoodretail.com (warranty claim group) and dfr-orderparts@doverfoodretail.com (non-warranty claim group). For parts choose your language, then select option 1 for Case Division Parts.

For technical questions regarding our cases, please contact our Technical Support Department at 1-833-280-5714. For Technical Support select option 2, then once in that menu, select option 1 for the Main Case Division.

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
1925 Ruffin Mill Rd
Colonial Heights, VA 23834
Website: www.hillphoenix.com
## UNITIZATION ASSEMBLY KITS

### CLOSE OFF PANEL KIT (GRAY 4')

<table>
<thead>
<tr>
<th>HPX P/N</th>
<th>ITEM</th>
<th>QNTY</th>
<th>DESCRIPTION</th>
<th>COLOR</th>
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<tbody>
<tr>
<td>P116702CGY</td>
<td>4.1</td>
<td>10</td>
<td>Flange Hexagon Bolt, M6x16</td>
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</tr>
<tr>
<td></td>
<td>3.3</td>
<td>2</td>
<td>Front Kickplate Linking Plate, IHF-0D2209PB</td>
<td>Gray</td>
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<td></td>
<td>1.5</td>
<td>1</td>
<td>Cover Plate, IHF-D1509PB</td>
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</tr>
<tr>
<td></td>
<td>*1.3</td>
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<td>Middle Cover Plate, IHFD2209PB</td>
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</tr>
<tr>
<td></td>
<td>1.4</td>
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<td>Case Connecting Cover, IHF-D2209PB</td>
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### CLOSE OFF PANEL KIT (WHITE 6' END)

<table>
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<tr>
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<td></td>
<td>1.1</td>
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<td>Supporting Column, IHF-D2209PB</td>
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</tbody>
</table>

### CLOSE OFF PANEL KIT (GRAY 7')

<table>
<thead>
<tr>
<th>HPX P/N</th>
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</tr>
<tr>
<td></td>
<td>1.2</td>
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<td>Cover Plate, IHF-D2209PB</td>
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<tr>
<td></td>
<td>1.4</td>
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### CLOSE OFF PANEL KIT (GRAY 8')

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### SIDE CLOSE OFF KIT (GRAY/GRAY)

<table>
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<td>Supporting Column, IHF-D2209PB</td>
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### SIDE CLOSE OFF KIT (GRAY/WHITE)

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<td>4.2</td>
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</table>

REFERENCE DIAGRAMS ON FOLLOWING PAGES (CONT'D)

* See (Fig. 11) for a detail of the connecting plate.
CASE INSTALLATION

BACK-TO-BACK ASSEMBLY (DIAGRAM 1)

**PRICE PLATE
**PRICE TAG MOLDING

COVER PLATE
SUPPORTING COLUMN
SIDE KICKPLATE

**FRONT KICKPLATE

BACK-TO-BACK ASSEMBLY W/ END CAP ASSEMBLY (DIAGRAM 2)

MIDDLE COVER PLATE
FRONT KICKPLATE
LINKING PLATE
**SIDE KICKPLATE (END CAP)
**CORNER COVER PLATE (END CAP)

* See (Fig. 11) for a detail of the connecting plate.
** These parts ship with the case.
LOCATION
This refrigerated 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

Excessive Heat
1. Windows
2. Sun
3. Flood lamps 8 feet or less from the product
4. Other heat 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. The power cord shipping brace can be removed with a screw gun if attached to the pallet. Otherwise, the power cord is attached to the case with a zip tie and needs to be removed carefully.
5. Carefully, if horizontal supports, lift case up and off the pallet. Remove dust cover. Check for loose components in the packaging. Do not dispose of of loose components. If it cannot be determined where the loose components belong, call Hillphoenix technical support. (Hillphoenix self-contained display cases are sometimes designed with casters. In most situations, one or two persons can easily move the case into position.) If there are casters simply roll them on to the store floor to the proper staging area. First remove all crating then all sled runner, caster, and/or power cord shipping braces. (Dependent on case design.)
6. Leveling is necessary to ensure proper operation of the refrigeration system and drainage of the condensate. Locate the highest point on the positioning lines as a reference for determining levelers. A laser transit is recommended for precision and requires just one person. When in final position level adjustable feet (Fig. 1 & 2) as needed so that the casters are not engaged to the floor. To do so, first rotate the nut at the adjustable feet counterclockwise. Turn feet until engaged to the floor and the casters no longer make contact to the ground.

Fig. 1 Vertical supports

Fig. 2 Adjustable leveling feet and casters

Note: Avoid contact with the castors under the case when using a forklift to move the case.

CAUTION
Failure to properly level the case could result in lack of proper condensation drainage leading to failure of the unit.

7. (CASTERS/BULLET LEGS) If necessary, attach two brackets at two separate corners of the case (Fig. 3) and fasten to the floor with concrete anchors. Prior to attaching brackets be sure to turn the power OFF to the case and unplug power cord.

Fig. 3 Seismic anchoring (brackets)

8. The brackets need to be affixed in the exact locations specified here (below) due to the R-290 case design components inside the case. Be sure that at least two...
with case joining. Keep all loose items as they will be used later in the installation process.

2. Move the case into position. The case has a two lane pallet with connecting strips and enforcement steel panels.

3. Use a (philips) to remove the screws on each of the steel panels at each corner of the pallet. After the steel panels are removed pull away the connecting strips (Fig. 4) at each pallet side. Insert pallet jack or fork lift at the gap left by the connecting strips, turn up the case and take away the two side/end pallets. Repeat as needed.

4. Once the case is properly placed check the vertical plumb of the case by placing a bubble level on the rear wall. For the horizontal level, repeat this process after placing the bubble level on the front sill.

5. Install the bumper, if applicable, into pre-attached bumper track and snap into place. (Most self-contained cases ship with bumper pre-installed.)

6. Install the kickplate fixing plate according to the position shown in the figure, and use the screws delivered with the product, with the specifications of ST4.2 x 13.

7. Install the front kickplate (Fig 5). The specification of the screw is the same as that mentioned above. Fix the right side first.
CAUTION
Do not obstruct ventilation around the base of the display case condensing unit. Obstructing could cause the case to not operate correctly and failure to maintain product temperatures.

Multi-Case
1. Follow the single-case installation instructions 1 - 5 then position the next case in the line-up approximately 3’ away.

2. Due to congestion of the warm exhaust air (heat accumulation). The front, rear and undercase air vents of the unit must not be covered for island arrangement.

3. An end case will butt against the ends of the straight cases with a 0" gap. Note: Exhaust on side of end cases.
   a) The exhaust air must be able to escape freely at the backside of the unit.
   b) Minimum distance for single unit installation
      All Around = 3.9 in
   c) Minimum distance for island arrangement
      $A = 0\ in \quad B = 5.5\ in$

4. Install the screws supplied at the rear of the case with the equipment in the frame selected part of the diagram (Fig. 7). The bolt specification is m6 x 16. The screws don’t need to be tightened for the time being.

5. Insert the column (Fig. 8) into the screw installation position, one on the left and one on the right.

6. Place the showcase back-to-back, lift the column, and connect the two cases together (Fig. 9).

7. Place the cover plate at the middle of the two cases, as shown here (Fig. 10). Hardware is not required for this step. Note: Do not merchandise on top of the cover plate as this will restrict the air exhaust.

8. Install the side skirting board (Fig. 6).

9. Use the front kickplate linking plate to fix the front and side kickplate.
CASE INSTALLATION

8. If more than two cases need to be spliced in a line-up, install the connecting plate according to the position (Fig. 11) after the two cases are placed.

9. Repeat steps for case splicing as needed and put the middle cover plate down in the middle when ready (Fig. 12).

10. Install the kickplate fixing plate according to the position (Fig. 13) and use the screws delivered with the product, with the specifications of ST4.2 x 13.

11. Install the front kickplate with the fixing plates at the top of each two double cutouts depicted (Fig. 14). The specification of the screw is the same as that mentioned above. Fix the right side first.

12. Install the side skirting board at each connecting corner (Fig. 15). Two screws at each corner. **Note:** Pre-install the corner kickplate. If the adjoining case is an end case be sure to next attach the corner kickplates (Fig. 16) to the end of the side skirting board kickplate (Fig. 14).

13. If there is an end cap case, fix the front and corner kickplates together with screws (Fig. 16).

14. Use the front kickplate linking plate to fix the front and side kickplate (Fig. 17).

15. If there are more than two groups of cases that need to be
spliced in a line-up, install the kickplate linking plate after the front skirting board is fixed.

16. Repeat steps of this sequence for all remaining cases. Be certain to properly level all cases.

17. Install the price tag molding using double sided sticky tape. Do not use hardware to install the tag molding as this will interfere with the assembly of the center cover panel.

**Adjastable wire racks**

The wire racks inside of the case(s) have four available heights when including the base. First cut the zip ties holding the racks in place for shipping, then adjust the level of the wire rack by using the side racks for placement (Fig. 18).

**Note:** Do not use the highest available point (Fig. 18) as this height exceeds the load limit line for product.

---

**Fig. 18 Adjustable wire racks and zip ties**

---

**ADJUSTABLE WIRE WRACK POSITIONS**

<table>
<thead>
<tr>
<th>WIRE RACK POSITION</th>
<th>HEIGHT OF RACK FROM TANK BOTTOM &quot;A&quot;</th>
<th>MERCHANDISING HEIGHT RACK TO LOAD LIMIT LINE &quot;B&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base (Bottom)</td>
<td>1-13/16&quot;</td>
<td>18-5/16&quot;</td>
</tr>
<tr>
<td>2nd Height</td>
<td>7-1/4&quot;</td>
<td>12-7/8&quot;</td>
</tr>
<tr>
<td>3rd Height</td>
<td>12&quot;</td>
<td>8-1/8&quot;</td>
</tr>
<tr>
<td>4th Height</td>
<td>17&quot;</td>
<td>3-1/8&quot;</td>
</tr>
</tbody>
</table>
ELECTRICAL

This case has a NEMA 5-15P plug (locking NEMA-15P plug when applicable) that will need to be connected. **Note:** The locking NEMA L5-15P plug can replace the standard NEMA 5-15P plug via the connector disconnect that is found in the condensing unit compartment on the customer right hand side of the case.

The case must be grounded. For more detailed electrical wiring information (see Appendix A1).

**Power Cord Locking L5-15P**

Prior to plugging in and starting up the case always check the data tag located on the outside back panel of the case, as well as the voltage label found on the main power cord (if applicable) which can be found at the rear base panel. **Note:** Check that the voltage of the receptacle you are going to use for power and the voltage required for the case match.

**CAUTION**

Prior to plugging in and starting up the case. Be certain that the voltage of the receptacle you are going to use and the voltage required for the case match. Failure to do so may result in case/system damage.

Cord Replacement (5-15P to L5-15P)

Prior to replacing the power cord and plug, be sure to **DISCONNECT POWER to the case before proceeding.** The power can be disconnected at the main panel breaker in the building. Just turning OFF the case with the main power switch will **NOT disconnect power coming to the case.** **Note:** The front control panel has a clear cover to help protect against accidental access to switches. The controls can be accessed by use of a tool put through the provided holes in the cover.

To replace the standard 5-15P cord with the locking cord L5-15P in the field it is a quick disconnect of the connector and ground terminal (Fig. 20) within the CDU compartment; accessed from the rear air grill.

**DANGER**

**CAUTION, RISK OF ELECTRIC SHOCK.** Prior to replacing the power cord and plug, be sure to **DISCONNECT POWER WITH THE MAIN PANEL BREAKER to the case, before proceeding.**

**CAUTION**

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

REFRIGERATION & COMPRESSOR COMPARTMENT

A bottom mounted compressor compartment (Fig. 21) can be accessed by removing the lower rear panel. See Appendices for full instructions on how to program the Dixell electronic controller.
Access locations and/or R-290 compartment configurations will vary based on case design. See page 18 for a compressor compartment diagram.

**DANGER**

When carrying out maintenance tasks inside the refrigerated case or compressor compartment, it is essential to disconnect the power source to the case from the main power.

**CAUTION**

Be sure to remove all Styrofoam shipping blocks from piping and refrigerant lines. Failure to do so may result in case damage.

**Temperature Probe Connections**

1. The top probe is for defrost temperature and the bottom probe is the case temperature (Fig. 22).

**Electronic Cutoff**

The CNZLA/CNEZLA compressors have an electronic cutoff mechanism such that the LRA (Locked Rotor Amps) has zero (0) amp draw after 4 seconds when the rotor becomes locked.

**Power Supply & Light Switch**

1. After the main power cord located at the base panel of the case is plugged in and the power switch (Fig. 23) flipped to ON the case should begin normal operations.
2. After establishing power the light control switch (Fig. 23) (if applicable) located on the exterior front panel can be flipped to the ON position. The case should now be fully operational and all lights functioning when in the ON position (if applicable).
3. **Note:** The front control panel has a clear cover to help protect against accidental access to switches. The controls can be accessed by use of a tool put through the provided holes in the cover.

**DANGER**

ALWAYS CHECK THE THERMOSTAT CURRENT RATING. It may have a limited current, as low as 2A. If necessary protect digital thermostat contacts with a contractor.

**Fig. 23 Front panel power and light switch**
### CASE CONNECTIONS

#### R-290 COMPRESSOR COMPARTMENT DIAGRAM

![R-290 COMPRESSOR COMPARTMENT DIAGRAM](image)

A  Condenser Coil  C  Compressor  E  Drain  
B  Condenser Fan  D  Condensate Tray

Note: Access locations and/or compartment configurations will vary based on case design.

### SAFETY LABELS

Inspect the refrigerated display case and ensure all safety warnings/information applied on the refrigerated case are not removed. Any labels removed must be replaced. The following signs are applied:

<table>
<thead>
<tr>
<th>Warning #</th>
<th>Description of Warning</th>
<th>Symbol/Information</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ID Plate/Data Tag</td>
<td><img src="image" alt="ID Plate/Data Tag" /></td>
<td>Close to Field Wiring Box</td>
</tr>
<tr>
<td>2.</td>
<td>Danger; connect to an electrical system with a magneto-thermal cut-out</td>
<td><img src="image" alt="Danger Symbol" /></td>
<td>On Field Wiring Box</td>
</tr>
<tr>
<td>3.</td>
<td>Danger; connect to an electrical system with a magneto-thermal cut-out</td>
<td><img src="image" alt="Danger Symbol" /></td>
<td>On electrical panel. Power lead</td>
</tr>
<tr>
<td>4.</td>
<td>Danger: Do not lift. Disconnect electrical power first; do not use water jets directly; moving parts; disconnect electrical power.</td>
<td><img src="image" alt="Danger Symbol" /></td>
<td>On all fan holders</td>
</tr>
<tr>
<td>5.</td>
<td>Ground connection point.</td>
<td><img src="image" alt="Ground Symbol" /></td>
<td>On the electrical switch box.</td>
</tr>
<tr>
<td></td>
<td>Label Type</td>
<td>Description</td>
<td>Location</td>
</tr>
<tr>
<td>---</td>
<td>------------</td>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>6</td>
<td>Type label</td>
<td>ANSI/NSF-7 Type 1 Display Refrigerator intended for 75°F/55%RH</td>
<td>Close to Field Wiring Box</td>
</tr>
<tr>
<td>7</td>
<td>Intended use label</td>
<td>This equipment is intended for the storage of packaged products only</td>
<td>Close to Field Wiring Box</td>
</tr>
<tr>
<td>8</td>
<td>Load limit</td>
<td></td>
<td>Inside/ixed and/or mobile</td>
</tr>
<tr>
<td>9</td>
<td>Danger</td>
<td>Risk of fire or explosion. Flammable refrigerant used. Do not use mechanical devices to defrost refrigerator. Do not puncture refrigerant tubing.</td>
<td>Flammable locations</td>
</tr>
<tr>
<td>10</td>
<td>Danger</td>
<td>Risk of fire or explosion. Flammable refrigerant used. Do not use mechanical devices to defrost refrigerator. Do not puncture refrigerant tubing.</td>
<td>Flammable locations/Case Exterior</td>
</tr>
<tr>
<td>11</td>
<td>Danger</td>
<td>Risk of fire or explosion. Flammable refrigerant used. To be repaired only by trained service personnel. Do not puncture refrigerant tubing. Caution: Flammable refrigerant used. Consult repair manual/owner's guide before attempting to install or service this product. All safety precautions must be followed.</td>
<td>Near the Machine Compartment Nameplate</td>
</tr>
<tr>
<td>12</td>
<td>Caution</td>
<td>Risk of fire or explosion. Dispose or properly in accordance with federal or local regulations. Flammable refrigerant used.</td>
<td>Exterior of Display Case</td>
</tr>
<tr>
<td>13</td>
<td>Caution</td>
<td>Risk of fire or explosion. Do not puncture refrigerant tubing; follow handling instructions carefully. Flammable refrigerant used.</td>
<td>Exterior of Display Case</td>
</tr>
<tr>
<td>14</td>
<td>Caution</td>
<td>Risk of fire or explosion. Due to flammable refrigerant used. Follow handling instructions carefully in compliance with U.S. government regulations.</td>
<td>Exterior of Display Case</td>
</tr>
</tbody>
</table>
GENERAL LIGHTING INFORMATION

Hillphoenix cases are equipped with LED luminaires.

The lighting system has an ON/OFF switch located on the front panel grille. **Should a power supply need to be removed and/or replaced, DISCONNECT POWER to the case before proceeding.** The power can be disconnected at the main panel breaker in the building. **Just turning OFF the case with the main power switch will NOT disconnect power coming to the case.** Once a case has been properly positioned in the store 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 75°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 (Fig. 24) or power supplies remove the lower front panel grille.

REPLACING LED LIGHTS

Once store power is connected the 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, DISCONNECT POWER to the case before proceeding.** The power can be disconnected at the main panel breaker in the building. Just turning OFF the case with the main power switch will NOT disconnect power coming to the case. Be certain to replace the power supply with genuine Hillphoenix parts.

**LED LUMINAIRES/ADAPTER**

Disassembling lampshades and LED luminaires:

1. First turn the power to the case OFF with the switch (Fig. 25) found at the front panel. **DISCONNECT POWER to the light before proceeding.**

2. Gently push in at the top of the lampshade until there is a small gap (Fig. 26) while at the same time using a slotted screwdriver (Fig. 27) to gently pry open the lampshade at the top of the shade.

3. Carefully, sliding horizontally while using your fingers loosen the top of the lampshade from left to right (Fig. 28) until the entire shade can be pulled out and away.

4. Once the lampshade is removed, unscrew the terminal wiring brackets (Fig. 29).
Reassembling lampshades and LED luminaires:

1. First turn the power to the case OFF with the switch (Fig. 25) found at the front panel. **DISCONNECT POWER to the case before proceeding.** The power can be disconnected at the main panel breaker in the building. Just turning OFF the case with the main power switch will NOT disconnect power coming to the case.

2. Follow steps 2-5 from the previous section covering the disassembly of the lampshades and LED luminaires.

3. Clip (Fig. 31) in the new LED light bar luminaires.

4. Plug in the terminals (Fig. 30).

5. Screw the terminal wiring brackets (Fig. 29) back in to place.

6. The lampshade (Fig. 28) will go back in next by gently placing it in the slotted bracket, along the bottom of the shade while moving down the shade left to right. Once the bottom of the lampshade is in position you will then move left to right again but this time carefully pressing the top portion of the shade back in to the slotted bracket that will hold it in place.
Disassembly of LED Driver:

1. First turn the power to the case OFF with the switch (Fig. 32) found at the front panel grill. DISCONNECT POWER to the case before proceeding. The power can be disconnected at the main panel breaker in the building. Just turning OFF the case with the main power switch will NOT disconnect power coming to the case.

Fig. 32 Front panel grill & power switch

2. Once case power is OFF and POWER DISCONNECTED you can remove the grill. With a slim tool similar in width to a plastic card, place the tool in to the upper seam of the grill (Fig. 33.) While doing so push the tool in, then downward to disengage the snap features of the panel.

Fig. 33 Front panel removal

3. There are two snap features (Fig. 34) on top and one on each side holding the grill in place. Note: When returning the grill be sure that the flanges on the bottom of the panel are engaged between the bottom of the grill and the case structure.

Fig. 34 Snap features and wiring

4. Unplug the terminal, the switch connected to the input terminal and the LED light wiring connected to the output terminal (Fig. 35). One plug is for the lights, the other for the condensor fan. The plug with the yellow wire is the fan.

Fig. 35 LED driver

5. Use a screwdriver to remove the screws securing the power supply to complete the disassembly.
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. 8)

☐ Have you checked to ensure the case is horizontally level? (see pg. 11)

☐ Have you checked and verified the voltage of the receptacle you are going to use for power and the voltage required for the case match? (see pg. 16)

☐ Have you verified the display case switch is in the OFF position prior to plugging in to the main power source? (see pg. 16-17)

☐ Have you checked all exposed refrigeration lines to ensure that they are not kinked, dented or rubbing together and have installed the compressor compartment access panel? (see pg. 17-18)

☐ Have you reviewed safety warning labels and verified all are present and in good condition? (see pg. 18-19)

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 case temperature and adjust controller as needed. All display case connections comply with the information/instructions?

2. Store the installation manual in the vicinity of the display case itself to where it can be accessed and consulted by all members of staff involved in the use of the refrigerator display case.

3. Before placing food in the display case, allow the case to operate for approximately two (2) hours and ensure the case is at the proper temp before loading.
AIRFLOW & PRODUCT LOAD

Hillphoenix cases provide maximum product capacity within the refrigerated air envelope. Please keep products within the appropriate load limit.

It is important that you do not overload the food product display so that it impinges on performance. Overloading will cause malfunction and the loss of proper temperature levels. *For full technical reference drawings with load limit lines, refer to pages 4 and 7.*

Access to the product is from the top. The case must only be loaded with product when the temperature specified for the product has been reached.

**WARNING**
Always keep product within the designated air curtain. 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.

**CAUTION**
Proceed to the loading only once the display case has reached the proper temperature setting.

DEFROST

Cases are delivered with a customer specific factory setting. Each case contains one or more hermetically sealed refrigerant circuits, the components of which are technically connected to each other permanently. The units can operate in four different operating modes: Ice Cream, Frozen Food, Meat and Deli.

The waste heat generated in the case is discharged to the ambient air via an air condenser.

The case is defrosting automatically to keep the inner tank free of frost and ice. The unit work properly even when the frost/ice accumulates on the surface of the inner tank. Automatic defrost and manual defrost are set inactive in freezer mode.

A limited number of manual defrosts can be performed. Push the DEF key for more than 2 seconds and a manual defrost will start.

Triggered by a factory-set time, the unit starts one defrost cycle per day (during night time).

Defrost cycle stops automatically when ice/frost is removed (triggered by the internal temperature sensor or software based max time out period).

During automatic defrost the display shows "dEF". *For more detailed Dixell operating information (see Appendix B1).*

The accumulated defrost water is drained then evaporated.

**TEMPERATURE DISPLAY**

Indication of indoor temperature:
- Ice Cream, <0°F (-18°C)
- Frozen Food, <10°F (-12°C)
- Meat, 29°F (-1.5°C) ~ 39°F (4°C)
- Deli, 33°F (0.5°C) ~ 40°F (4.5°C)

Responsibility: operating staff
Frequency: several times a day

**DANGER**

**FLAMMABLE**
DANGER - Risk of Fire or Explosion. Flammable Refrigerant Used. Do Not Use Mechanical Devices To Defrost Refrigerator. Do Not Puncture Refrigerant Tubing.
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 cleaning 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.
- Check the 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. This can be found about half way down the case wall. The condensate runs to the trough where it will exit the case to the condensate pan to be evaporated off.
- To clean the LED luminaires, shut off the lights in the case, then wipe the luminaires down with a soft, damp cloth. Avoid using harsh or abrasive cleaners as they may damage the lights. Be certain that the luminaires are completely dry before re-energizing.
- 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.
- Allow cases to be turned off long enough to clean any frost or ice from coil and pans.
- Remove kickplate 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

Material damage due to excessive amounts of cleaning agents. Use only cleaning devices moistened with cleaning agents.

- Clean water: Unit and glass surfaces outside and inside.
- Slightly alkaline cleaning agent for heavier contamination (e.g., neutral soap and water): Unit outside and inside. Glass surfaces outside.
- Glass cleaner (recommended pH-value 5-7): Glass surfaces outside.

### CAUTION

Material damage due to wrong cleaning agents. Do not use abrasive, chemically aggressive, strongly acidic (pH-value <4), strongly alkaline (pH-value>8) or highly flammable cleaning agents. All cleaning devices must be clean themselves.
**CASE CLEANING**

**FOR CLEANING**

<table>
<thead>
<tr>
<th>CLEANING DEVICES</th>
<th>CLEANING AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damp soft cotton cloth.</td>
<td>Unit and glass surfaces outside and inside.</td>
</tr>
<tr>
<td>Damp sponge cloth or sponge.</td>
<td>Unit Inside</td>
</tr>
</tbody>
</table>

**FOR DRYING**

<table>
<thead>
<tr>
<th>FOR DRYING</th>
<th>CLEANING AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lightly moistened soft cotton cloth.</td>
<td>Unit and glass surfaces outside and inside.</td>
</tr>
</tbody>
</table>

**DURING OPERATION**

**Cleaning Steps**

1. Clean exterior walls and the frame.
2. If available, clean the bumpers and water protection strips.
3. Clean glass surfaces outside.
4. Remove food residues, such as spilled liquids and packaging residues.
5. Clean the tracks for the lids.
6. Dry all cleaned surfaces and components.
7. Clean the floor in front of the unit.

**COOLING FUNCTION SWITCHED OFF**

**Cleaning Steps**

**Frequency: For hygiene reasons at least twice a year.**

1. Move product to another unit.
2. Switch refrigeration OFF by pressing the main power switch.
3. Remove the glass lids by pushing up into the seel then pulling out. Clean before re-installation with a spray bottle filled with an approved mild detergent and warm water. Also clean the associated plastic unit frame and seels. Do not apply large amounts of cleaning agent to these surfaces.
4. Remove all accessories from the interior of the unit. After use ensure for a neat and safe storage.
5. Remove all defrost water from the following options;
   a) Wet vacuum cleaner/electrical devices with marking of explosion protection.
   b) Lightly moistened cloth.
   c) Units with defrost water plug: Place a pan under the drain and remove the defrost water plug. Let the defrost water drain off then close the drain with the defrost water plug again.
6. Remove food residues, such as spilled liquids and packaging residues.
7. Clean the interior of the unit such as the defrost drain and the defrost water sieve.
8. All cleaned areas and components must be dried again.
9. Re-install all accessories correctly.
10. Re-install the lids properly and close them completely.
11. Switch refrigeration function on by pressing the main power switch.

**CAUTION**

The case must only be loaded with goods when the temperature specified for the product has been reached.

**DANGER**

DANGER - Risk of Fire or Explosion. Flammable Refrigerant Used. Do Not Use Mechanical Devices To Defrost Refrigerator. Do Not Puncture Refrigerant Tubing.

**Condenser Air Intake**

Clean and remove the debris from the condenser air intake monthly. If not cleaned regularly the head pressure will rise and cut all power off to the compressor by means of the pressure switch.

This can be cleaned with an air hose. Be sure to remove all debris and wait until completely dry before turning power back on to the case.

**CAUTION**

Material damage due to improper cleaning. Damage to surface of plastic bezels/unit frame and impairment of the function of seals. Always clean plastic bezels/unit frame and seals again with clean water. There must not be any detergent residues on the plastic bezels/unit frame and seals.
Cleaning Condensate Tray
Inspect the condensate tray (Fig. 36) at least once every six months. Ensure you disconnect the electrical power supply and make sure you DO NOT touch the elements as they reach high temperatures (necessary for evaporation inside the pan).

Cleaning Condenser
The condensers used on the condensing units gather dust and dirt and must be cleaned regularly. Under normal working conditions this task must be executed at least once a month. A dirty condenser will reduce the display case performance: it will also result in increased energy consumption (Fig. 36).

CAUTION
Be sure to clean the condenser air intake monthly. Failure to do so may result in loss of normal compressor functions and case damage.

1. Open the front panel grill after power switch is turned OFF.
2. Use a brush to brush off the dust on the surface of the condenser, or use a hand-held vacuum cleaner to suck out the dust on the surface of the condenser.
3. When done re-install the front panel grille.

UNSCHEDULED CASE MAINTENANCE
Unscheduled maintenance concerns all those tasks that cannot normally be carried out by the routine user as specified. Such tasks require qualified personnel with specific technical skills (e.g. refrigeration system specialists, electricians etc.) and must be carried out at least once a year. See the scheduled maintenance table for a list of the main tasks (Fig. 37).

If inspection reveals any rust, cracks and etc...it will be necessary to carry out repairs and/or replacement of parts so that the case meets code and the display case is in prime operating condition. To enhance safety, it is recommended that you always seek the advice of a specialized technician before carrying out any repair work.

Fig. 36 Cleaning the condensate tray and condensing unit

SCHEDULED MAINTENANCE TABLE

<table>
<thead>
<tr>
<th>Maintenance</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Half Yearly</th>
<th>Yearly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning case</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Cleaning gas condenser</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case visual check</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety labels visual check</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check electric system</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Check water drainage system.</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Check refrigeration system</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>General inspection</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Fig. 37 Recommended cleaning schedule
PARTS SUBJECT TO WEAR & SPARE PARTS
Most spare parts carry clear, complete ID information. It is important that the refrigerated case parts be replaced by analogous parts of equivalent safety and quality: to order spare parts please contact Hillphoenix, stating the case model and serial number, found in this manual or on the case ID plate, and provide a description of the component and the desired quantity. Refer to the Parts section in the back of the manual for parts ordering and to identify parts that may need to be replaced.

INSTRUCTIONS FOR PERSONNEL

In the Event of General Emergency
Immediately inform those in the vicinity of the perceived danger, gesticulating if necessary; cut the electrical power to the cabinet.

In the Event of Fire
In the event that the refrigerated case catches fire or is involved in a fire it is possible to use an extinguisher with a powder-type or CO2 extinguishing agent.

Resetting the Case
To restore normal operation it is necessary to eliminate all the causes of the emergency situation; if necessary repair or replace damaged parts.

Note: If safety devices are tripped it will be necessary to identify the cause before continuing work.

FAILURES AND TROUBLESHOOTING

Failures
In the event of a failure of mechanical/electrical/refrigeration parts the initial safety conditions must be restored immediately by replacing or repairing such faulty parts.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The refrigerated cabinet does not work.</td>
<td>1. The main circuit breaker is set to OFF; 2. The power line between refrigerated cabinet and power socket is faulty; 3. The switch on the refrigerated cabinet control panel switch is not on.</td>
<td>1. Turn the main power on; 2. Make sure the plug is inserted properly in the socket; 3. Turn the power switch on the refrigerated cabinet panel ON.</td>
</tr>
<tr>
<td>The refrigeration effect of the refrigerated cabinet is poor.</td>
<td>1. The product door is not closed tightly; 2. The product temperature is set too high; 3. The product is exposed to direct sunlight or close to hot objects; 4. The goods are placed higher than the load line</td>
<td>1. Close the door tightly; 2. Lower the product temperature; 3. Keep the product in a cool place; 4. Place goods below the load line</td>
</tr>
<tr>
<td>The outer surface of the product is hot.</td>
<td>The outer surface of the product is wrapped with a condenser, which will generate heat during refrigeration.</td>
<td>This phenomenon is normal.</td>
</tr>
</tbody>
</table>

(Cont’d) NEXT PAGE
<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The product is noisy</td>
<td>1. The product is in the high-frequency operation stage at the initial stage of operation; 2. The product is in the defrosting stage; 3. The product is not placed stably.</td>
<td>1. After one to two hours of operation, the noise will be significantly reduced; 2. The defrosting cycle of the product is 24 hours. In the defrosting stage, high noise is a phenomenon of genuine production; 3. Adjust the foot to make the cabinet stable.</td>
</tr>
<tr>
<td>Condensation occurs on the glass door</td>
<td>The ambient temperature and humidity of the product are too high</td>
<td>The operating environment of the product is 75°F/55RH. In case of excessive humidity, please wipe off the water stains on the surface with a rag</td>
</tr>
<tr>
<td>There is peculiar smell inside the product</td>
<td>1. New products will smell like plastic; 2. Check whether there are deteriorated goods in the cabinet; 3. The product has not been cleaned for a long time.</td>
<td>1. After the product is used for a period of time, the smell will disappear naturally; 2. Clean up spoiled food in time; 3. Clean the product regularly.</td>
</tr>
</tbody>
</table>
SAFETY DEVICES & SERVICE

SAFETY DEVICES

WARNING

It is absolutely forbidden for the user to tamper with safety devices. Before using the refrigerated case check that mechanical safety covers are properly in place. Any tampering shall render the warranty null and void and exonerate Hillphoenix from any liability with regard to users of the refrigerated case.

Only maintenance personnel may carry out maintenance tasks involving safety devices. These tasks are listed below.

<table>
<thead>
<tr>
<th>SAFETY DEVICE</th>
<th>SCOPE OF INTERVENTION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporated over-pressure cut-out</td>
<td>On incorporated condenser unit compressor</td>
<td>Cuts the electrical power of the compressor if the pressure of the refrigerant rises above the safety limits.</td>
</tr>
<tr>
<td>Fixed cover on electrical control panel. Remove only with aid of tools</td>
<td>Electrical control panel</td>
<td>Prevents access to live parts. Electrical danger warning sign applied (see “DESCRIPTION OF DANGERS AND RISKS RESIDUAL”)</td>
</tr>
</tbody>
</table>

DESCRIPTION OF RESIDUAL DANGERS AND RISK

Residual Dangers

Dangers that have not been reduced/eliminated with the safety measures adopted on the refrigerated case can nevertheless be reduced/eliminated as long as users apply proper managerial practices.

- Ensure that all safety warning and labels are always in good condition; inspect them periodically and have them replaced whenever necessary.
- Do not install any spare parts that are not identical to the originals or of equivalent performance.
- Do not carry out any modifications or structural work without approval from Hillphoenix or a qualified field service technician.
- Should the refrigerated case be dented, inspect the structure visually or have qualified personnel carry out an inspection.

After a long period of disuse have a qualified field service technician carry out an inspection of the case to check that it is in good condition and working properly.

Residual Risks

While the refrigerated case has been designed to ensure maximum safety, there nevertheless remain some residual risks. Hillphoenix has identified the main dangers and residual risks for users and maintenance personnel as follows in chart below:

<table>
<thead>
<tr>
<th>DESCRIPTION OF RESIDUAL RISK</th>
<th>CAUSE</th>
<th>SAFETY MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger of falls in area surrounding the cabinet</td>
<td>Presence of: stairs, columns etc. and/or slippery floors and objects and/or work tools</td>
<td>Mark out the relevant zones and highlight them with warning signs and symbols (e.g. yellow/black striped marker tape on stairs etc.) that are visible during both routine use and maintenance.</td>
</tr>
<tr>
<td>Danger of objects accidentally falling</td>
<td>Haphazard storage of tools/objects.</td>
<td>Use tool boxes in work areas. Ensure personnel are trained.</td>
</tr>
<tr>
<td>Danger of injury to hands, arms, legs and head</td>
<td>During cleaning and maintenance there may be objects or parts of the cabinet protruding from the case itself (e.g. glass covers open during cleaning)</td>
<td>Mark out the work area with appropriate barriers. Always use the recommended personal safety devices.</td>
</tr>
<tr>
<td>Risk of refrigerating gas leaks</td>
<td>Accidental damage to pipes</td>
<td>Immediate shutdown of case operation. Disconnect electrical power supply. Contact a service technician.</td>
</tr>
</tbody>
</table>

SCHEDULED MAINTENANCE TABLE

<table>
<thead>
<tr>
<th>DESCRIPTION OF RESIDUAL RISK</th>
<th>CAUSE</th>
<th>SAFETY MEASURES</th>
</tr>
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</tbody>
</table>
REFRIGERANT

This piece of equipment uses a R-290 Refrigeration system. This equipment has been clearly marked on the data tag the type of refrigerant that is being used. There is also a warning label stating that the unit contains R-290 refrigerant.

No smoking or open flames when servicing this equipment. If needed, use a CO2 or dry=power type fire extinguisher.

Only authorized service technician, certified in R-290 system should service this equipment.

MANIFOLD SET

A R-134a manifold set can be used for servicing this equipment.

REFRIGERANT RECOVERY

Follow all national and local regulations for R-290 refrigerant recovery.

LEAKING CHECKING AND REPAIR

Leak check an R-290 system the same way you would an R-134a or R-404a system with the following exceptions.

1. Do not use a Halide leak detector on a R-290 system.
2. Electronic leak detector must be designated specifically for combustible gas.

Use of a bubble solution or an ultrasonic leak detector are acceptable.

When repairing a leak, it is recommended to use oxygen free dry nitrogen with a trace gas not exceeding 200PSI.

When accessing an R-290 system, proper charge is to be weighed into the system and the system is to be leak checked afterwards.

The R-290 equipment must have red process tubes and other devices through which the refrigerant is serviced, such as any service port. This color marking must remain on the equipment. If marking is removed, it must be replaced and extend at least 2.5 centimeters (1") from the compressor.

CHARGING

Follow the charge amount specified on the data tag. It is recommended to use the shortest hoses possible to prevent under-charging.

Ensure the system is sealed and leak checked
Evacuate system to a minimum 500 microns
Weigh in correct charge
Leak check the system again
Bleed the refrigerant from the high side hose to the low side hose
Disconnect the hoses
Remove line taps
Be sure that you have proper ventilation
Contact the Service Parts Department at:

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

or

dfr-caseclaims@doverfoodretail.com (warranty)
dfr-orderparts@doverfoodretail.com (non-warranty)

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 rear exterior panel of the case.

If the parts are to be returned for credit, contact the Parts Department. Do not send parts without authorization.
A1 ........................................................................................................... Piping Diagram
A2 ........................................................................................................... Wiring Diagram
B1-B3 ................................................................. Dixell Operating Instructions
C1 ........................................................................ Sporlan Pressure-Temperature Chart (R290)
D1-D2 ......................................................................................... Parts List
E1-E29 ................................................................................ Exploded Parts List
1.1 PLEASE READ BEFORE USING THIS MANUAL
- This manual is part of the product and should be kept near the instrument for easy and quick reference.
- The instrument shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.
- Check the application limits before proceeding.
- Dixell Srl reserves the right to change the composition of its products, even without notice, ensuring the same and unchanged functionality.

1.2 SAFETY PRECAUTIONS
- Check the supply voltage is correct before connecting the instrument.
- Do not expose to water or moisture; use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent formation of condensation.
- Warning: disconnect all electrical connections before any kind of maintenance.
- The instrument shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.
- Ensure that the wires for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining.
- In case of applications in industrial environments, the use of mains filters (our mod. FT1) in parallel with inductive loads could be useful.

2. GENERAL DESCRIPTION
The XR06CX, format 32 x 74 x 60 mm, is microprocessor based controller, suitable for applications on medium or low temperature ventilated refrigerating units. It has three relay outputs to control compressor, fan, and defrost which can be either electrical or reverse cycle (hot gas). The device is also provided with 2 NTC probe inputs, the first one for temperature control and the second one to be located onto the evaporator, to control the defrost termination temperature and to managed the fan and it’s provided with a configurable digital input.

3. REGULATION
The regulation is performed according to the temperature measured by the thermostat probe with a positive differential from the set point: if the temperature increases and reaches set point plus differential the compressor is started and then turned off when the temperature reaches the set point value again.
In case of fault in the thermostat probe the start of stop of the compressor are timed through parameters “O” and “C”.

4. DEFROST
Two defrost modes are available through the “T” parameter:
- “T=HEL” defrost through electrical heater (compressor OFF).
- “T=HGC” hot gas defrost (compressor ON).
Other parameters are used to control the interval between defrost cycles (td), its maximum length (dM) and two defrost modes: timed or controlled by the evaporator’s probe. At the end of defrost dripping time it’s started, its length is set in the dR parameter. With dR=0 the dripping time is disabled.

5. FANS
With FC parameter it can be selected the fans functioning: FC=CN will switch ON and OFF with the compressor and not run during defrost.
FC=CN will run when the compressor is off, and not run during defrost.
After defrost, there is a timed fan delay allowing for drip time, set by means of the “Tm” parameter.
In case of fault in the thermostat probe the start of stop of the compressor are timed through parameters “O” and “C”.

6. FRONT PANEL COMMANDS

6.1 FANS AND DIGITAL INPUT
When the digital input is configured as door switch @FDO, fans and compressor status depends on the dC parameter value:
- dC=ON a normal regulation;
- dC=FN fans OFF;
- dC=CN compressor OFF;
- dC=Fc compressor and fans OFF.

5.1 FANS AND DIGITAL INPUT
When the digital input is configured as door switch @FDO, fans and compressor status depends on the dC parameter value:
- dC=ON a normal regulation;
- dC=FN fans OFF;
- dC=CN compressor OFF;
- dC=Fc compressor and fans OFF.

When @FDO, the regulation restart with door open alarm.

6.2 HOW TO CHANGE THE SETPOINT
1. Push the SET key for more than 2 seconds to change the Set value.
2. The value of the set point will be displayed and the “C” or “F” LED starts blinking;
3. To change the Set value push the “+” or “-” arrows.
4. To memorise the new set value press the SET key again or wait 10s.

6.3 HOW TO START A MANUAL DEFROST
Push the DEF key for more than 2 seconds and a manual defrost will start.

6.4 HOW TO CHANGE A PARAMETER VALUE
To change the parameter’s value operate as follows:
1. Enter the Programming mode by pressing the SET+ key for 3s (“C” or “F” LED starts blinking.
2. Select the required parameter. Press the “SET” key to display its value.
3. Use “+” or “-” to change its value.
4. Press “SET” to store the new value and move to the following parameter.
To exit-Press SET+ or wait 10s without pressing a key.

NOTE: the set value is stored even when the procedure is exited by waiting the time-out to expire.

6.5 HIDDEN MENU
The hidden menu includes all the parameters of the instrument.

HOW TO ENTER THE HIDDEN MENU
1. Enter the Programming mode by pressing the SET+ key for 3s (“C” or “F” LED starts blinking.
2. Released the keys, then push again the SET+ key for more than 7s. The L2 label will be displayed immediately followed from the H parameter.

NOW YOU ARE IN THE HIDDEN MENU.
3. Select the required parameter.
4. Press the “SET” key to display its value.
5. Use “+” or “-” to change its value.
6. Press “SET” to store the new value and move to the following parameter.
To exit-Press SET+, or wait 15s without pressing a key.

NOTE: if there aren’t any parameter in L1, after 3s the “!!!” message is displayed. Keep the keys pushed till the L2 message is displayed.

NOTE: the set value is stored even when the procedure is exited by waiting the time-out to expire.

HOW TO MOVE A PARAMETER FROM THE HIDDEN MENU TO THE FIRST LEVEL AND VICEVERSA.
Each parameter present in the HIDDEN MENU can be removed or put into “THE FIRST LEVEL” (user level) by pressing SET+. In HIDDEN MENU when a parameter is present in First Level the decimal point is on.

6.6 TO LOCK THE KEYBOARD
1. Keep pressed for more than 3s the “+” and “-” keys.
2. The “OFF” message will be displayed and the keyboard will be locked. If a key is pressed more than 3s the “OFF” message will be displayed.
B2: DIXELL OPERATING INSTRUCTIONS

7 PARAMETERS

REGULATION

Hy Differential: (0°C – 25°C / 7°F – 77°F) Intervention differential for set point. Compressor Cut IN is at SET POINT + differential (Hy). Compressor Cut OUT is when the temperature reaches the set point.

LS Minimum SET POINT: (5°C/SET-67°F+SET) Sets the minimum value for the set point.

US Maximum SET POINT: (SET+69°C / SET+99°F) Sets the maximum value for the set point.

First probe calibration: (9.8÷9.9°C -17°F÷17°F) allows to adjust possible offset of the first probe.

P2 Evaporator probe presence: en = not present; y, = the defrost stop by temperature.

Eo Second probe calibration: (9.8÷9.9°C -17°F÷17°F) allows to adjust possible offset of the second probe.

Outputs activation delay at start up: [0÷99min] This function is enabled at the initial start up of the instrument and inhibits any output activation for the period of time set in the parameter.

AC Anti-short cycle delay: [0÷99 min] minimum interval between the compressor stop and the following restart.

Cy Compressor ON time with faulty probe: [0÷99 min] time during which the compressor is active in case of faulty thermostat probe. With Cy=0, compressor is always OFF.

Cn Compressor OFF time with faulty probe: [0÷99 min] time during which the compressor is OFF in case of faulty thermostat probe. With Cn=0, compressor is always active.

DISPLAY

CF Measurement unit: [°C / °F] = °C; °F. [Fahrenheit]. WARNING: When the measurement unit is changed the SET point and the values of the parameters Hy, US, SL, cD, cL, A1. AU have to be checked and modified if necessary.

rl Resolution only for °C (°D / °E / °F / °N): decimal between 9.9 and 9.9°C, in integer

Ld Default display: (P1 + P2) P1 T16 thermostat probe; P2 T6 evaporator probe. SP=Set point (only XR04CX)

dy Display delay: [0÷15 min] when the temperature increases, the display is updated of °C/ °F after this time.

DEFROST

id Defrost type: [EL – in] = electrical heater, compressor OFF; [in hot gas, compressor ON]

dE Defrost termination temperature: [-55÷50°C / -67°F÷99°F] This temperature is set by the evaporator probe, which causes the end of defrost.

Id Interval between defrost cycles: [0÷99 minutes] Determines the time interval between the beginning of two defrost cycles.

Md Maximum length for defrost: [0÷99 min] with 0 defrost] when P2=0, (not evaporator probe: timed defrost) it sets the defrost duration, when P2=1 (defrost based on temperature) it sets the maximum length for defrost.

Start defrost: [0÷99min] This is useful when different defrost start times are necessary to avoid overloading the plant.

df Display during start: (h / k / S / F ) = real temperature; [E] = start defrost temperature; SP=SET POINT; [D] = label DF.

dt Drip time: [0÷99 min] time interval between reaching defrost termination temperature and the restoring of the control’s normal operation. This time allows the evaporator to eliminate water condensation before the door can be opened.

Pd Defrost at power: on= activated; off= deactivated. Pd defrost doesn’t start at power-on.

FANS

Fp Fans operating mode: (on, on, on, y, y, y) = runs in the compressor, OFF during defrost; on=continuous mode, OFF during defrost; on= run with the compressor OFF, during ON; on=continuous mode, ON during defrost.

Fd Fans delay after defrost: [0÷99 min] interval between end of defrost and evaporator fans start.

FS Fans stop temperature: [-55÷10°C / -67°F÷59°F] setting of temperature, detected by evaporator probe, above which fans are always OFF.

ALARMS

AU Maximum temperature alarm: (AL÷98°C/209°F) when this temperature is reached the alarm is enabled, after the “Ad” delay time.

AL Minimum temperature alarm: [-55÷5°C / -67°F÷9°F] when this temperature is reached the alarm is enabled, after the “Ad” delay time.

Ad Temperature alarm delay: [0÷99 min] time interval between the detection of an alarm condition and alarm signaling.

da Exclusion of temperature alarm at startup: [0÷99 min] time interval between the detection of the temperature alarm condition after instrument power on and alarm signaling.

DIGITAL INPUT

IP Digital input polarity: (P+ < P- ) = OR activate by closing the contact; EL= activated by opening the contact.

If Digital input configuration: [EAE/Door/3mA/10mA] EA E External alarm: “E” message is displayed; bA serious alarm “CA” message is displayed; door switch function; dF defrost activation: As most used; HX: overinversion of the kind of action.

di Digital input delay: [0÷99 min] with IF=E or BA or defrost delay between the detection of the temperature alarm condition and its signalling. With IF = DO it represents the delay to activate the door alarm.

dC Compressor and fan status when open door: [noI/Door/On] = non normal; Fe = Fans OFF; Cp = Compressor OFF; Fe = Compressor and fans OFF.

rd Regulation with door open: (n V) = no regulation if door is opened; y when d is elapsed regulation restarts even if door open is present.

OTHER

d1 Thermostat probe display (read only)

d2 Evaporator probe display (read only)

P1 Parameter code table

rl Software release

8 DIGITAL INPUTS (ONLY XR03CX)

The free voltage digital input is programmable in different configurations by the “IF” parameter.
probe. Temperature alarms “HA” and “LA” automatically stop as soon as the temperature returns to normal values. Alarms “EA” and “CA” (with iF=bL) recover as soon as the digital input is disabled.

### 13 TECHNICAL DATA

**Housing:** self extinguishing ABS.  
**Case:** frontal 32x74 mm; depth 60mm;  
**Mounting:** panel mounting in a 71x29mm panel cut-out  
**Protection:** IP20;  
**Frontal protection:** IP65  
**Connections:** Screw terminal block \( \leq 2,5 \) mm\(^2\) wiring.  
**Power supply:** according to the model 230Vac \( \pm 10\% \), 50/60Hz --- 110Vac \( \pm 10\% \), 50/60Hz  
**Power absorption:** 3.5VA max  
**Display:** 2 digits, red LED, 14,2 mm high;  
**Inputs:** Up to 2 NTC.  
**Digital input:** free voltage contact  
**Relay outputs:** compressor SPST 8(3) A, 250Vac; SPST 16(6)A 250Vac or 20(8)A 250Vac defrost: SPDT 8(3) A, 250Vac  
**fan:** SPST 8(3) A, 250Vac or SPST 5(2) A  
**Data storing:** on the non-volatile memory (EEPROM).  
**Kind of action:** 1B;  
**Pollution degree:** 2;  
**Software class:** A.;  
**Rated impulsive voltage:** 2500V;  
**Overvoltage Category:** II  
**Operating temperature:** 0÷60 °C;  
**Storage temperature:** -25÷60 °C.  
**Relative humidity:** 20 \( \leq \) 85% (no condensing)  
**Measuring and regulation range:** NTC \(-40÷110\)°C;  
**Resolution:** 0,1 °C or 1°C or 1 °F (selectable);  
**Accuracy (ambient temp. 25°C):** \( \pm 0,1 \) °C \( \pm 1 \) digit

### 14.1 XR06CX – 20+8+5A OR 16+8+5A – 110VAC OR 230VAC

**NOTE:** The compressor relay is 20(8)A or 16(6)A depending on the model.  
**NOTE:** Connect the 120Vac power supply to 4-5

### 14.2 XR06CX – 8+8+8A – 110VAC OR 230VAC

**NOTE:** Connect the 120Vac power supply to 6-7

### 15 DEFAULT SETTING VALUES

<table>
<thead>
<tr>
<th>LABEL</th>
<th>DESCRIPTION</th>
<th>RANGE</th>
<th>DEFAULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hy</td>
<td>Differential</td>
<td>0.1 ÷ 25°C/1 ÷ 45°F</td>
<td>2.0°C / 4 °F</td>
</tr>
<tr>
<td>LS</td>
<td>Minimum Set Point</td>
<td>-55°C/SET-67°F/SET</td>
<td>-55°C / 55°F</td>
</tr>
<tr>
<td>US</td>
<td>Maximum Set Point</td>
<td>SET+99°C/ SET+99°F</td>
<td>99 °C / 99°F</td>
</tr>
<tr>
<td>at</td>
<td>First probe calibration</td>
<td>-9.9÷9.9°C/-17÷17°F</td>
<td>0.0</td>
</tr>
<tr>
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<td>n – Y</td>
<td>y</td>
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<tr>
<td>eE</td>
<td>Second probe calibration</td>
<td>-9.9÷9.9°C/-17÷17°F</td>
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</tr>
<tr>
<td>od</td>
<td>Outputs activation delay at start up</td>
<td>0 ÷ 99 min</td>
<td>0</td>
</tr>
<tr>
<td>AC</td>
<td>Anti-short cycle delay</td>
<td>0 ÷ 50 min</td>
<td>1</td>
</tr>
<tr>
<td>Cy</td>
<td>Compressor ON time faulty probe</td>
<td>0 ÷ 99 min</td>
<td>15</td>
</tr>
<tr>
<td>Cn</td>
<td>Compressor OFF time faulty probe</td>
<td>0 ÷ 99 min</td>
<td>30</td>
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### DISPLAY

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<tbody>
<tr>
<td>rE</td>
<td>Resolution (only for °C)</td>
<td>-de – in</td>
</tr>
</tbody>
</table>
## Temperature Chart

**Natural Refrigerants**

### Refrigerant Type (Safety Class)

- **HC (A3)**
- **Ammonia (B2L)**
- **CO2 (A1)**

### Temperature

- **°F**
- **°C**

### Chart Data

<table>
<thead>
<tr>
<th>Refrigerant Type</th>
<th>Safety Class</th>
<th>Temperature Range</th>
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<td>HC (A3)</td>
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<tr>
<td>Ammonia (B2L)</td>
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<tr>
<td>CO2 (A1)</td>
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</table>

### Chart Details

- Use this QR code to download the Chillmaster P-T app.
- To determine superheat, use Dew Point values.
- To determine subcooling, use Dew Point values.

### Chart Notes

- Pressure, psig = pounds per square inch (gage), psig
- Vacuum, inhg = inches of Mercury (inHg)

---

**C1: SPORLAN PRESSURE-TEMPERATURE CHART**

At San Leandro, Calif.

www.sporlanonline.com

---

*Temperature and pressure data generated by NIST Refprop.*

---

*Copyright 2016 Parker Hannifin Corporation.*

---

*Exceeds critical temperature.*

---

*To determine Superheat or 400-Series blends, use Refrigerant-290 here reads 41 PSIG (at bulb).*

---

*To determine Subcooling, use SUPERHEAT/Dew Point values.*

---

*Pressure, psig = pounds per square inch (gage), psig
Vacuum, inhg = inches of Mercury (inHg)*
A  Price Tag Molding
B  Top Glass Door
C  Top Glass Door Handle
D  Outside Back
E  Compressor Compartment
F  Compressor Air Exhaust
G  End Kickplate
H  Compressor Air Exhaust
I  Light Switch (Green)
J  Main Power Switch (Red)
K  Condenser Air Intake
L  Dixell Controller
M  Front Kickplate
N  Cart Bumper
O  Front Exterior Panel/Die Board

Note: The visual side panel shown separate from the case is not removable and only shown in this manner for visibility of the components behind it. The side panel shown removed in the exploded rendering here is for the labeling of parts only.
D2: PARTS LIST *CNEZLA (R-290)

A  Price Tag Molding
B  Top Glass Door
C  Top Glass Door Handle
D  Right Glass (Reverse Side - Left)
E  Outside Back
F  Compressor Compartment
G  Compressor Air Exhaust
H  End Kickplate
I  Compressor Air Exhaust
J  Light Switch (Green)
K  Main Power Switch (Red)
L  Condenser Air Intake
M  Dixell Controller
N  Front Kickplate
O  Cart Bumper
O  Front Exterior Panel/Die Board

Note: The visual side panel shown separate from the case is not removable and only shown in this manner for visibility of the components behind it. The side panel shown removed in the exploded rendering here is for the labeling of parts only.
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<tr>
<td>60</td>
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</table>

**Diagram:**

- **Part 1:** Grid
- **Part 2:** Plate
- **Part 3:** Plate
- **Part 4:** Grid
- **Part 5:** Grid
- **Part 6:** High front flute
- **Part 7:** High front flute
- **Part 8:** High front flute
- **Part 9:** Front cover
- **Part 10:** Front cover
- **Part 11:** Front cover
- **Part 12:** Front cover
- **Part 13:** Front cover
- **Part 14:** Front cover
- **Part 15:** Front cover
- **Part 16:** Front cover
- **Part 17:** Front cover
- **Part 18:** Front cover
- **Part 19:** Front cover
- **Part 20:** Front cover
- **Part 21:** Front cover
- **Part 22:** Front cover
- **Part 23:** Front cover
- **Part 24:** Front cover
- **Part 25:** Front cover
- **Part 26:** Front cover
- **Part 27:** Front cover
- **Part 28:** Front cover
- **Part 29:** Front cover
- **Part 30:** Front cover
- **Part 31:** Front cover
- **Part 32:** Front cover
- **Part 33:** Front cover
- **Part 34:** Front cover
- **Part 35:** Front cover
- **Part 36:** Front cover
- **Part 37:** Front cover
- **Part 38:** Front cover
- **Part 39:** Front cover
- **Part 40:** Front cover
- **Part 41:** Front cover
- **Part 42:** Front cover
- **Part 43:** Front cover
- **Part 44:** Front cover
- **Part 45:** Front cover
- **Part 46:** Front cover
- **Part 47:** Front cover
- **Part 48:** Front cover
- **Part 49:** Front cover
- **Part 50:** Front cover
- **Part 51:** Front cover
- **Part 52:** Front cover
- **Part 53:** Front cover
- **Part 54:** Front cover
- **Part 55:** Front cover
- **Part 56:** Front cover
- **Part 57:** Front cover
- **Part 58:** Front cover
- **Part 59:** Front cover
- **Part 60:** Front cover
E2: EXPLODED PARTS LIST (CNZLA-4)

序号 | 名称          | 部件编码
--- | ------------ | ----
1   | 右把手       | 4020002542
2   | 上玻璃门(带把手) | 4020001041
3   | 下玻璃门(带把手) | 4020001042
4   | 左把手       | 4000002943

Glass Door Assembly
<table>
<thead>
<tr>
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<tbody>
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<td>Switch</td>
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## E8: EXPLODED PARTS LIST (CNEZLA-6)

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![Diagram of the assembly]
E9: EXPLODED PARTS LIST (CNEZLA-6)

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<td>Right Spring Guide</td>
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<td>4</td>
<td>Right Bar</td>
<td>4200021443</td>
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<td>Left Door</td>
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<td>Left Door Frame</td>
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<tr>
<td>7</td>
<td>Left Spring Guide</td>
<td>360000279</td>
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<td>8</td>
<td>Left Bar</td>
<td>4200021444</td>
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### 3-Glass Door Assembly

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<td>Top Glass Door with Handle</td>
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<tr>
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<td>Bottom Glass Door with Handle</td>
<td>4204000042</td>
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**4-Glass Door Assembly**

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</tr>
<tr>
<td>2</td>
<td>Top Glass Door with Handle</td>
<td>4204001641</td>
</tr>
<tr>
<td>3</td>
<td>Bottom Glass Door with Handle</td>
<td>4204000042</td>
</tr>
<tr>
<td>4</td>
<td>Left Handle</td>
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EXPLODED PARTS LIST (CNEZLA-6)

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<td>Right Grid</td>
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<td>Key Holder</td>
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![Diagram of the parts list](image-url)
## E14: EXPLODED PARTS LIST (CNEZLA-6)

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<td>4</td>
<td>Fan Motor</td>
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<td>Fan Motor</td>
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Diagram showing exploded view of the parts.
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Right Hand</td>
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</tr>
<tr>
<td>2</td>
<td>Up Glass Door (Right)</td>
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</tr>
<tr>
<td>3</td>
<td>Down Glass Door (Right)</td>
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<tr>
<td>4</td>
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### E25: EXPLODED PARTS LIST (CNZLA-8)

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![Diagram of parts list](image-url)
### 6-LED灯组件

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<th>名称</th>
<th>部件编号</th>
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<td>3507001275</td>
</tr>
<tr>
<td>2</td>
<td>内灯左盖</td>
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<tr>
<td>3</td>
<td>内灯右</td>
<td>8007001032</td>
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<tr>
<td>4</td>
<td>内灯罩</td>
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<tr>
<td>5</td>
<td>内灯右盖</td>
<td>8000000443</td>
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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:

<table>
<thead>
<tr>
<th>Division</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillphoenix Refrigeration &amp; Power Systems Division</td>
<td>2016 Gees Mill Road, Conyers, GA 30013</td>
<td>1-833-280-5714</td>
</tr>
<tr>
<td>Hillphoenix Display Case Division</td>
<td>1925 Ruffin Mill Road, Colonial Heights, VA 23834</td>
<td>1-833-280-5714</td>
</tr>
<tr>
<td>Hillphoenix Specialty Products Division</td>
<td>703 Franklin Street, Keosauqua, IA 52565</td>
<td>1-833-280-5714</td>
</tr>
</tbody>
</table>
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.