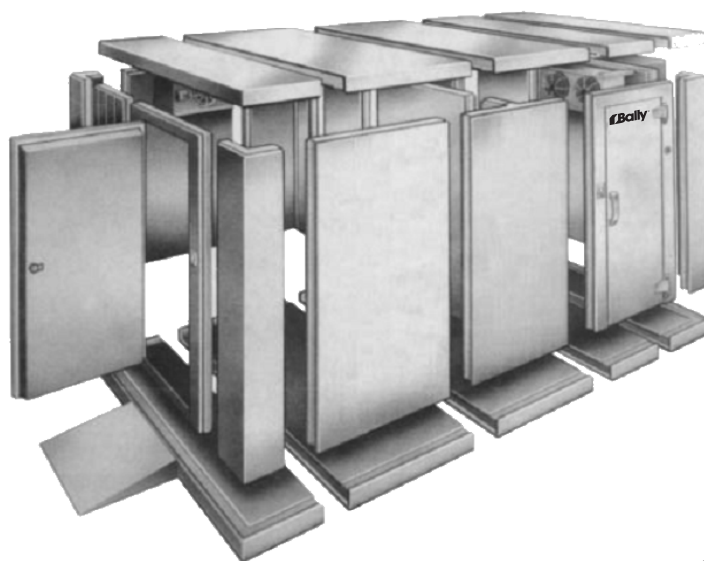




# Pre-Engineered Walk-In Coolers and Freezers Installation Manual



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**1-800-24BALLY | [sales@ballync.com](mailto:sales@ballync.com)**

## Miscellaneous Box #1 with the orange sticker contains all the information you will need.

- Before attempting to install the Bally Walk-In, review these instructions and any others supplied with the shipment.
- For future reference, make sure there is a record of the original order number and a list of all serial numbers for the Walk-In and refrigeration systems.
- A plan view showing the proper layout of panels is enclosed with other documents as well as this manual. Make sure you are using the "As-Built" drawings as opposed to any previously supplied "Proposal" drawings.
- Before placing any panel into position, check the plan view for location.

### 1. Installation Preparation

- When the building is delivered, make sure you have the right equipment and manpower on hand to unload the truck. A forklift or high jack can be helpful if the shipment includes heavy steel or refrigeration equipment. The carrier typically imposes time constraints on unloading your box, and in all situations one person is not enough.
- As you are unloading look for any freight damage; all products left our factory in perfect condition. Once the Bill of Landing was signed by the carrier, safe delivery became their responsibility and the equipment became your property. Check the packing list and make sure that all component parts are accounted for. Before signing the Bill of Landing, inspect all items. If any damage is noted or the number of pieces received does not agree with the invoice, do not accept shipment without notation by the carrier's agent on the Freight Bill. If damage or shortage is discovered when unpacking leave material and request an inspection by the carrier. Keep all documents and information so you can file you claim properly with the carrier. The Bill of Landing, Freight Bill, and the original invoice, are needed to file a claim, and must be filed within one week of the date of shipment.
- Use extreme caution when unpacking to prevent damage to panels and other equipment. Pay close attention to hardware affixed to the door and door-frame. Do not lift the door by its Hardware or the Light Base. Do not drop panels or slide over unfinished surfaces. Keep panels dry and out of direct sunlight.
- The protective plastic coating on the panels may be removed before or after the installation depending on the timing of construction schedules. The protective plastic on the bottom of the floor panels must be removed prior to setting the floors in place. In all cases, **ALL** plastic must be removed before the final completion of the installation. This includes all unexposed areas and all surfaces under membrane roofs.
- The most important requirement for installation of this Walk-In is to have a level floor. If the floor is level the process will be very smooth. Otherwise, it's impossible to make sure that the panels will align correctly and be plumb and level. Use a laser level or transit to identify the high spots on the floor. Whenever Walk-Ins are to be installed where concrete is curing or tile is being set, it is important to provide adequate ventilation. Concrete and tile grout release hydrogen while curing, which can damage the panel finishes, especially any type of Aluminum finish.

Bally identifies panels with barcode labels that specify:

**a. Panel type:**

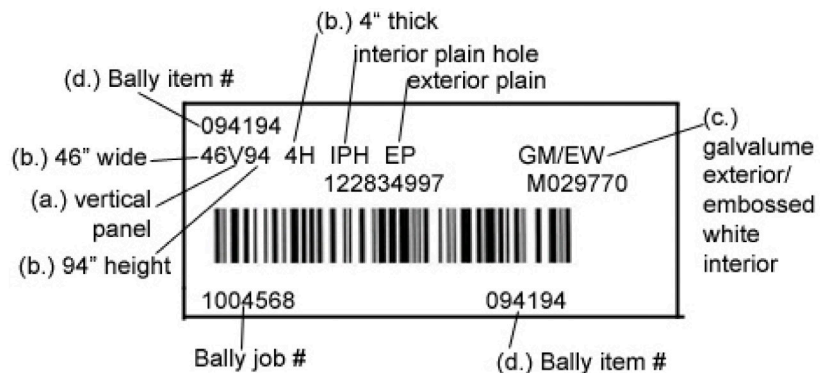
FLR- Floor  
CLG- Ceiling  
V- Vertical  
VC- Vertical corner  
BKR- Breaker

**b. Panel dimensions**

**c. Panel finishes**

Listed Exterior/Interior

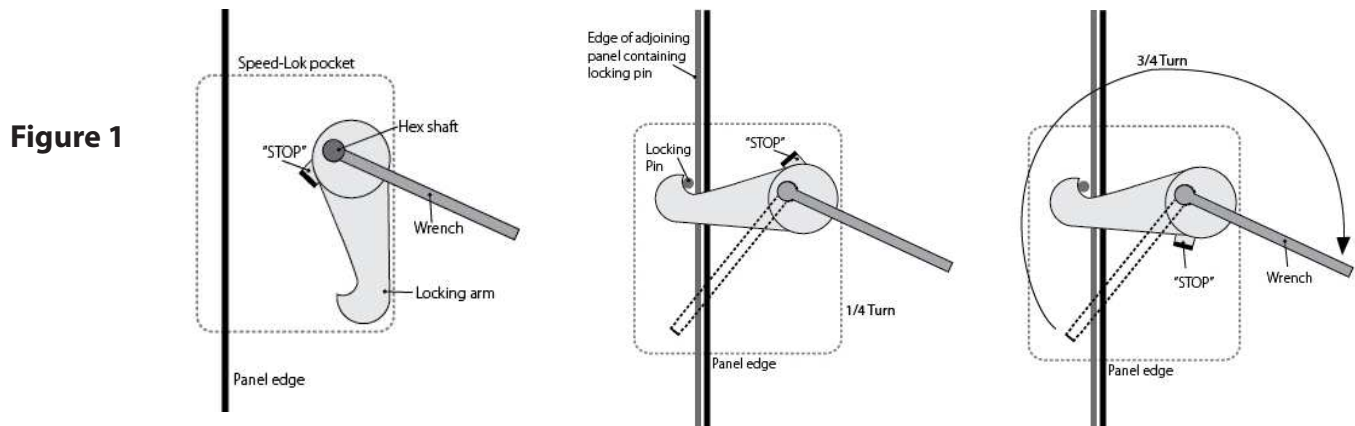
**d. Bally Part# and Serial#**



**For immediate service, call Bally's Parts and Service Hotline toll-free: 1-800-344-9302**

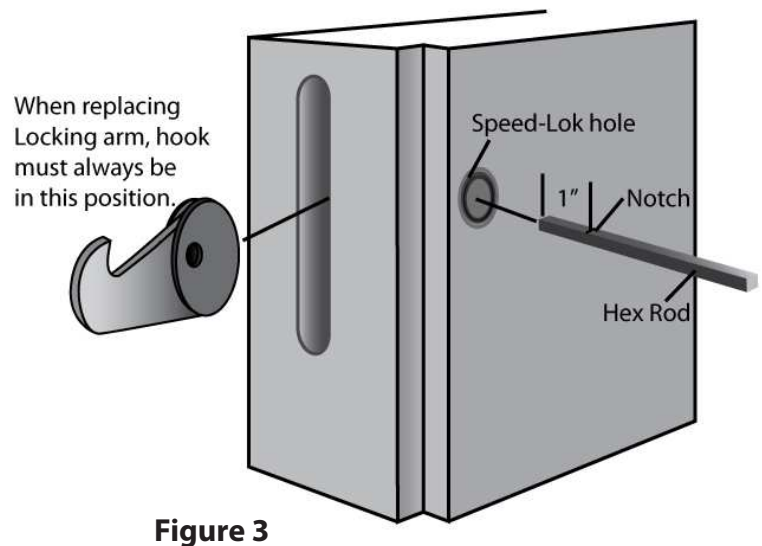
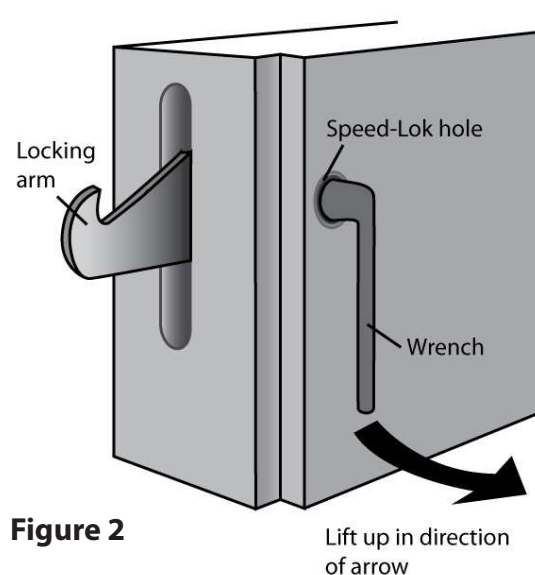
## 2. Operation of the Bally Speed-Lok:

A. Before attempting to erect panels, familiarize yourself with the operation of the locks Figures 2, 3, and 4. On Bally panels, locks will always be on the left turning in clockwise rotation. If for any reason you have to unlock a panel, refer to Section B below.



B. Replacing broken or stripped locks

1. The panel contained the lock must be slid away from adjacent panels in order to obtain adequate working space. First check for any obstructions (dirt, foam, etc.) once you have unlocked a panel reset the cam stop by turning the lock fully back to its original position. If the hook is broken or stripped replacements can be found in Miscellaneous Parts Box#1.
2. Position the lock wrench on the hex rod and turn clock-wise until the locking arm protrudes.
3. Place your hand near the bend in the wrench and use a lift-up motion. This will produce a clamping action on the hex rod. While doing this, pull forward until the rod is free of the panel. The locking arm will then drop free. *See Figure 2.*
4. Hold the new locking arm in position. Make sure the hook of the arm faces in the proper direction. *See Figure 3.*
5. Insert the new hex rod into the lock hole. Care must be taken to insert the notched end of the rod. The end to be inserted has a notch located 1" from the end. This notch acts as a stop so the rod will not be inserted too far.
6. Align the hex rod with the hex hold of the locking arm; gently tap it until the notch stops against the locking arm.
7. Replace and refasten the panel in its original position.



Always refer to your **Plan View** when installing your Bally Walk-In Cooler or Freezer.

## Part Two: Installation

### 1. Positioning

Walk-Ins erected near existing building walls must be positioned with minimum 2" clearance to allow for air circulation and prevent possible condensation on the exterior surface of the Walk-In. It is important to check that the building's walls are square and plumb, if they are not this will have to be taken into account when erecting the sidewalls. If refrigeration and coil drain tubing is to be run between Walk-In and building wall allow space for installation. Check for overhead objects that will intrude the Walk-Ins height. Depending on temperature and humidity, air circulation may be needed to equalize the air temperature and the panel surface temperature above the dew point; this is usually required in a dead air space and high humidity environment.

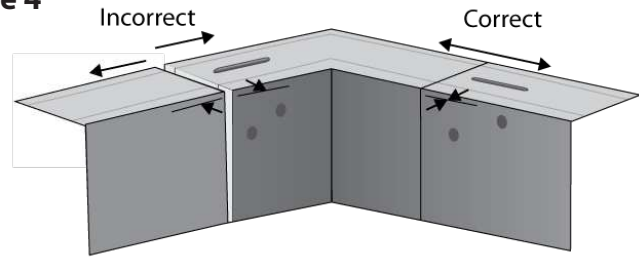
### 2. Walk-Ins with Screeds

If any part of your Walk-In employs screeds, lock the screeds to the bottoms of the panels before placing any vertical panels. Vinyl floor screeds are anchored to concrete in less-floor Walk-Ins via drive pins with sleeve anchors provided by Bally. Drill into the concrete or other surface with a masonry bit. When using vinyl screeds, shim to make sure panels are level inside the screed. If the Walk-In is being installed on quarry tile, floor holes may be drilled to hit tile seams. Check all dimensions before proceeding.

### 3. Assembly of Less-Floor Walk-Ins

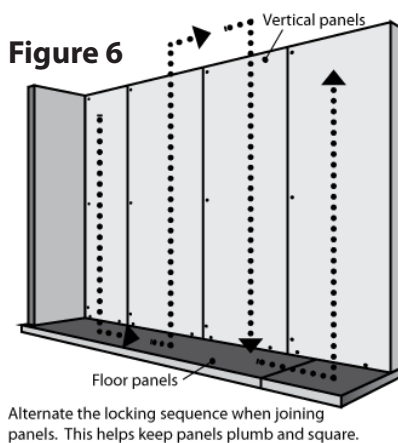
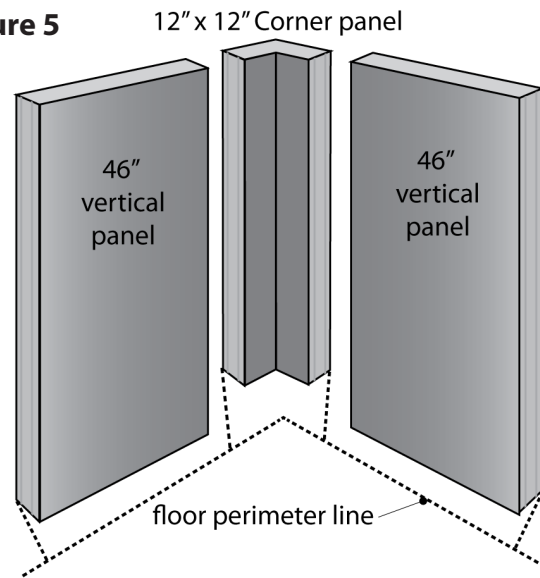
- After you have checked that the building floor is level, use a transient or builders level to find the highest point on the perimeter. Position the first 12" x 12" corner to be level with the high point. Begin at corner and align panels at the top. *See Figure 4.*
- Position a vertical panel to the right and left of the corner panel (as per Plan View) and flush with the perimeter line. Once properly aligned, fully engage all vertical-to-vertical locks. *See Figure 5.*
- Level panels to the perimeter high point and check for plumb with a 48" spirit level. (Panels over 10' high use a plumb bob.) *See Figure 7.*
- As each panel is installed, check to make sure it's plumb and level. If the panel is not plumb, shim to adjust for plumb. Making the same check down the panel's leading edge shows whether it's level along the top or not. If not adjust accordingly.
- Continue installing vertical panels in the same manner, periodically checking to make sure that panels remain plumb and level. *See Figure 6* (staggered locking sequence).
- When enough vertical panels are set to accept the installation of the first ceiling and end panel, begin assembly of the ceiling panels. *See Section 6* for method of installing remaining vertical and ceiling panels.
- With installation complete, caulk the bases of the vertical panels where they meet the concrete floor.

**Figure 4**



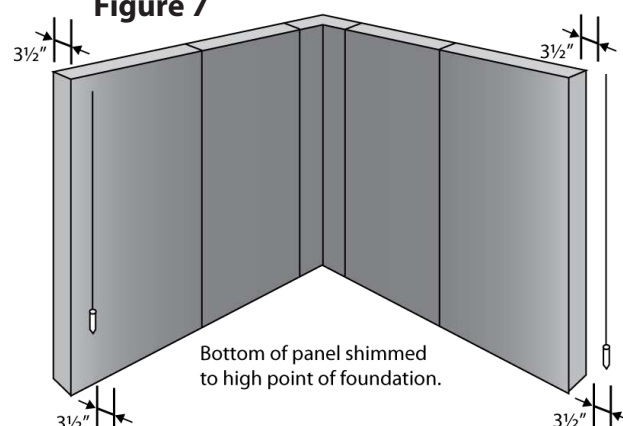
Prior to engaging vertical to full locking position check metal to metal alignment at points indicated. This will assure you of a neat installation, and maintain all panels on a true horizontal plane.

**Figure 5**



Alternate the locking sequence when joining panels. This helps keep panels plumb and square.

**Figure 7**



Always check to make sure that each new panel is **level and plumb.**

#### 4. Door Installation

A. When erecting a door panel for an installation on a concrete floor and without Bally floor panels, it is necessary to provide a cutout in the concrete floor for all freezer applications so that the heater channel may be inserted to prevent icing. Doors intended for Coolers are simply set on top of the concrete.

- If your door sticks out at the top, your frame is not plumb. Move the bottom of the frame in or out to correct this problem.
- If the gap at the top of the door is inconsistent, your frame is not level and the door latch may not work properly. Shim the low side of the frame to level it with the high side.

B. Caulk and seal any gaps under panels or door to floor. Apply base trim as per plan view. For outdoor installation it is recommended that all exterior panel joints be caulked during installation.

C. Anchor panels to floor using either Continuous Angle provided or, for outdoor boxes, L-bracket attachments known as WA-1 or Wa-2. See Figure 8.

#### 5. Assembly of With-Floor Walk-Ins

A. Make sure the floor is level. The entire area beneath the Walk-In floor should be covered with a heavy polyethylene vapor barrier to prevent possible damage by moisture. (Check state and local codes to determine the mil thickness.)

B. Check plan view for any special panel configuration, then place a 23½" wide floor end panel along the most logical starting point (usually the furthest corner from existing building wall). Level the floor panel to high point of concrete slab. See Figure 9.

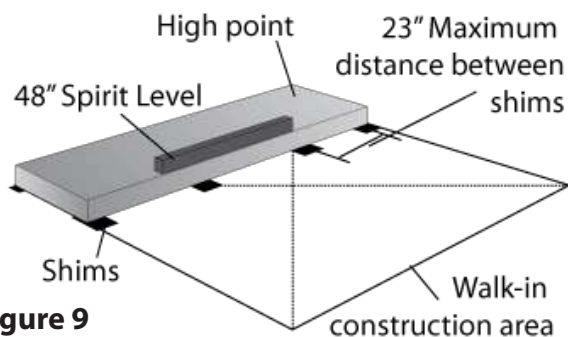
C. Install the next panel and align. Level to the high point of the concrete slab every time a new panel is installed.

D. Install shims (Bally recommends asphalt shingles) under corners and cross panel joints as needed to ensure proper support and levelness of panels. Be sure the shims are not more than 23" apart at any given point under the panel. Place additional shims, equally spaced, along the door frame area for proper support, and to eliminate potential sagging.

E. Continue to install floor panels as per Plan View, locking each panel to its adjoining panel, and keeping ends of panels even. Continue until all floor panels are assembled, check for levelness and squareness. (Adjust if necessary.)

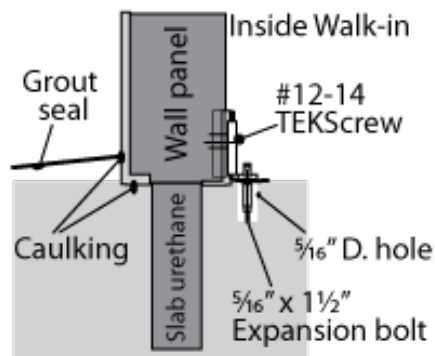
F. Check bottom section of door to be used to insure the proper door is in the correct location. Doors are specifically located by the floor plan drawing which is enclosed with the installation instructions (A freezer door may have a different stepplate condition than a cooler door Follow the suffix 01 – 02 that corresponds to the drawing).

G. If structural steel is required it should be located and installed before installing further.



**Figure 9**

**Figure 8**



#### 6. Vertical and Ceiling Panel Installation

A. Determine the critical areas to find a starting point (For smaller Walk-Ins this is the door location); this section must be perfectly plumb and square to insure proper operation of the door.

B. Begin by erecting a vertical corner panel (If the Walk-In is being installed near a building start at a corner nearest that). Speed-Lok holes are always on the left when facing the interior of the panel.

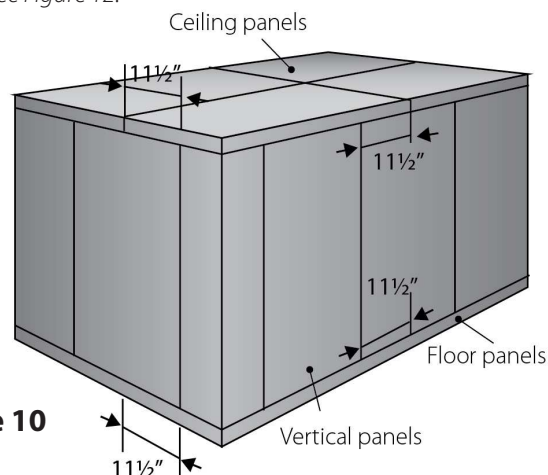
C. Erect the vertical panels to the right and left of the corner panel (Check the plan view), align tops of the panels and check for plumb and level. Lock panels together, check to be sure the proper metal finish is exposed where specified on the plan view.

D. When enough vertical panels have been set to allow installation of the first ceiling panel, install the panel walls in an order that will allow a ceiling section to be installed before proceeding with more panel walls. Fasten ceiling panels to one another. When a few are in place, lock the first ceiling panel to vertical panels.

E. To check for correct alignment measure the distance from the edge of the ceiling or floor to the nearest vertical joint. This should be 11½" and maintained at every joint of the Walk-In. Use a staggered locking sequence as shown in Figure 6. See Figure 10.

F. When all walls and ceiling panels are in place, lock all vertical panels to floor panels. Door sections are held down through the threshold plate. Drill through thresholds' pre-drilled holes into floor. Secure to floor with screws provided. See Figure 11.

G. For a Walk-In requiring anchors on the outside of the walls, begin by centering anchors WA-3 to vertical panel joints and WA-4 to corners. See Figure 12.

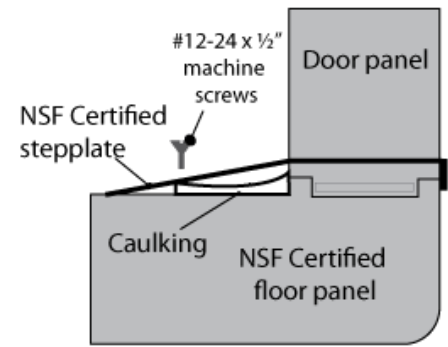


**Figure 10**

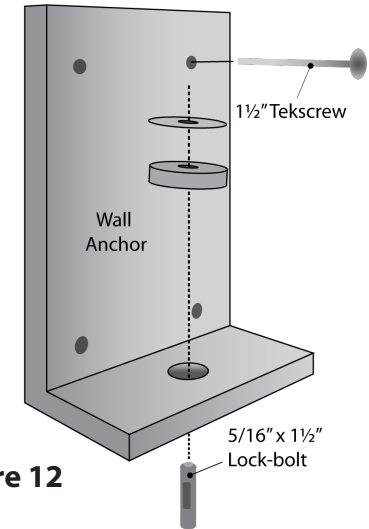


## 7. Installing Multi-Compartment Walk-Ins

- A. The most common arrangement for a Walk-In is a two compartment cooler/freezer combination. Installation of panels in this situation is the same as described above. The use of a "Breaker" or "Tee" panel is used to separate the different compartments. These panels will be either 23" or 46"; typically the verticals are the opposite of the ceilings and floors.
- B. The Partition Wall will have at least two special panels referred to as P-1 and P-2. The panel widths are either 7.6" or 19.1" and are marked with a special blue sticker that corresponds to the drawing. The P-2 panels are double tongued (has hook pockets on both sides) which allows for final locking of the partition wall.
- C. In large multi-compartment Walk-Ins, (three compartments or more) it is very important to control the alignment of the panels and make sure if there is any growth in the vertical panels that they are growing at the same rate as the ceiling and floors. A quick and accurate way to check for correct alignment is to measure the distance from the edge of the ceiling to the nearest vertical panel joint. This measurement must be 11½"; it must be maintained at every joint to assure proper assembly of the Walk-In. *See Figure 10.* In these instances we recommend that after the floors are placed and leveled that the center most partition be the starting point and to work toward either end of the box.
- D. Look at the plan view and take special note of which side of the panels the wrench hold are on. If there is not a door in the partition wall the panels will lock to ceiling and floors in either orientation. An error on the partition will cost many man hours to correct. The entire box will most likely have to be taken down to correct this error because condensation will occur. As a general rule of thumb, the wrench holes should always be on the colder compartment side, usually the freezer.



**Figure 11**



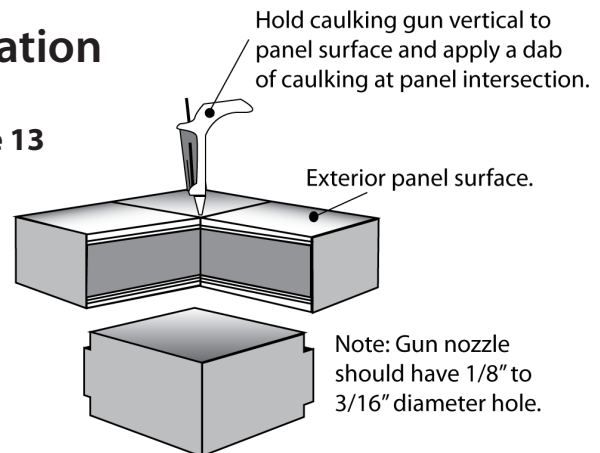
**Figure 12**

## Part Three: Other Important Information

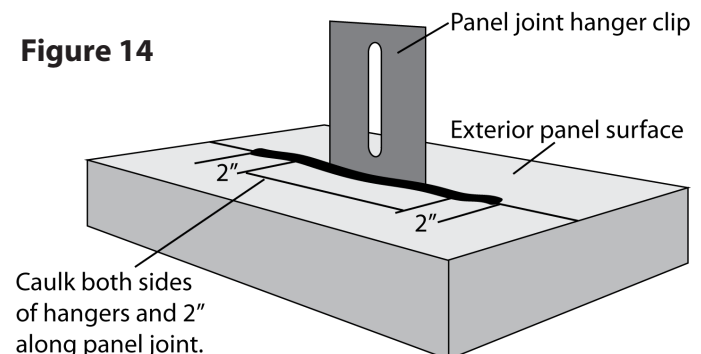
### 1. Preventing Vapor Leaks

- A. Modular panels are square and dimensionally accurate so in most installations they will seal effectively against vapor leaks. However in some unusual cooler applications, minor vapor leaks may occur. The leaks can occur if the panels follow slab variations or if the building in which the Walk-In is installed settles. If the internal temperature is cycled periodically, the expansion and contraction of building materials will cause enough movement to allow some vapor penetration.
- B. Unfortunately, internal dripping does not always occur directly across from the vapor leak which can make locating a leak troublesome. In order to avoid time-consuming search procedures, caulk the exterior junction of three or more panel joints. Most leaks caused by settlement will be at these points. *See Figure 13.*
- C. All wall penetrations should be sealed. This includes any protruding clips or hangers installed in panels joints. *See Figure 14.*
- D. Use either industrial-grade or silicone caulking. When silicone is used, sealed areas must be cut opened whenever the panels are to be disassembled for relocation or enlargement.

**Figure 13**



**Figure 14**



Note: Cut nozzle of caulking tube to a 45° for best results. Bead should be 3/16" wide.

## 2. Partition Wall Caulking

As an added precaution against vapor leaks, Bally recommends that all joints from partition wall panels to breaker panels (vertical, ceiling, floor) be caulked on warm side during assembly. See Figure 15.

## 3. Air gap/circulation recommendation.

Bally recommends a 2" gap between Walk-In vertical panels and existing building walls for proper air circulation. It is also recommended that air exchange/circulation be provided for Walk-In s that are within an enclosed area.

## 4. Making holes for Refrigeration Tubing and Electrical Lines

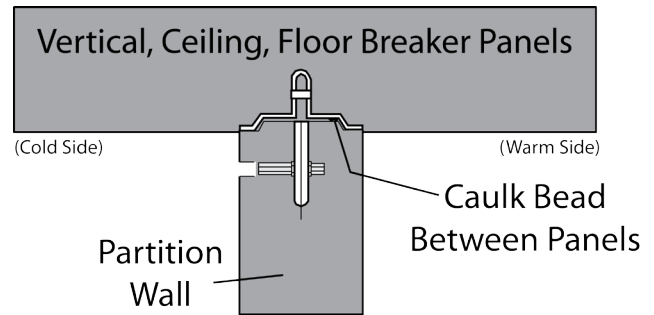
If penetrations in panels are needed, avoid the areas that are shown. Penetrations should be made as needed by competent installer or mechanical service. If shaded areas are avoided, urethane insulation can be easily removed from opening. After equipment installation, fill in hole with permagum caulk. See Figure 16.

- When a remote refrigeration system is used, it will be necessary at the job site to make holes for refrigeration and electrical lines.
- After installation, use permagum to caulk around the electrical and refrigeration lines. Caulk both the interior and exterior gaps.
- Condensation in electrical junction boxes is caused by warm vapor passing from the exterior to the interior of the Walk-In through electrical conduit lines. This problem can be eliminated by installing a seal-off fitting in the conduit line where it passes through the wall. Install the fitting as shown in Figure 17 and fill it with sealant.

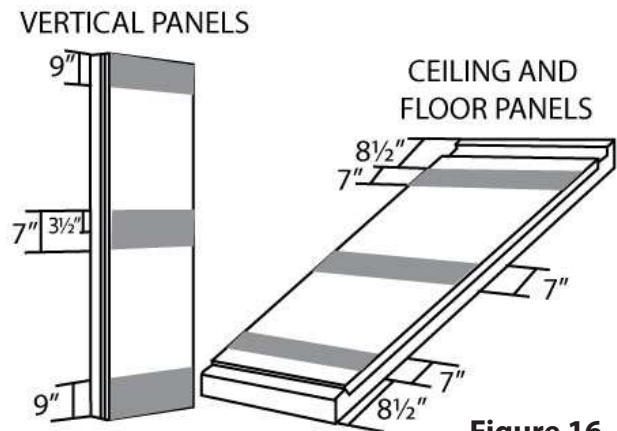
## 5. Making electrical connections to Entrance Doors and Installing Vapor-proof Lights

- Electrical connections to the Walk-In doors are made at the top interior of each door panel. See Figure 18. Remove the socket plate to expose the wire connections in the junction box.

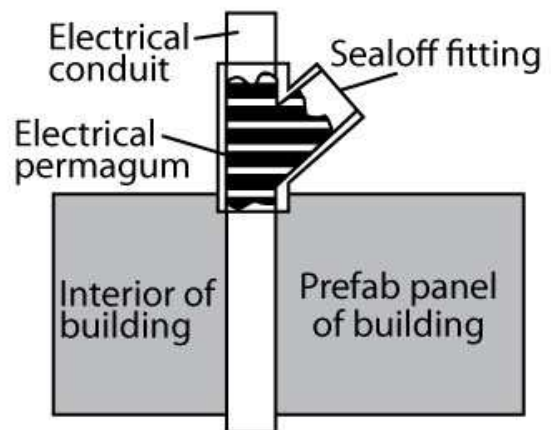
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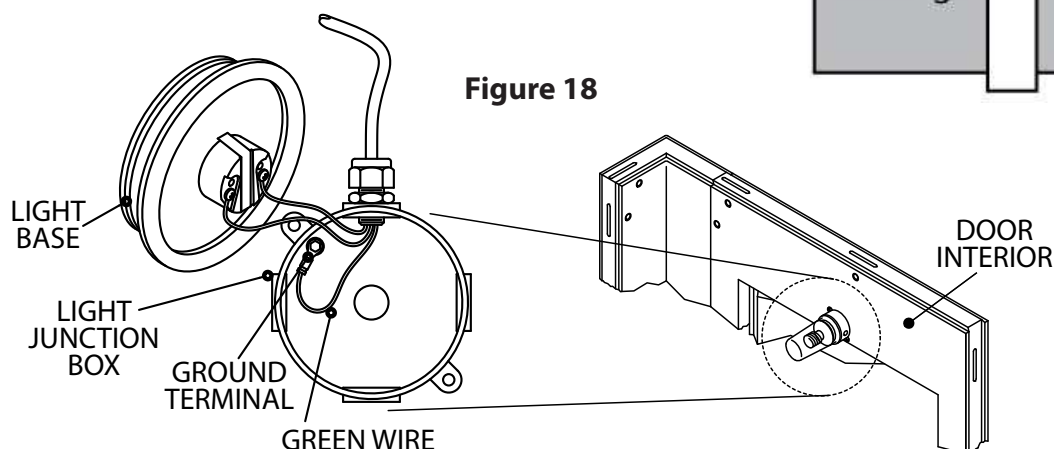
**Figure 15**



**Figure 16**



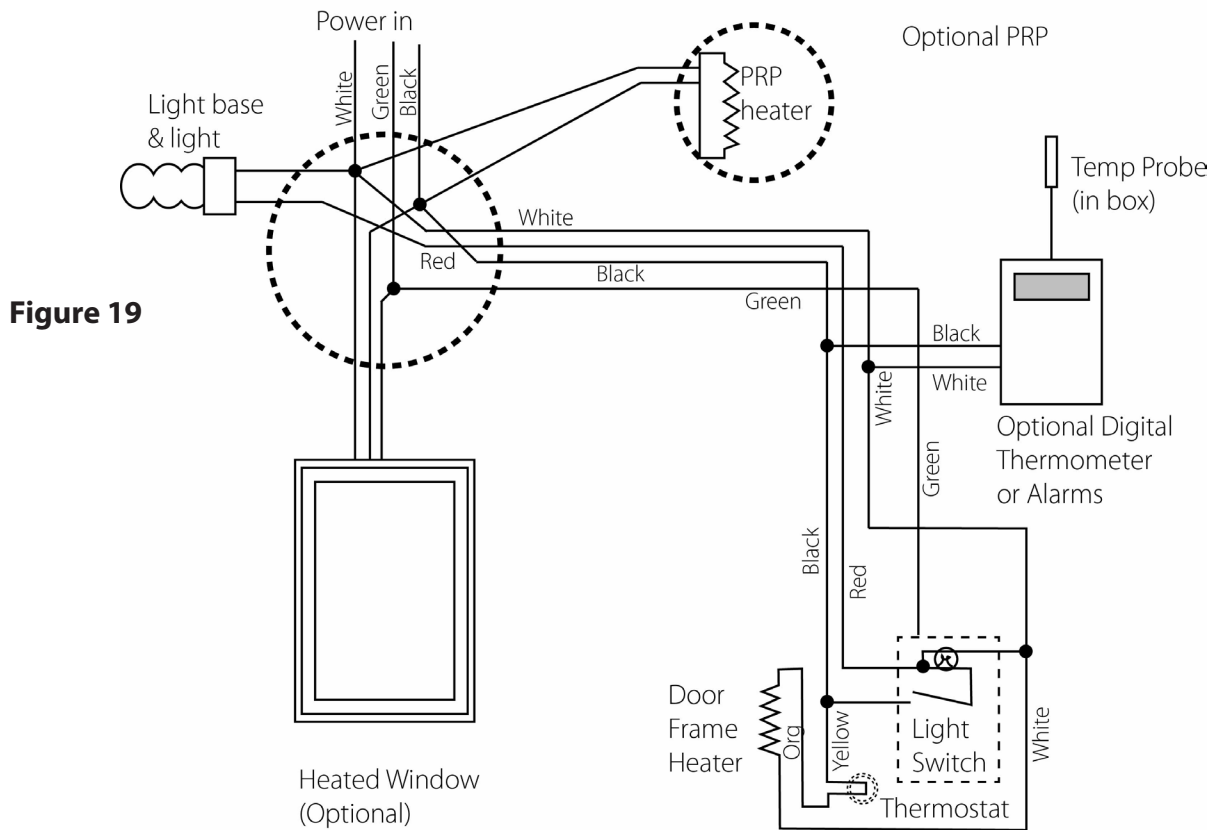
**Figure 17**



**Figure 18**

## Making electrical connections to Entrance Doors and Installing Vapor-proof Lights (Continued)

- B. Remove the short wire “pigtails” and connect the service at the wire nuts, through the hole provided in the junction box. Refer to serial tag for proper electrical characteristics. Insure that the electrical service is properly grounded. *See Figure 19.* Remount the vapor-proof light assembly after all connections have been made. **Do not turn on power to door section until after the refrigeration system has been started.**



### Color Codes:

**Black – Line**

**White – Neutral**

**Green – Ground**

**Red – From switch to light**

**Orange – } Wires for -3 and -4 way switches.**

**Grey – } Connect like colors to complete the circuit.**



## Part Four: Completing the Bally Installation

- A. Trim door wiper gasket (if necessary) from the inside bottom of door. The wiper gasket should gently touch the threshold when the door is in the closed position. Adjust hinges and latch if necessary (shims provided in Miscellaneous Box #1)
- B. After all locks are engaged, it is very important to secure the plug buttons over the Speed-Lok holes. (These buttons are in Miscellaneous Box #1)
- C. Make sure all of the protective plastic is removed from the panels and the job site debris is cleaned up.
- D. Inform the electrician that he is now able to complete connections to door light and Pressure Relief Port (if on a separate circuit) Please note that it is not recommended to hook up door heaters until the mechanical refrigeration is fully operational. The heat will melt the door gasket.
- E. After the installation is complete use a silicone caulk between the outside vertical panels and the concrete floor. If large gaps exist, make certain to first fill the voids with expanding foam prior to sealing with caulk. Apply sealant to building floor if water tight seal.
- F. If installing an outdoor Bally Box with a membrane roof, make sure all the termination bars are securely fastened and that all exterior joints have been caulked to prevent water leaks. All outdoor Walk-Ins must be protected against the weather by a roof of some type, refer to "Instructions for Membrane Roof" to properly install. We can also supply a standing seam aluminum roof where specified; Bally will provide separate installation instructions as needed for these products.
- G. You are now ready to hang evaporators and connect refrigeration. See separate instructions supplied by the manufacturer of the refrigeration's mechanical equipment.

### Installation Reference Information

Please Fill in the spaces below and retain this manual for easy reference.

Purchaser's name and address: \_\_\_\_\_

Date Installed: \_\_\_\_\_

Name of Installer: \_\_\_\_\_ Installer's Phone Number: \_\_\_\_\_

Walk-In Serial Number (from plate above door): \_\_\_\_\_

Refrigeration System Model Numbers: \_\_\_\_\_

Refrigeration System Serial Numbers: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Bally Refrigerated Boxes, Inc.

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