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Installation, Maintenance &
Troubleshooting Manual
for
Walk-In Coolers and Freezers

Overview

Thank you for your purchase of our prefabricated modular walk-in. Imperial's prefabricated structures are designed for exact size and easy field installation, disassembly, enlargement, and relocation. Installation is relatively easy, but it still requires a minimum understanding of how our the structure goes together. This guide will help you install one of our structure correctly and efficiently.



IMPORTANT: Before attempting to install a walk-in, read these instructions carefully. Enclosed with these instructions is a shop print (plan view) showing proper location of all panels. Before placing any panel into position, check plan view for the location.



NOTE: The instruction manual is provided to make the installation process as easy as possible, but it does not show every application available. The walk-in depicted is a freezer with a pre-fabricated floor. Please note any differences between this walk-in and your walk-in.



NOTE: When erecting the walk-in next to an existing building wall, position the walk-in with sufficient clearance (2" minimum) for adequate air flow and to allow for any wall surface irregularity. (If walk-in has been ordered with floor, please see figure 1 in installation manual.)



IMPORTANT: If at any time during installation you have a question, simply call our customer service department at 800-238-4093.

INSTALLATION

Floor panels

This section is applicable only if your walk-in has a floor. If not, proceed with next section.

These are probably the most important panels you will install. To install the floor panels, follow the procedure described below:

1. Lay out the outside dimensions of cooler or freezer with a chalk line on surface being used.
2. Find the high point of this area (on walk-in larger than 10' x 10', it is advisable that a transit be used to level the floor rather than a spirit level). The entire floor area must be leveled from this highest point. A fairly simple method for leveling the floor is with wooden supports and shims.



IMPORTANT: Levelness of the walk-in floor is critical. If the floor is not level, vertical panels cannot be aligned properly.

3. If floor design includes optional sleeper strips, lay strips provided perpendicular to the prefabricated floor panels (across floor panel joints) approximately 16" on center (see figure 1). Appropriate spacing is indicated in the shop drawings.

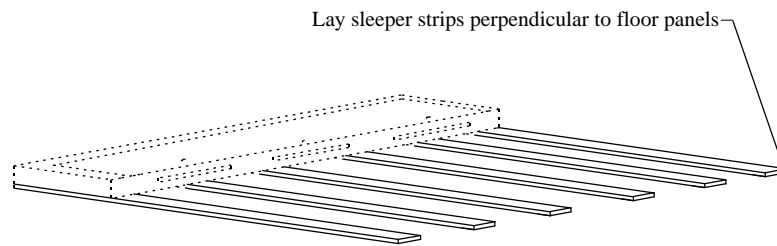


Figure 1 - Laying Out The Sleepers

4. Place a bead of latex caulking between each floor panel before cam-locking together. Flush the top and end of each panel as to ensure the panels themselves are level (see figure 2 and 3).



IMPORTANT: Make sure the measurements are square.

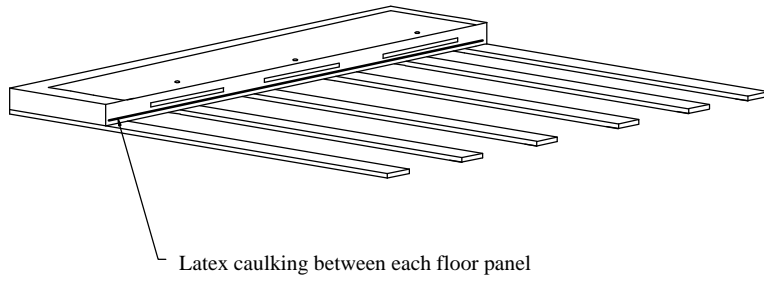


Figure 2 - Laying out the floor panels

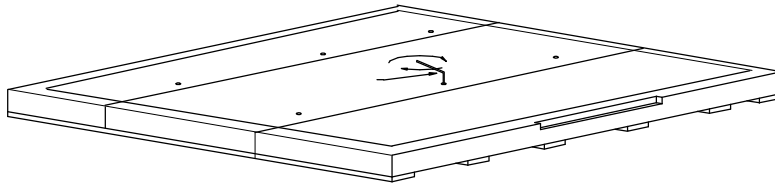


Figure 3 - Cam-Locking Floor Panels Together

Wall Panels

Before installing any wall panel, install the angle screed on the floor surface as shown on figure 4. Measure in half the distance of the wall thickness and install the 3/4" x 1" angle screed. Place the angle facing toward the inside of the walk-in with the 1" leg down. Fasten angle screed to floor surface holding angle back approximately 1ft. from corners and any door opening. If walk-in is a freezer using no prefabricated floor and a swing door, make sure the floor surface is notched in accordance to drawings specification to accommodate a freezer door heat cable.

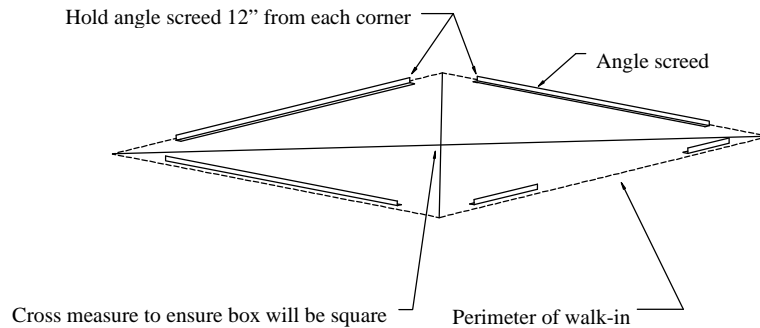


Figure 4a - Installing Angle Screed On Building Floor

Wall panels are now to be installed on top of the prefabricated floor. If the walk-in does not have a prefabricated floor, lay out the outside dimensions of walk-in with a chalk line on surface being used (see figure 3).

The bottom edge of wall panels is generally inserted on top of a angle screed. The angle screed is not to be used if floor is cam-lock. In some rare cases, cam-lock screed may be used.

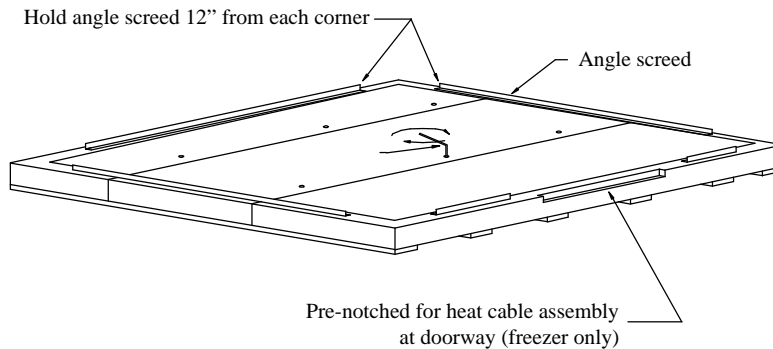


Figure 4b - Installing Angle Screed On Prefabricated Floor

2. Place a heavy bead of latex caulking on the outside of the angle screed (see figure 5).

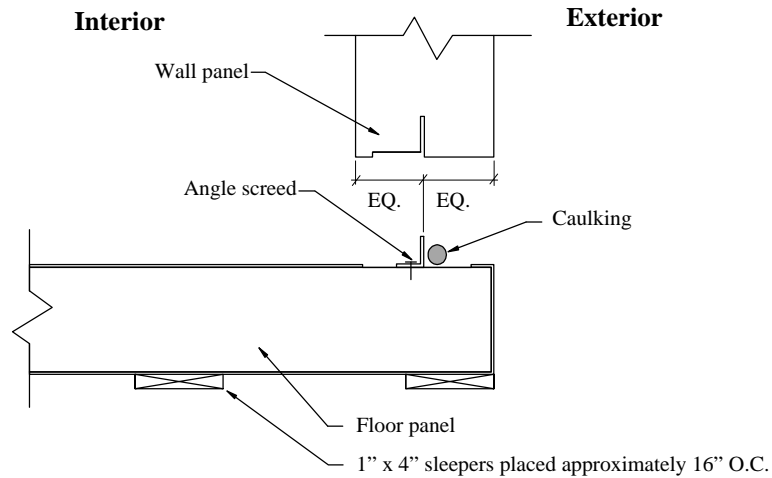


Figure 5 - Wall To Floor Assembly

3. Begin installing the wall panels starting with a corner panel and working in an outwardly direction (see figure 6).

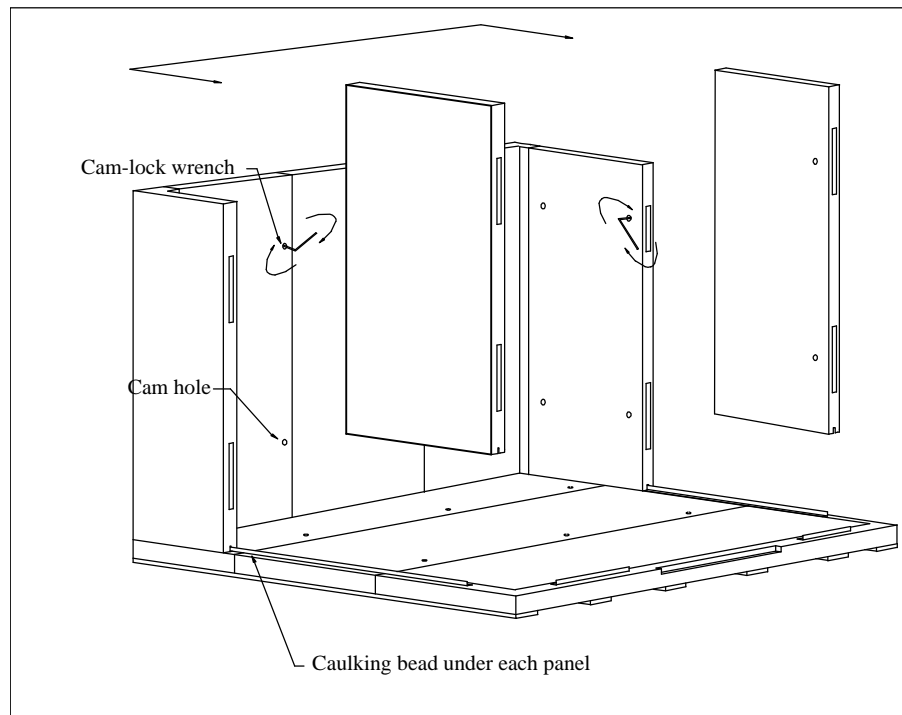


Figure 6 - Installing The Wall Panels



IMPORTANT: Be sure to follow the number sequence on the shop print. As walls are cam-locked together, make sure the top of each panel is flush with the previous panel before they are cam-locked. Because of the possible irregularity of the existing floor, gaps may vary between the wall panel and floor.



NOTE: Sometimes when locking a panel together, a cam-lock misses the pin and will not lock. Lock the cam again by turning the wrench counter-clockwise. At this point make sure the two panels lined up and are as close as possible before reactivating the cam-lock.



NOTE: Place any freezer door and frame assembly in pre-notched opening. A cooler door does not require a notch. Door panels are assembled as any other wall panel.

4. The last wall panel to be installed should be the most accessible corner panel (see figure 7).

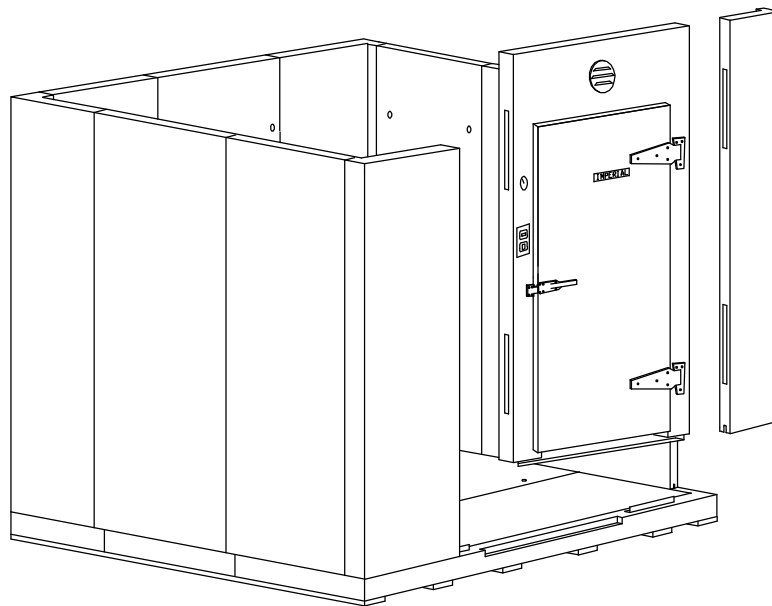


Figure 7 - Completing Wall Panels Installation

Ceiling Panels

1. When installing ceiling panels it is recommended that the first panel be located above the door (see figure 8a). As each ceiling panel is cam-locked together make sure the ends of each panel are flush with each other.



NOTE: Do not worry about the ceiling being flush with the wall panels until it is time to lag down. The wall panels can be pushed in and out as needed to flush with ceiling panels.

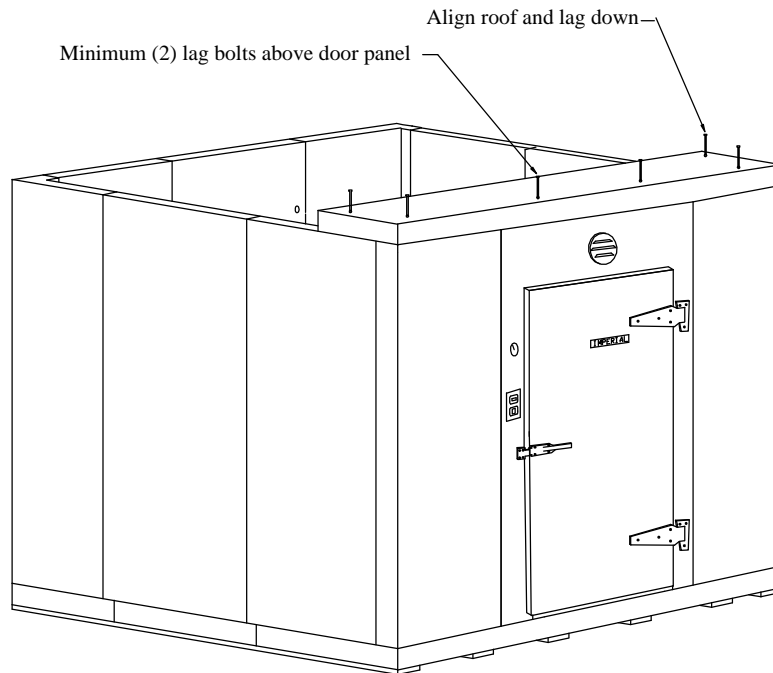


Figure 8a - Completing Wall Panels Installation

2. Lag down from the top with 3/8" lags. Tighten the lags down until the gasket seals ceiling panels with the wall. Align and adjust door for proper seal and secure at floor line with door angles provided (see figure8b).

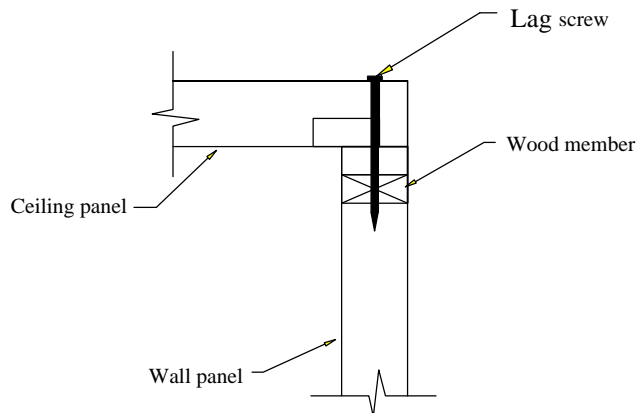


Figure 8b - Ceiling To Wall Attachment

3. Place 1/2" buttons in cam-lock holes, silicone between ceiling/wall joint and wall/floor joint.

Finishing the job

1. Align door frame with adjacent wall panels, making sure that opening is square and frame is plumb, and install door angles (see figure 9).

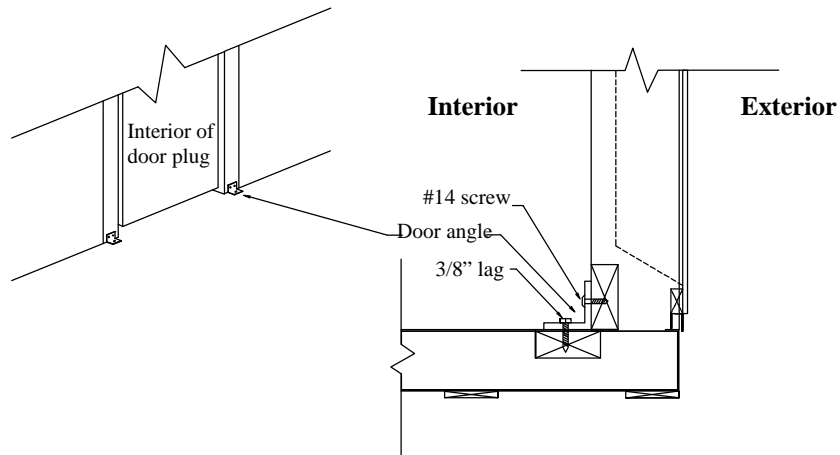


Figure 9 - Installing Door Angles

2. Apply silicone bead at interior ceiling/wall and wall/floor joints.

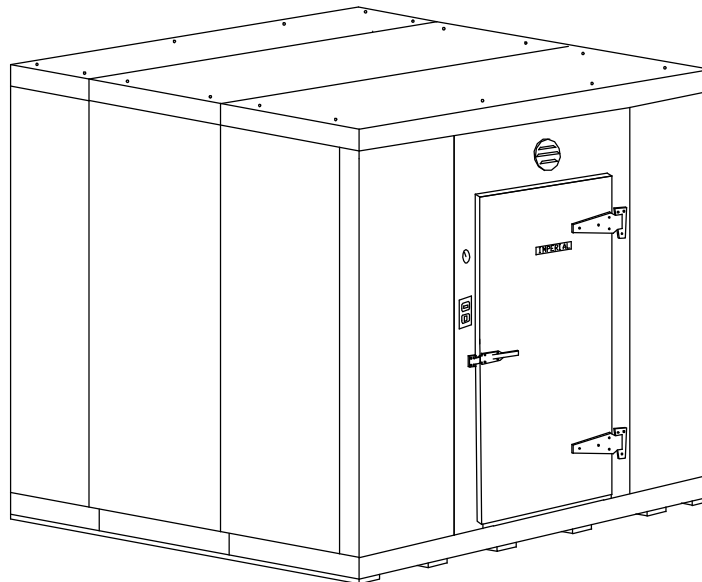


Figure 10 - Assembled Walk-In

3. Install tie-downs, if applicable (see shop print).

Split Panel Application

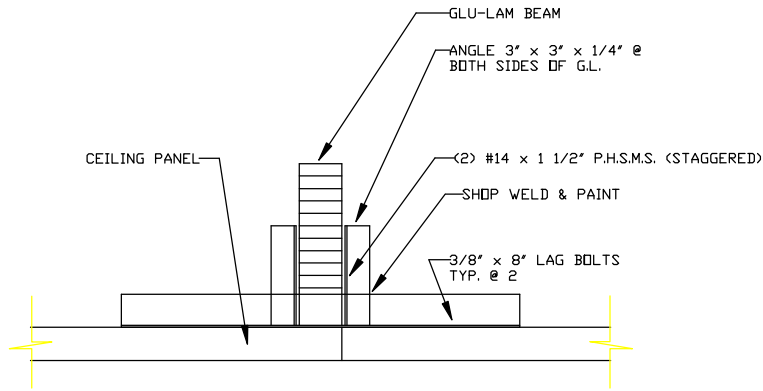


Figure 11 - Beam Spreader Detail

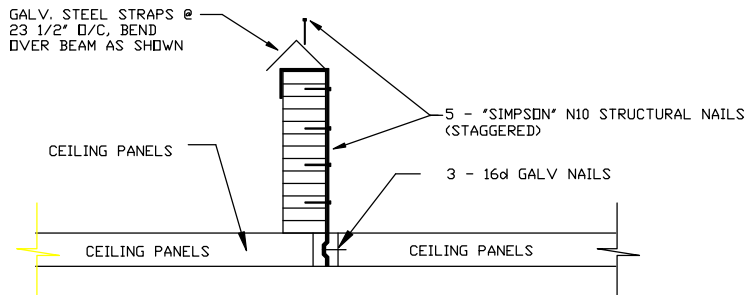


Figure 12 - Beam Section Detail

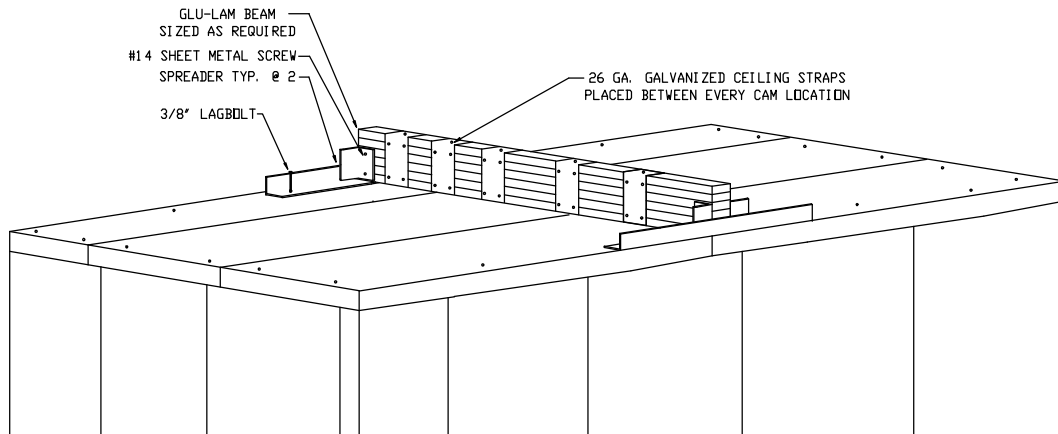


Figure 13 - Split Ceiling Application Using Glu-Lam Beam

MAINTENANCE

The owner/operator is responsible for the proper upkeep of the walk-in cooler/freezer. Simple procedures of cleaning and preventive maintenance will ensure many years of trouble-free service.

Cleaning

Keep floor surfaces clean of any liquid or solid.



IMPORTANT: Floors may become slippery and hazardous if allowed to become wet, greasy or icy. Keep floor clean and free from any ice buildup.

Wipe up spills with warm water and mild detergents, rinsing thoroughly with hot water, but not with excessive amounts of water.



IMPORTANT: Never use caustic or abrasive cleaners. Check with manufacturer for potential cleaning product reaction with different metals and finishes.

Never use high pressure cleaning machinery or panel seals might get damage.

Dry thoroughly to prevent ice formation.

Use same procedure as above to remove dirt of fingerprints from wall surfaces.



NOTE: If finish is stainless steel, wipe in the direction of the metal "grain"

Clean door gaskets and sweep regularly with mild soap and water to remove grease and oil.

Preventive Maintenance

Lubricate door hinge bearings, latches and inside releases with petroleum jelly at least once a year.

Adjust door sweep as necessary to compensate for wear or uneven floors.

Periodically check all hardware and fasteners (attaching screws) to be sure they are firmly anchored. If loose, tighten. If any hardware malfunctions, see owner's manual for terms of warranty and act accordingly.

Maintain unrestricted air flow across the condensing unit and be sure condenser coil is kept free of dirt at inlet (behind usually) and outlet (in front usually). Check that the condensing unit drain lines run free and clear.

Tips

Do not place fresh product (fruit, produce, exposed foods) in the direct path of the cooled air. This causes premature drying, adds excess moisture to the air, and shortens the shelf life.

Pack product on shelves to allow complete air circulation around each vessel. Stacking inhibits cooling and proper operation.

Close door behind you. The door is equipped with an inside safety release handle. An open door builds excess humidity and works against the refrigeration system.

TROUBLESHOOTING

Doors

Ice formation or water condensation around a freezer door may indicate a defective heat cable. First check that power is being fed to the heat cable (check that circuit breaker is on and that fuses are not burned). If this does not solve the problem, please call our customer service department for further instructions.



NOTE: Most Imperial swing doors are equipped with a red pilot light (mounted on the heat cable J-box). The light goes on when the heat cable thermostat kicks in.

If doors are difficult to open in a freezer, then relief air vent may not be functioning properly. Air vent might be iced up. De-ice the air vent and make sure that its heat cable is working. If not, check that it is connected to a power source. If the air vent heat cable is found to be defective, please replace air vent.

For electric sliding doors, please refer to the R-Plus Doors Troubleshooting Guide.

Refrigeration Equipment

Follow the refrigeration equipment manufacturer's troubleshooting guide first. Here are a few things to look for:

- If ice is forming on the ceiling near the condensing unit, or if the condensing unit is icing too much, then there might be a problem with the refrigeration system. Please contact your refrigeration service company.
- If water drips from the condensing unit into the walk-in, then the condensing unit drain line might be plugged. If so, clean the drain pan and its pipe. In a freezer, check the drain line heater is working.