To ensure proper functionality and optimum performance, it is STRONGLY recommended that Hillphoenix display 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 Web site at www.hillphoenix.com.
PRECAUTIONARY NOTICES

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 call out important messages in all Hillphoenix installation and operations handbooks with an accompanying alert symbol paired with the words "DANGER!", "WARNING!", or "ATTENTION!". All of these important messages will inform you of potential hazards and dangers to personal safety and health - as well as risks of case damage - if the instructions are not carefully followed.

ATTENTION!
Indicates an important point of information that is key to ensuring that case equipment functions properly.

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

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

SERVICE NOTICE

To ensure proper functionality and optimum performance, it is strongly recommended that Hillphoenix display 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 Web site at www.hillphoenix.com.

LIABILITY NOTICE

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

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

P079211M, REVO

GLYCOL NOTICE

For Systems Utilizing R-744 (CO2) Refrigerant
Use of glycol as a secondary refrigerant must be carried out in accordance with the procedures set forth in the Hillphoenix Second Nature Medium Temperature Secondary Refrigeration Installation Manual. This manual is available for download from the Hillphoenix website at the following link, http://www.hillphoenix.com/refrigeration-systems/second-nature/.

R-744 (CO2) NOTICE

For Systems Utilizing R-744 (CO2) Refrigerant
For refrigeration units that utilize R-744 (CO2), 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 (CO2), venting of the R-744 (CO2) 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.

CAUTION!
Under no circumstance should any component be replaced or added without consulting Hillphoenix Field Service Engineering. Utilizing improper components may result in serious injury to persons or damage to the refrigeration system.
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 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 Hillphoenix, and we wish you the very best in outstanding food merchandising.

**CASE DESCRIPTION**

This manual covers VNRZ reach-in door merchandisers.

**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 (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.

**RECEIVING CASES**

Examine fixtures carefully and in the event of shipping damage and/or shortages, please contact the Service Parts Department at 1-800-283-1109.

**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.

**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.

**SERVICE & TECHNICAL SUPPORT**

For service or technical questions regarding display cases, please contact our Case Division Customer Service Department at the toll-free number listed below. For questions regarding our refrigeration systems or electrical distribution centers, please contact our Systems Division Customer Service Department at 1-770-388-0706.

---

**Hillphoenix**  
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

Single Case

1. Roll the case into position, leaving a minimum of 2” between the wall and back of case. Using a “J” bar, raise the end of the case (under cross support), remove the casters from the back of the case, lowering the base horse on to the shim packs. Repeat on the other end of the case.

2. When the back-end of the case has been properly seated on the shim packs, insert an outrigger upside-down into the baseframe to use as a lifting surface. Using the “J” bar, simply lift the case (Fig. 2), then add or remove shims as necessary. Do NOT use the tank bottom as a J bar lifting surface!

Multi-Case

1. Remove any shelves (discard the shelf clips) and/or loose items from the cases that may interfere with case joining (e.g. shipping braces, mirror assemblies, etc). Keep all loose items as they will be used later in the installation process.

2. Remove the return air grill at the case joint. The grill lifts out without fasteners and may be easily removed to gain clear access to the case-to-case joining bolts.

3. Follow the single-case installation instructions for the first case, then position the next case in the line-up approximately 3’ away. Remove the casters on the end that is closest to the first case.

CAUTION!

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.
4. Apply the foam tape gasket (supplied) and butyl or silicone sealant to the end of the first case (Fig. 3).

5. From the opposite end, push the second case to a position that is approximately 6" from the first case, then remove the remaining casters and position case on the shim packs.

**TRIM OUT**

1. Seal the case-to-case joints with caulk (supplied), then apply acrylic tape (supplied) over the pipe-chase seam (Fig. 4). The tape acts as a watershed preventing water from settling in the case joint.

2. Re-install shelves. If shelf fillers are utilized, it is important that they be installed flush with the rear baffle to ensure proper airflow in the case.

3. Install the front panel (Fig. 5). The front panel bottom insert is a painted panel that ships loose with the case. The panel is inserted upward under the door frame exteriors and is supported without fasteners by setting the panel on the tabs as shown.

4. Make any adjustments that are necessary to properly align the front panels, then install the front panel trim (supplied).

5. Install the front kickplate (Fig. 6) to the kickplate retainer as shown.
REFRIGERATION

There are two refrigeration piping options for VNRZ cases: standard and top-rear.

As the diagrams below indicates, the piping penetration area is located at the front, right-hand side of the case, fully visible in front of the fan plenum. An optional piping to the top rear is provided with refrigeration pipes stubbed out and labelled at the top of the case. These pipes exit the case through the lower rear pipe egress and into a foam-filled box. Refrigeration connections are made at the top of the case.

If hot gas defrost is utilized, suction lines to each case in the circuit should be of equal distance from the main suction line. The expansion valve and other controls - located on the left-hand side of the case - are accessible by lifting the two deck pans (lifting the fan plenum is not required).

ATTENTION!

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

If it becomes necessary to penetrate the case tank in any area, be certain to seal any open gaps afterwards with canned-foam sealant and white RTV. Before operating the case, be certain to remove the shipping blocks (Fig. 6) that protect the refrigeration lines during shipping.

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

![Fig. 6 Remove the shipping blocks](image)

---

### VNRZ

**Electrical Junction Box**

- Wiring Per Local Codes

**Dimensions**

- **A**: 37 1/8 in [94.4 cm]
- **B**: 32 7/8 in [83.6 cm]
- **C**: 26 3/4 in [67.9 cm]
- **D**: 23 1/2 in [59.6 cm]
- **E**: 30 1/8 in [76.6 cm]

**Piping to the Top**

- 2 in [5.1 cm]
- 7 in [17.8 cm]

**Kick Plate Location**

- 1 1/2" PVC Drain Connection

**Base Frame Structure**

<table>
<thead>
<tr>
<th>VNRZ</th>
<th>Base Frame Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASE LENGTH</td>
<td>DOORS A</td>
</tr>
<tr>
<td>60&quot;</td>
<td>2</td>
</tr>
<tr>
<td>90&quot;</td>
<td>3</td>
</tr>
<tr>
<td>120&quot;</td>
<td>4</td>
</tr>
<tr>
<td>150&quot;</td>
<td>5</td>
</tr>
</tbody>
</table>

* Riser Support
**PLUMBING**

The drain outlet is specially molded out of PVC material and is located in the front-center of the case for convenient access. The "P" trap, furnished with the case, is constructed of schedule 40 PVC pipe (Fig. 7). Care should be given to ensure that all connections are watertight and sealed with the appropriate PVC or ABS cement.

The drain lines can be run left or right of the tee with the proper pitch to satisfy local drainage requirements. Since the kickplate is shipped loose with the case, you should have open access to the drain line area during installation.

If the kickplate has been installed, you will find it very easy to remove. Simply lift the kickplate up from the "J" rail and pull it out, away from the case. See the Trim Out section on page 6.

**ELECTRICAL**

Electrical hookups are made to a junction box located on the top-rear-left of the case (Fig. 8).

For case-to-case wiring, run conduit between the junction boxes. 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. For more detailed electrical wiring information, see Appendix A.

**LIGHTING**

LED lighting for VNRZ cases is pre-installed during the manufacturing process. For any questions or service needs, please contact our Case Division Customer Service Department toll-free at 1-800-283-1109.
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. 2)

☐ Have you removed and discarded the casters? (see pg. 3)

☐ Have you checked the vertical plumb of the case? The horizontal level? (see pg. 3)

☐ Have you applied the foam tape gasket and sealant between adjoining cases? (see pg. 3)

☐ Have you sealed the case-to-case joints by applying caulk and acrylic tape to the pipe-chase seam? (see pg. 4)

☐ Have you removed the shipping blocks from the refrigeration lines? (see pg. 5)

☐ Have you sealed any tank penetrations? (see pg. 5)

☐ Have you cleared the case of any loose packaging or case materials? (see pg. 6)
AIR FLOW & PRODUCT LOAD

Hillphoenix cases 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.

FANS

VNRZ cases feature EC (electronically commutated) fan motor assemblies in which the evaporator fan blade, motor, and basket are integrated into a single unit. The EBM Papst fans have 8” fan blades with a factory-set blade pitch. Fans are pre-set for 1800 RPMs; if an airflow adjustment is required, replacement fans with a different RPM set-point may be ordered.

Fan assemblies may be changed with an easy two-step process without lifting up the plenum, thereby avoiding the necessity to unload the entire product display to change the fan assembly:

1. Unplug the fan motor (Fig. 11) from the receptacle on the exterior of the fan plenum. Push the power cord back through the plenum opening.

2. Remove the fasteners, then lift out the entire fan basket.

(Reverse procedure when re-installing fan assembly.)

CAUTION!

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.

ATTENTION!

Power cord must be pushed back through the plenum opening before removing the fan basket. Failure to do so may result in damage to the power cord.

A. Discharge Air Probe
B. Electric Defrost Termination Control Sensor Bulb
   Electric Defrost Termination Probe
   Timed-Off Defrost Termination Control Sensor Bulb
   Temperature Control Sensor Bulb
C. Reverse Air Defrost Termination Control Sensor Bulb
   Return Air Probe
DEFROST & TEMPERATURE CONTROLS

Hillphoenix cases utilize electric or hot gas defrost. All low-temperature reach-in cases have local defrost controls that terminate defrost cycles in individual cases, as well as rack-system controls for circuit termination. The primary components are the various defrost termination sensors, which work to terminate the defrost cycle. These controls may include 1) a Klixon® thermostat (mounted on the dump line on the coil side of the check valve or solenoid valve for hot gas), 2) a sensor probe, (inserted 8" into the lower left coil end plate for electric defrost or mounted on the dump line on the coil side of the check valve or solenoid valve for hot gas) or 3) a dial-type thermostat with sensor bulb mounted to the left end of the coil for electric defrost or mounted on the dump line on the coil side of the check valve or solenoid valve for hot gas) - i.e., in the electrical junction box, in the electrical raceway, etc.).

For more detailed information on suggested defrost times and settings, see Appendices A & B. Further adjustment may be required depending on store conditions.

DETERMINING SUPERHEAT

To identify proper superheat settings, complete the following:

1. Obtain suction pressure from access port; obtain suction line temperature from area near TXV bulb at the outlet of evaporator coil (Fig. 12).
2. Using the suction pressure reading, convert pressure to temperature using temperature pressure chart (see Appendix B1 for supplied pressure-temperature chart).
3. Finally, subtract the converted temperature reading from the actual temperature reading for superheat setting.

Fig. 12 Obtain pressure and temperature readings

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

• All surfaces pitch downward to a deep-drawn drain trough, funneling liquids to the front of the case where the waste outlet is located for easy access. 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.

• 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.

• If any potentially harmful cleaners are used, be certain to provide a temporary separator (e.g., cardboard, plastic rap, etc.) between those cases that are being cleaned and those that may still contain product.

• Avoid spraying cleaning solutions directly on 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.
LIMITED WARRANTY

GENERAL WARRANTY

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

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

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

MODIFICATIONS TO GENERAL WARRANTY

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

DISPLAY CASE AND SPECIALTY PRODUCTS CLEARVOYANT® LED LIGHTING

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

REMEDY LIMITATION/DAMAGES EXCLUSION

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

EXCLUSIVE WARRANTY

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

Submit warranty claims to:

Hillphoenix Refrigeration & Power
Systems Division
2016 Gees Mill Road
Conyers, GA 30013
Attn: Tom Bradshaw
Phone: 770-285-3024
tom.bradshaw@hillphoenix.com

Hillphoenix Display Case Division
1925 Ruffin Mill Road
Colonial Heights, VA 23834
Attn: Harry Moy
Phone: 804-614-1457
harrymoy@hillphoenix.com

Hillphoenix Specialty Products Division
703 Franklin Street
Keosauqua, IA 52565
Attn Jake Bair
Phone: 319-293-8551
jake.bair@hillphoenix.com
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 components 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.
VNRZ ELECTRICAL DATA & CASE DIMENSIONS ............................................. A1
ELECTRICAL WIRING ................................................................. B1
SPORLAN PRESSURE-TEMPERATURE CHART ...................................... C1
SEISMIC BRACKET INSTALLATION ............................................... D1
NON-INSULATED PARTITION INSTALLATION INSTRUCTIONS ................. E1
### Electrical Data

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<thead>
<tr>
<th>Doors Per Case</th>
<th>Fans</th>
<th>High Efficiency Fans</th>
<th>Defrost Heaters</th>
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### Lighting Data

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### Anti-Condensate Heater Data

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<td>Low E (Heated Rails Only)</td>
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<td></td>
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### Guidelines & Control Settings

<table>
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<tr>
<th>Application</th>
<th>Door</th>
<th>BTUH/door</th>
<th>Evaporator Temp (°F)</th>
<th>Superheat Set Point @ Bulb (°F)</th>
<th>Discharge Air Temp (°F)</th>
<th>Discharge Air Velocity (FPM)</th>
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<td>1017</td>
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### Defrost Controls

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<th>Hot Gas Defrost</th>
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<td>Fail-Safe (min)</td>
<td>Termination Temp (°F)</td>
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<tr>
<td>1</td>
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<td>50</td>
</tr>
</tbody>
</table>

---

1. Do not remotely break the 120v fan circuit. Loss of local control/defrost termination will occur.
2. Drain heater and fan motors share the same circuit (separate cycles). Be certain that the circuit wiring is properly sized to handle the higher current draw of the tank heater.
3. Figure given is maximum amps per phase.
4. Low-power lights. High-power option available.
5. Values provided are for doors with no heat on the glass.
6. Average discharge air velocity at peak of defrost.
CASE DIMENSIONS

VNRZ BASE FRAME STRUCTURE

<table>
<thead>
<tr>
<th>CASE LENGTH</th>
<th>DOORS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tbody>
<tr>
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<td>2</td>
<td>3/8</td>
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<td>55 1/2&quot;</td>
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<tr>
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* RISER SUPPORT

NOTES:
- : STUB-UP AREA
** : RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS
- ENDS ADD APPROXIMATELY 1" TO CASE HEIGHT, 1/2" TO THE BACK & 1" TO THE FRONT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (ALL LENGTHS) - 5/8"
- LIQUID LINE (ALL LENGTHS) - 3/8"
- AVAILABLE SHELF SIZES: 24" & 22"
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ELECTRIC DEFROST
(208V; 1-PHASE)
HOT GAS DEFROST
(208V; SINGLE-PHASE)
**Sporlan Pressure-Temperature Chart - at sea level**

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<th>Refrigerant</th>
<th>Pressure (psig)</th>
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<td>744</td>
<td>38.0</td>
<td>21.1</td>
<td>744</td>
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**To determine subcooling for R-404A using BUBBLE POINT values: Temperatures above 50°F - Gray background: to determine superheat for R-404A, use BUBBLE POINT values. Temperatures below 0°F - Pink background.**

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Constraint Bracket Installation

The case constraint brackets can be installed in 2 ways. Option 1 can be used on multi-deck cases and uses an “L” bracket to attach the case to a vertical wall, as shown below. Option 2 can be used on multi-deck cases or on cases that do not have a canopy. Attach the “L” brackets to the base frames in either of the locations shown below. Brackets are available for all base frame heights.

**OPTION 1**

- **ATTACH BRACKET TO WALL**
  - USE (1) 0.5" OR (2) 0.375" ANCHORS

- **CONSTRAINT BRACKET**
  - ATTACH TO TOP OF CASE
  - USE (3) #10 SELF TAPPING SCREWS

**OPTION 2**

- **BASE FRAME CONSTRAINT BRACKET**
  - 2 PER CASE
  - BRACKET SHOWN HERE IS FOR A 5" TALL BASE FRAME, CONSTRAINT BRACKETS ARE ALSO AVAILABLE FOR ALL BASE FRAME HEIGHTS

- **ALTERNATE LOCATION**
  - BACK OF CASE
  - USE (1) 0.5" OR (2) 0.375" ANCHOR(S) FOR ATTACHMENT TO THE STORE FLOOR

- **BRACKET CAN BE POSITIONED ON EITHER SIDE OF THE BASE FRAME**

- **USE (3) #10 SELF DRILLING / SELF TAPPING SCREWS FOR ATTACHMENT TO THE BASE FRAME**