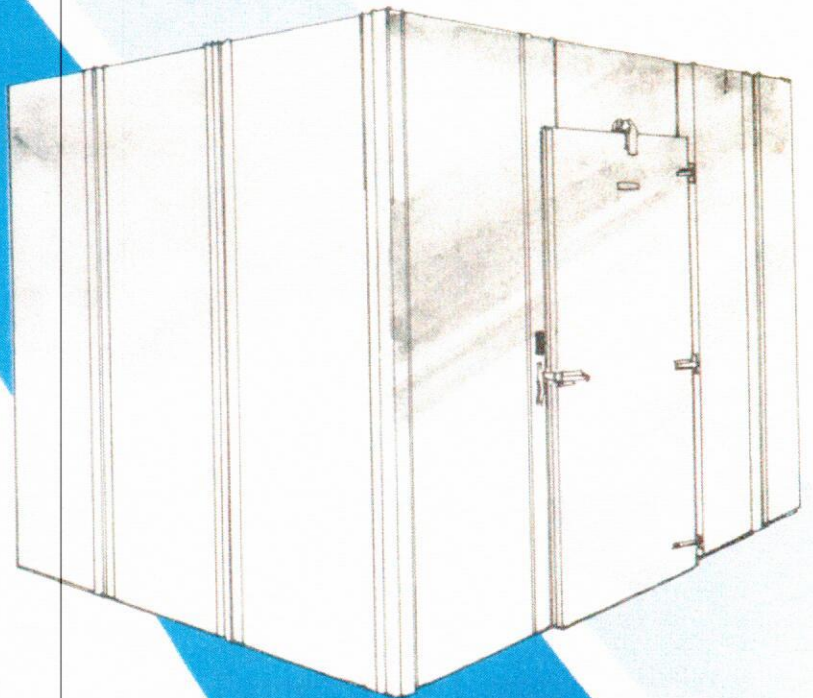


Custom Walk-in Cooler/Freezer Units

INSTALLATION MANUAL



**Whatever the Application... Our Custom Units
Are As Versatile As Your Requirements**



Custom Commercial Coolers

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CUSTOM COOLERS INSTALLATION

CCC offers a service of delivery and installation of its manufactured walk-ins by factory trained personnel.

As with any walk-in cooler installation, certain criteria must be met at the job site such as a quality constructed and level slab, adequate working room and clearance to assemble walk-in panels as well as convenient unloading access to allow for proper and safe installation of walk-in.

It is the intention of CCC to deliver product(s) ordered, to the determined destination on the date of customer's request, however specific delivery dates may vary due to reasons beyond our control, therefore it is our understanding that a targeted delivery date may vary. Should a delay in the schedule develop from CCC or its supplier, we will notify our customer as soon as the adjusted new schedule date confirmed.

Should an installation date be changed by the customer, we will reschedule a new delivery date based on the first possible availability, however our invoice may not be able to be delayed and therefore would be issued as per the original scheduled delivery date. Due to the nature of installations, jobsite readiness, weather and other variables that may be encountered, an allowance of up to 2 weeks from initial preliminary completion of installation date may be needed for CCC to completely satisfy the requirements of an installation.

WALK-INS WITH MANUFACTURED FLOORS

STEP 1 FLOOR INSTALLATION

LEVELING/PREPARATION

A perfectly level slab is of the utmost importance to insure that all the floor sections will be in correct alignment when they are installed. Making sure the slab is level will prevent many problems later on, such as fitting and aligning wall panels or proper operation of doors.

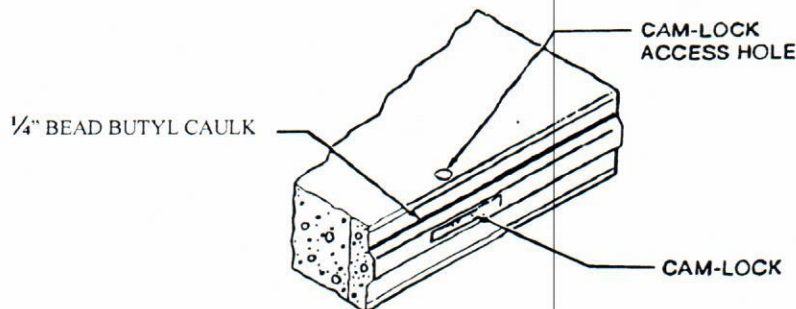
Transit leveling from the highest point in the floor will provide the proper base on which to rest floor panels. Use of the proper shimming material, such as cedar, redwood, or wolmanized shims will insure good support throughout the life of your walk-in. **If** shimming is not required, and the floor sections will be placed directly on the concrete, a layer of 50 pound asphalt paper or 6 mill polyethylene sheet must be placed between manufactured floor sections and the concrete floor as a vapor barrier. For installations next to a wall, maintain a minimum of three inches clearance to allow for surface irregularities in the existing wall and for air flow.

STEP 2. LAY FLOOR PANELS

All floor panels are marked numerically and correspond to the numbering scheme on your installation print.

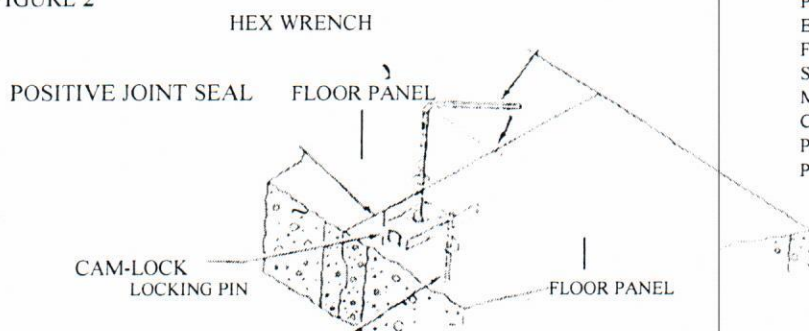
Begin at one end of the unit and lay down a floor panel, checking to assure it is level. Lay down another floor panel. A **high** grade of butyl caulk is supplied for application between the floor joints as shown below:

FIGURE 1



Slide the panels together, aligning the ends. Lock the panels together as shown below, verify panels are level, and repeat the process until all floor panels have been installed.

FIGURE 2



PANEL LOCKING DEVICE
ECCENTRIC ACTION PANEL LOCKS ARE USED TO FASTEN PANELS TO EACH OTHER. THE HEX WRENCH, SHIPPED IN CRATE WITH CAULK AND OTHER MISCELLANEOUS ASSEMBLY ITEMS, IS TURNED IN A CLOCKWISE MOTION TO ENGAGE PIN IN ADJACENT PANELS, DRAWING PANELS TOGETHER FOR A POSITIVE JOINT SEAL.

STEP 3. LOCK PANELS TOGETHER

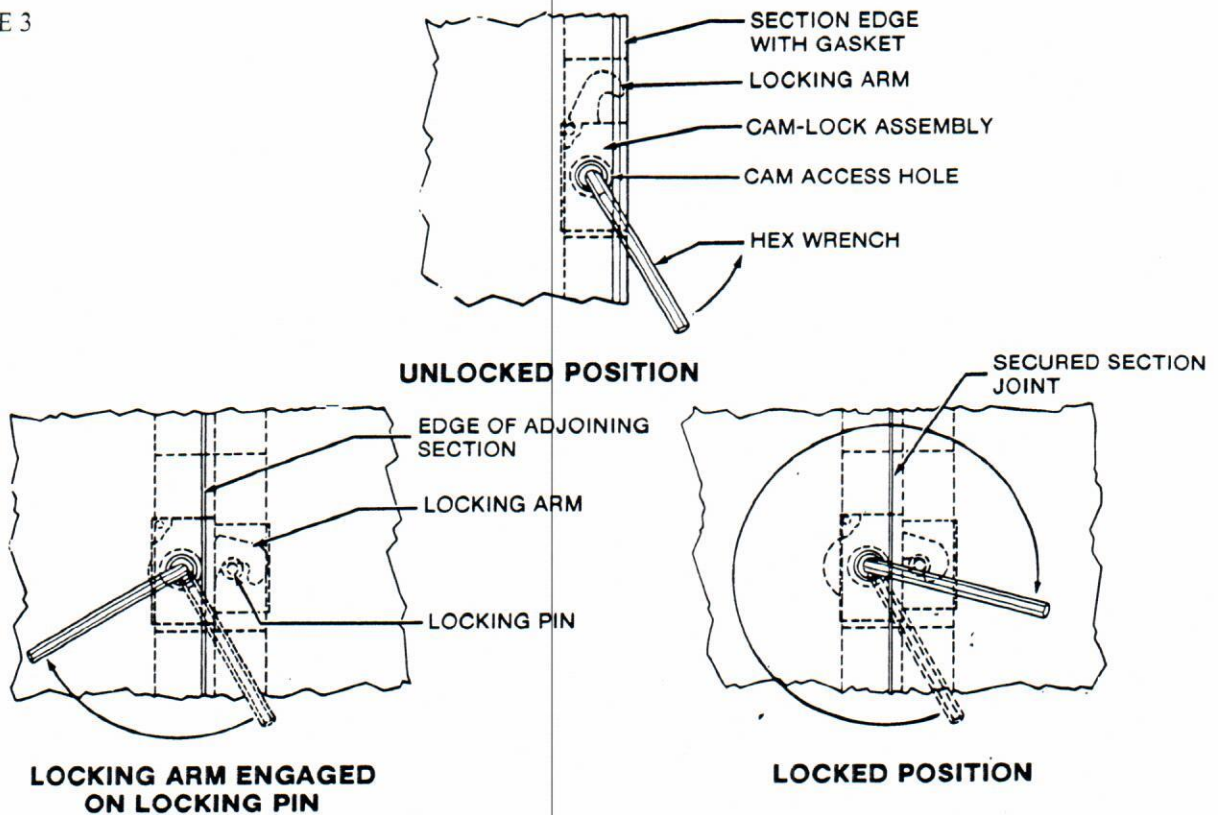
Located in the perimeter of all panels is the cam-lock locking device.

Be sure cam-lock is in its complete unlocked position before attempting to lock panels. With hex wrench inserted in cam-lock, turn counter-clockwise to put cam-lock in unlocked position.

To operate the cam-lock, insert hex wrench (packed in hardware box) through access hole in interior panel skin, and into the hex opening in cam-lock. Turn wrench clockwise approximately 7/8 of a complete turn to put cam-lock in a complete locked position.

NOTE: If lock does not engage pin, reset by first rotating in clockwise direction as far as possible, then rotate counter-clockwise as far as possible. This will reset the locking arm to its fullest extended position.

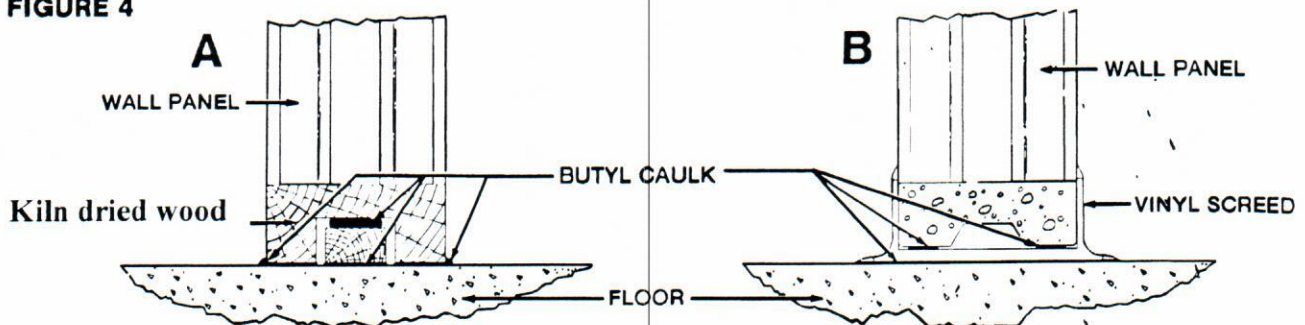
FIGURE 3



WALK-INS WITHOUT MANUFACTURED FLOORS

Your walk-in will use one of three screed types: (A) kiln dried wood, (B) VINYL, where wall panels are placed inside the screed, or (C) metal (not shown).

FIGURE 4



STEP 1. FLOOR PREPARATION

Refer to your installation print for the outside dimensions of your unit. From the outside dimensions, deduct one-half the thickness (see below) of your wall panels from each side to determine the centerline dimensions where wall panels will rest above your floor.

WALL PANEL THICKNESS

3 1/2 "
4 "
5 1/4 "

DEDUCT FROM UNIT PERIMETER

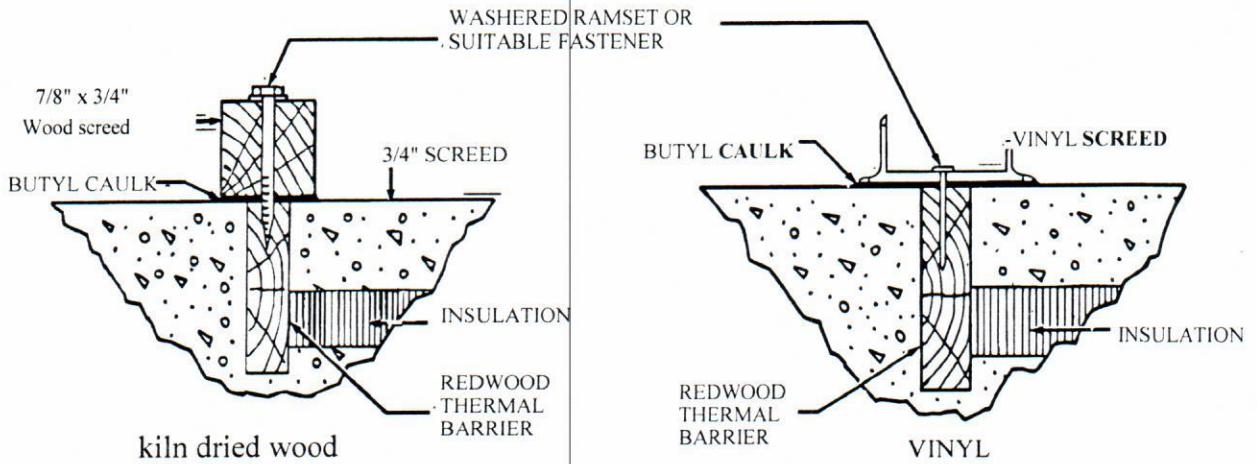
1 3/4 "
2 "
2 5/8 "

Example: An 8 x 10 unit with 3 1/2" walls would have 7'-8 1/2" x 9'-8 1/2" centerline dimensions.

Using the centerline dimensions, strike a chalk line on your floor, making sure all corners are square.

NOTE: For units which have a thermal barrier embedded in the floor, center and anchor screeds to this barrier as shown below:

FIGURE 5

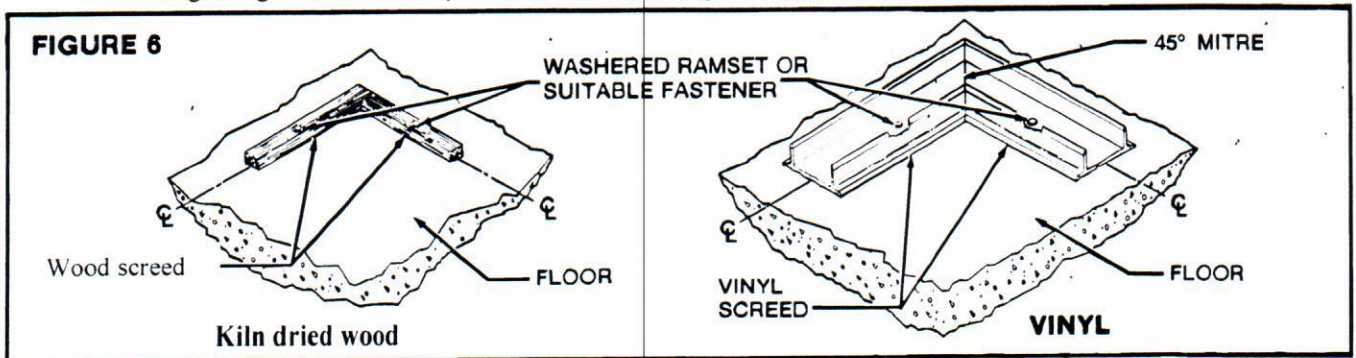


STEP 2. LEVELING THE SCREED

Determine the highest point on your chalk line. Vinyl screed must be leveled to this point to assure proper panel alignment and inter-connection between wall and ceiling panels. Should your floor have low areas greater than 1/2", supplemental grouting will be required to form a proper seal at the floor level.

STEP 3. LAYING DOWN SCREED

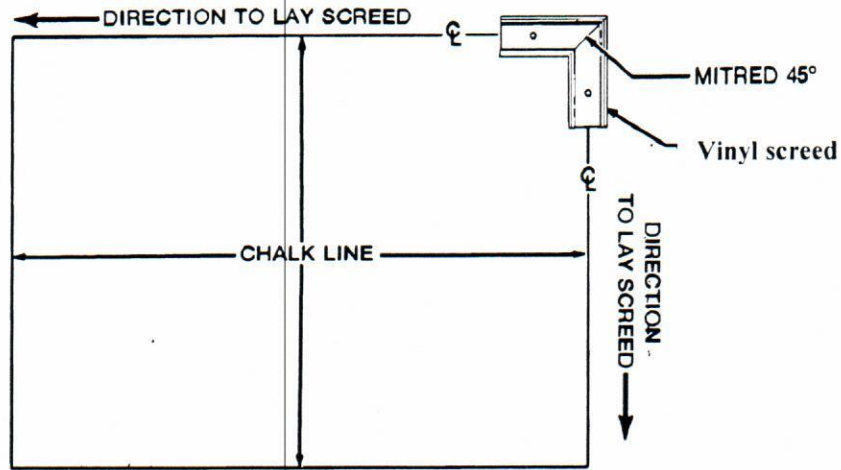
Beginning at one corner, lay down screed, centering it over your chalk line as shown below:



Shim vinyl screed to be level with highest point on your chalk line. (Wood screed need not be shimmed to level.)

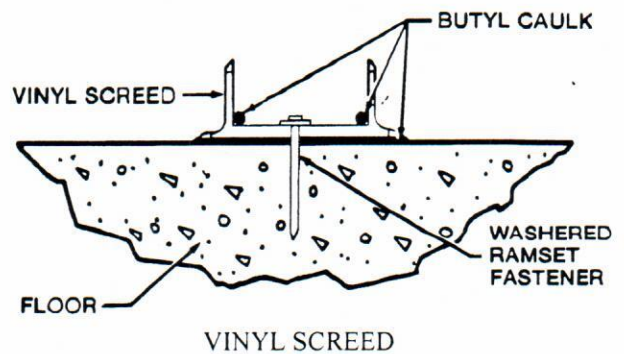
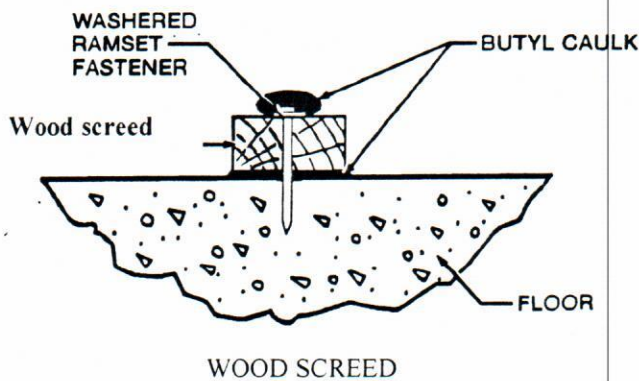
Apply bead of butyl caulk to underside of either screed.

FIGURE 7



Lay down screeds in two directions away from corner. Continue to lay down screed in both directions away from corner until reaching next corner. Attach screeds to floor using washered ramset, or other mechanical fastener, at 36" intervals. A washered fastener is recommended to avoid splitting screeds. Use fasteners on vinyl screed **ONLY** at shimmed points if shimming was required.

FIGURE 8

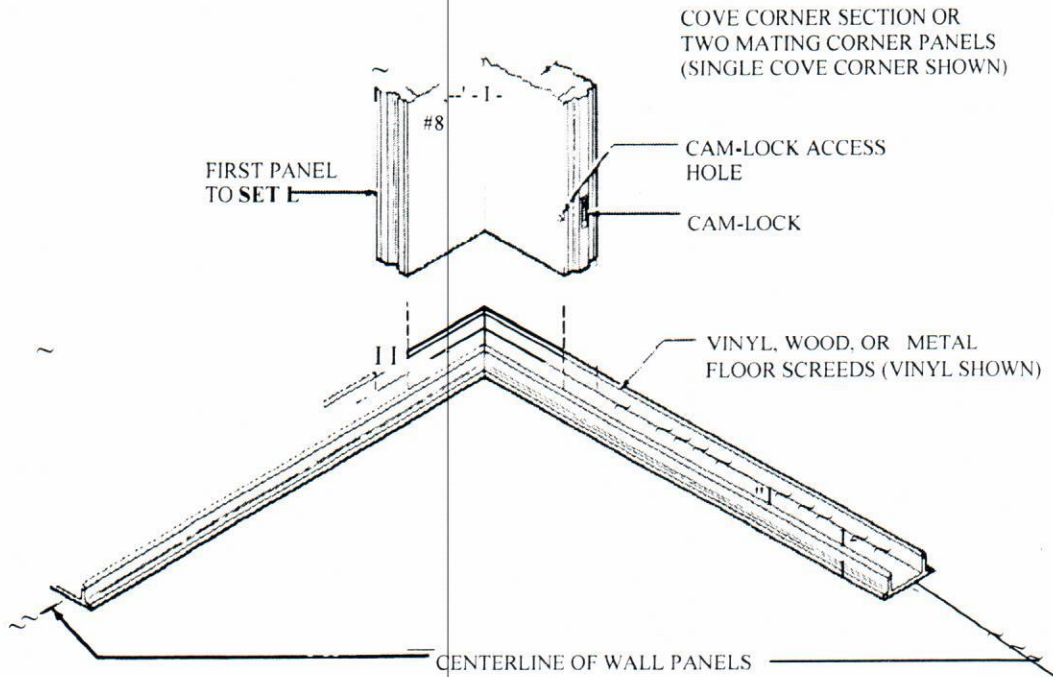


Return to corner and begin installation of wall panels. Once panels have been set to next corner, verify if chalk centerline of connecting walls is correct. Then, lay down screeds and continue with wall panel installation.

WALL PANEL INSTALLATION

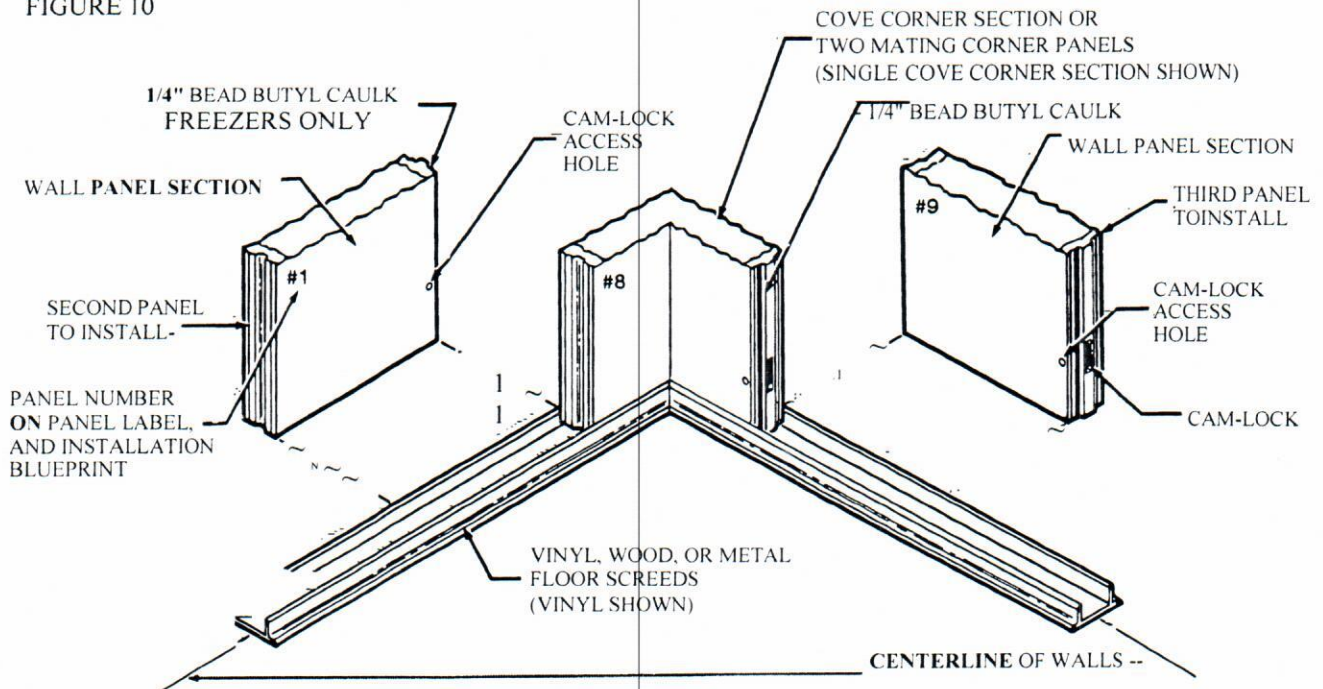
STEP 1. Begin at one corner of unit. Place two mating corner panels (or single cove corner with adjacent panel) in position and Lock in place (see cam-lock directions, page 2), making sure top and bottom of panels are even.

FIGURE 9



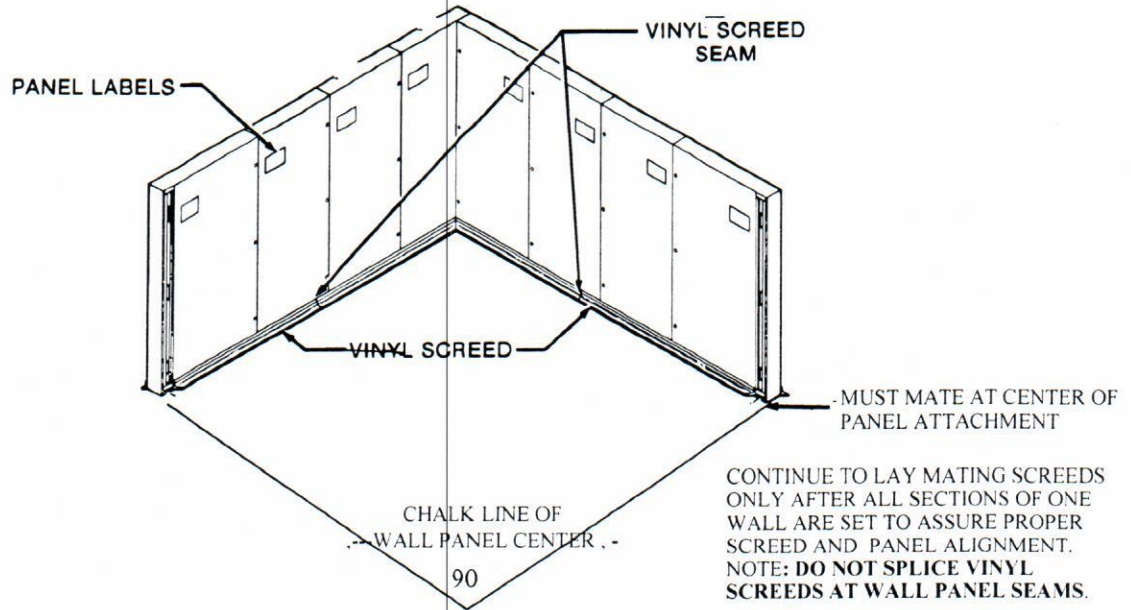
STEP 2. Continue adding panels, alternating sides until corners are reached. Place a 1/4" bead of caulk on tongue before joining panels. Refer to panel numbers on installation blueprint and panel to assure proper sequence of panels.

FIGURE 10



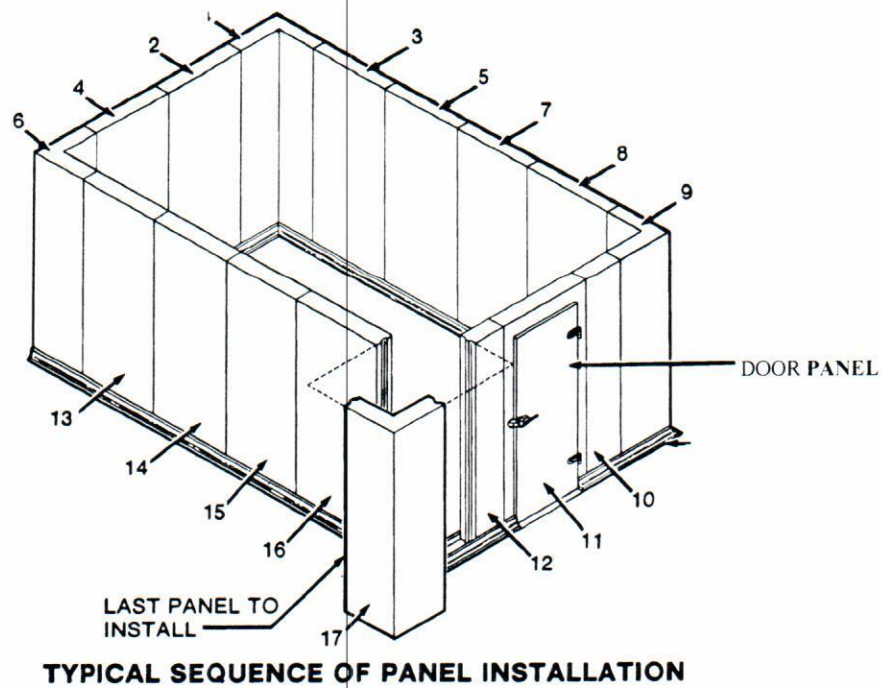
STEP 3. Verify chalk centerline for connecting wall is centered at mating surface of last panel. If not, restrike chalk line after verifying all panels set on wall are correct.

FIGURE 11



STEP 4. Continue adding panels from each corner until final corner is reached. Corner panel should be the last panel installed.

FIGURE 12

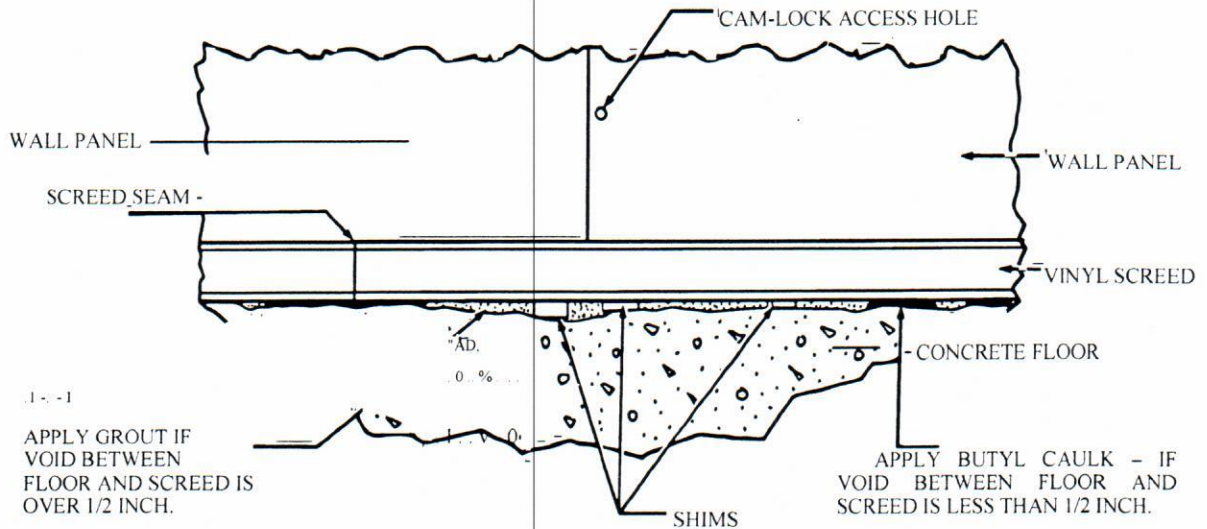


NOTE: Sequence to install has no relationship to numbers on your panels. Numbers on panels relate to their respective location on your installation print.

STEP 5. SEAL WALL TO FLOOR JOINT (Non-Manufactured Floor Installation)

After wall and ceiling panels are installed, inspect area between walls and floor. If void exists, fill voids of 1/2" or less with butyl caulk. Voids greater than 1/2" should be grouted to assure proper seal at floor and prevent air or moisture infiltration. Also, caulk all joints between lengths of vinyl screed as shown.

FIGURE 13



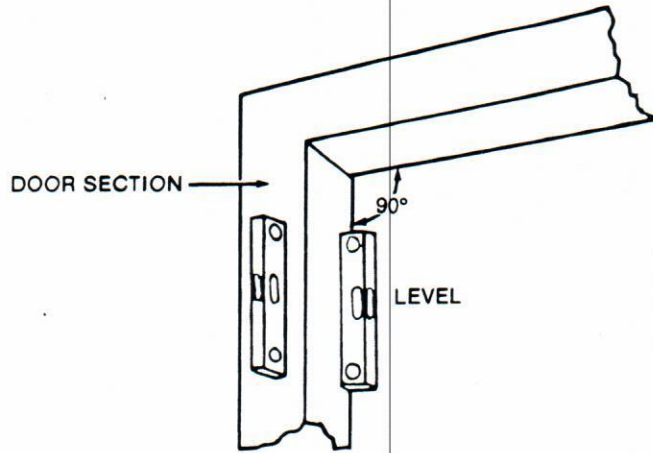
SUMMARY

1. Strike chalk line of wall panel centerline, assuring square corners.
2. Lay down (and level vinyl screed) screed in both directions away from corner. Apply butyl caulk under and on top of screed.
3. Install wall panels, beginning at corner in both directions, making sure tops of panels are in line. (See Wall Panel Installation)
4. Verify centerline of connecting walls at corners.
5. Lay screeds to mating corner as in "2" above.
6. Complete wall panel installation at corner.
7. Seal void between existing floor and walls with butyl caulk (voids less than 1/2") or grout (voids over 1/2").

INSTALLATION OF DOOR SECTIONS

STEP 1. Door sections are installed in the same manner as other wall sections. However, great care must be taken to assure the door section is set plumb and square.

FIGURE 14

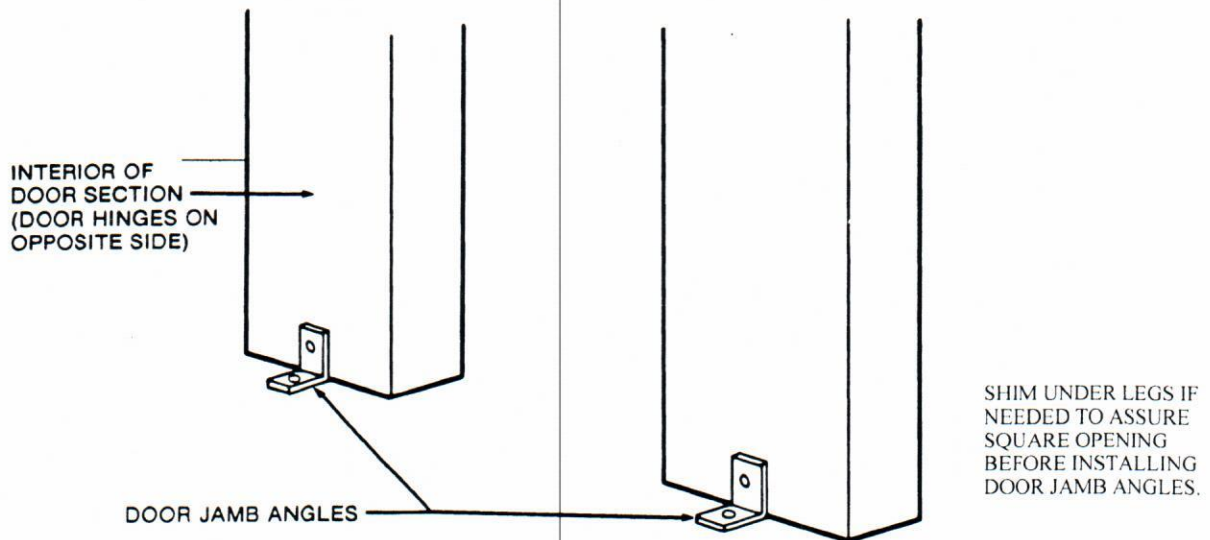


STEP 2. After setting door section, measure top and bottom of the opening. If they are not the same, adjust legs.

STEP 3. Door jamb angles are provided for each wall section that has a door opening. One angle should be installed on each side of the door opening to reinforce the wall section at these points. Failure to install these angles may eventually allow section legs to move resulting in a poor perimeter seal around the door. Use washered ramset or other suitable fastener to affix angle to floor and section.

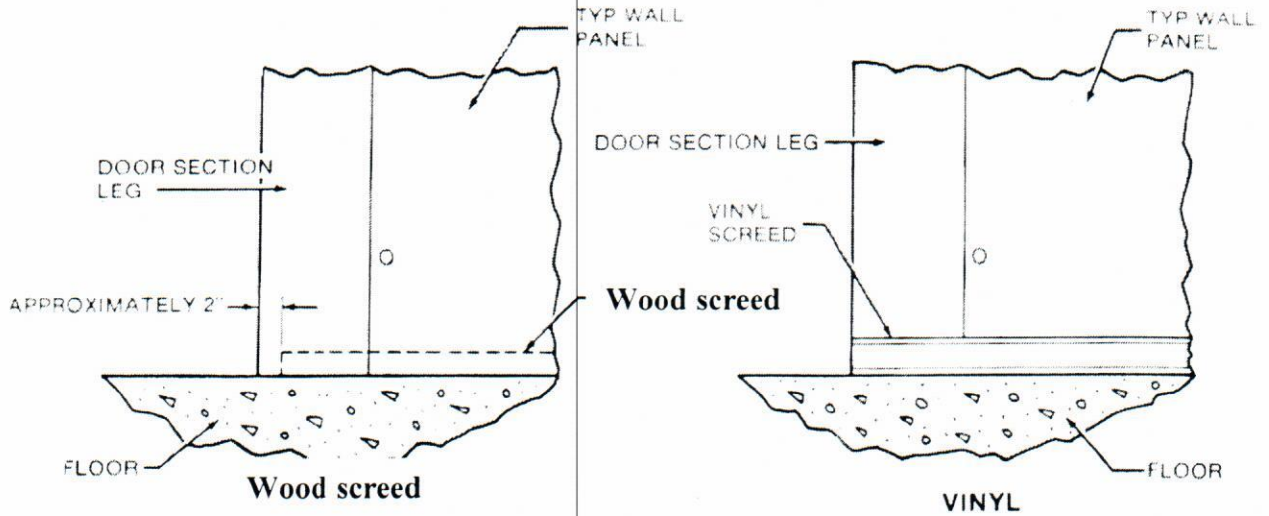
NOTE: Jamb angles are also used on sill panels where glass reach-in doors are to be installed.

FIGURE 15



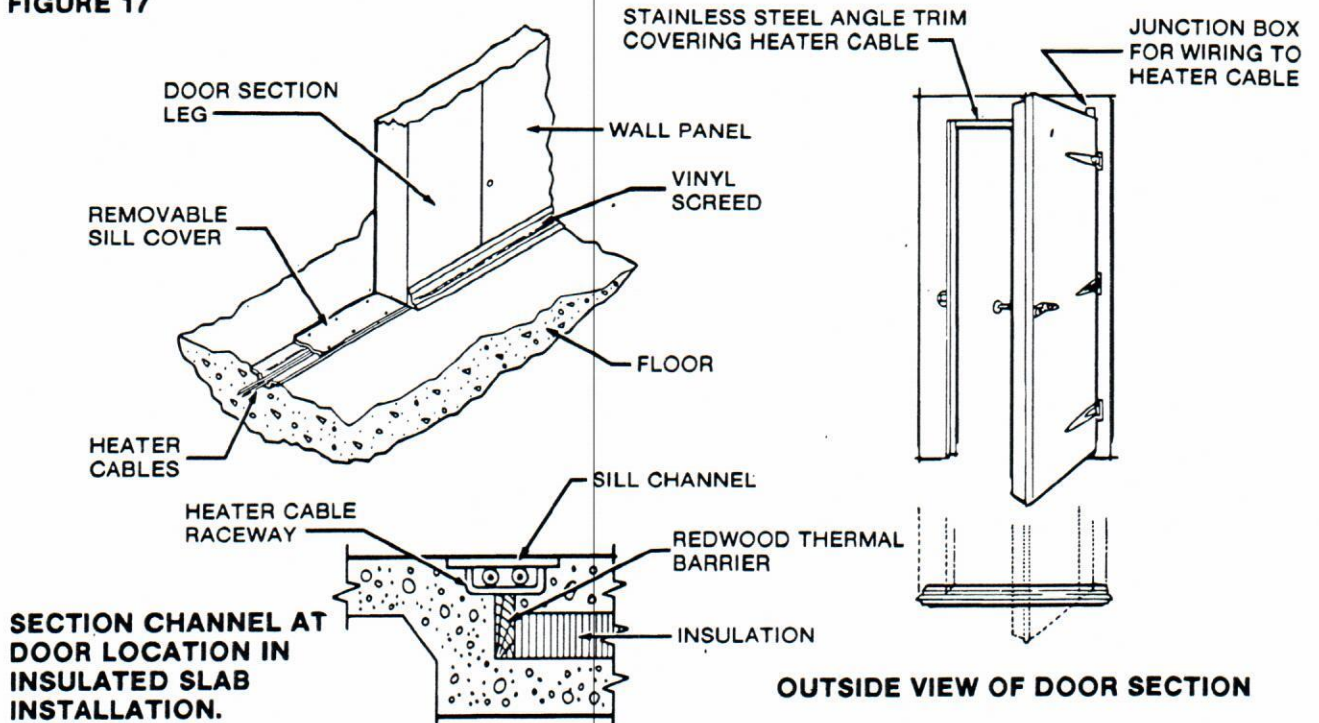
NOTE: Vinyl screeds terminate flush with legs of door section at opening. Cut wood and metal screeds 1" - 2" short of door opening before installing door sections.

FIGURE 16



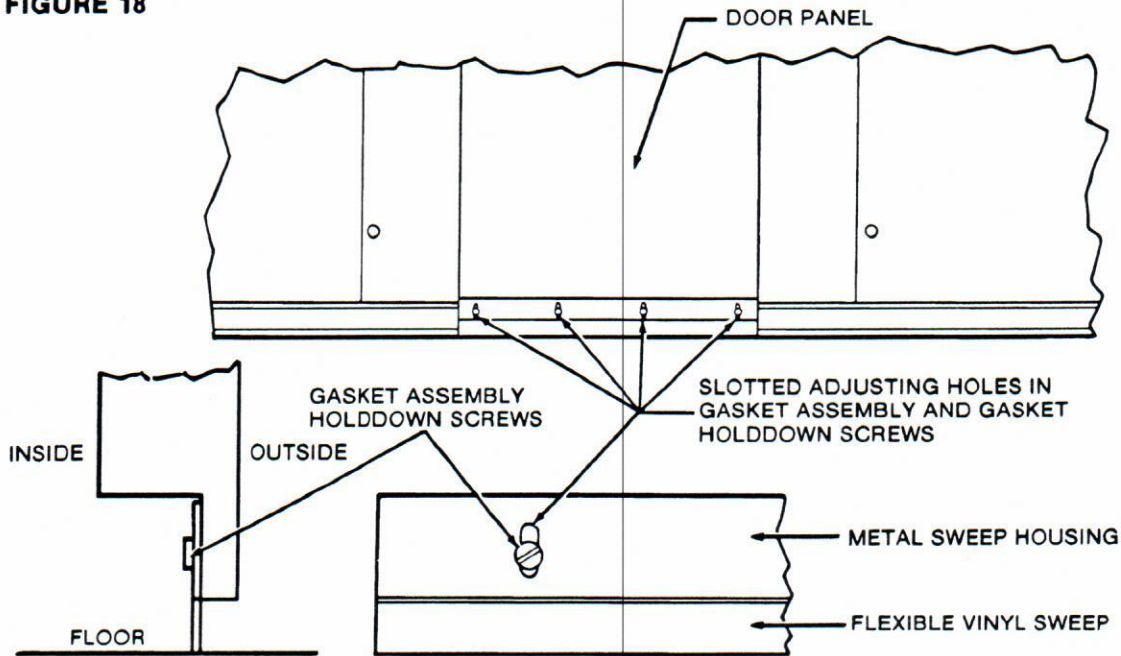
NOTE: Door sections requiring heated perimeters will have a threshold mounted to the bottom of the door section at the factory. The raceway under the threshold must lie in a recessed area of the floor as shown below. Heater cable should be wired on a dedicated line and left on at all times to avoid frost build-up or freezing.

FIGURE 17



NOTE: If your door has a wiper type gasket, adjust gasket so it meets the floor when door is open 12". Loosen gasket assembly screws, push gasket assembly up or down so bottom of vinyl sweep touches floor when door is open 12". Tighten gasket assembly screws.

FIGURE 18



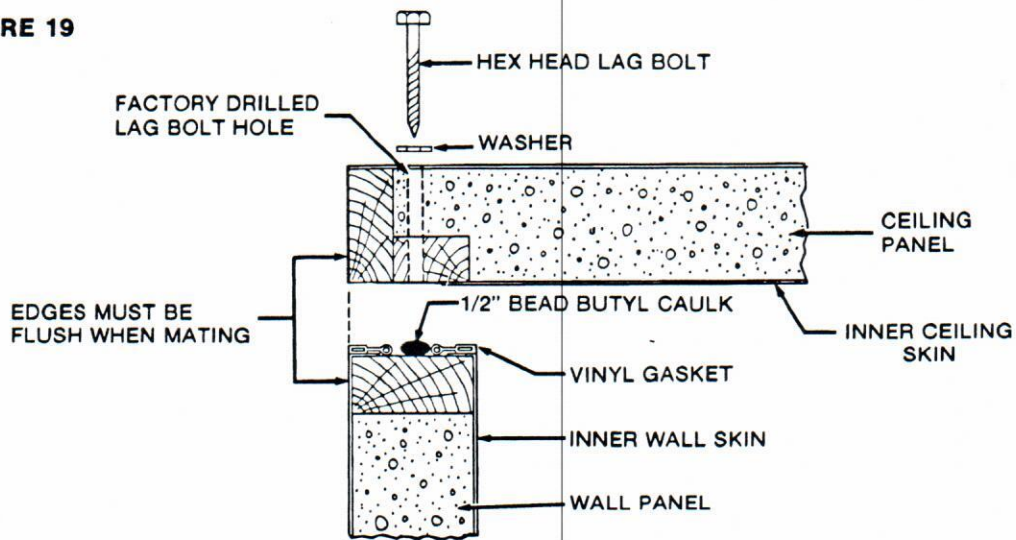
NOTE: Self closing, spring loaded hinges are factory adjusted. Do not adjust spring tension.

NOTE: If hinge lubrication is needed, use only a dry silicone type lubricant on spring loaded hinges, and petroleum jelly on cam lift hinges with vinyl inserts.

INSTALLATION OF SELF-SUPPORTING CEILING PANELS

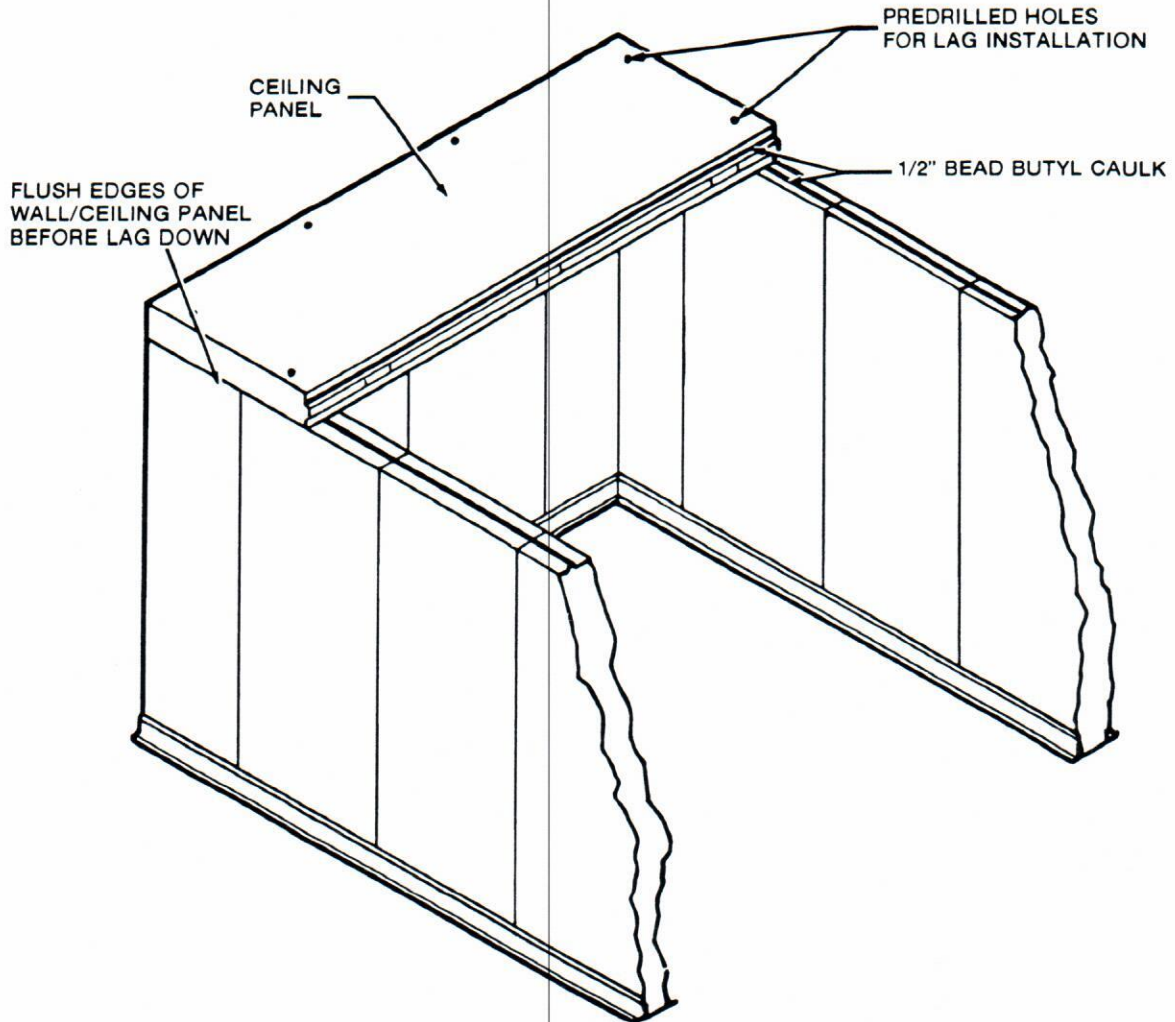
Ceiling panels are connected by cam-locks just like wall panels. These panels are then secured to the wall panels with 3/8" lag bolts. (6" for cooler walls, 8" for freezer walls.) Caulking should be put between each ceiling panel, and where the ceiling panels sit on the wall panels.

FIGURE 19



STEP 1. Begin at one end of the unit and place ceiling panel on top of walls after applying 1/2" bead of caulk on wall tops. Align walls even with edge of ceiling panel and lag ceiling to walls with impact wrench to hold in place. Ceiling panels are predrilled at the factory for lag bolt installation.

FIGURE 20



STEP 2. Place a bead of caulk on tongue of installed ceiling panel and move next ceiling panel in place. Cam-lock ceiling panels together, align walls with edge of ceiling panel, then lag down ceiling panel. Repeat Step 2 until all ceiling panels have been installed.

NOTE: Ceiling panels are numbered as shown on your installation print. Care must be taken to assure the panels are placed in their proper sequence.

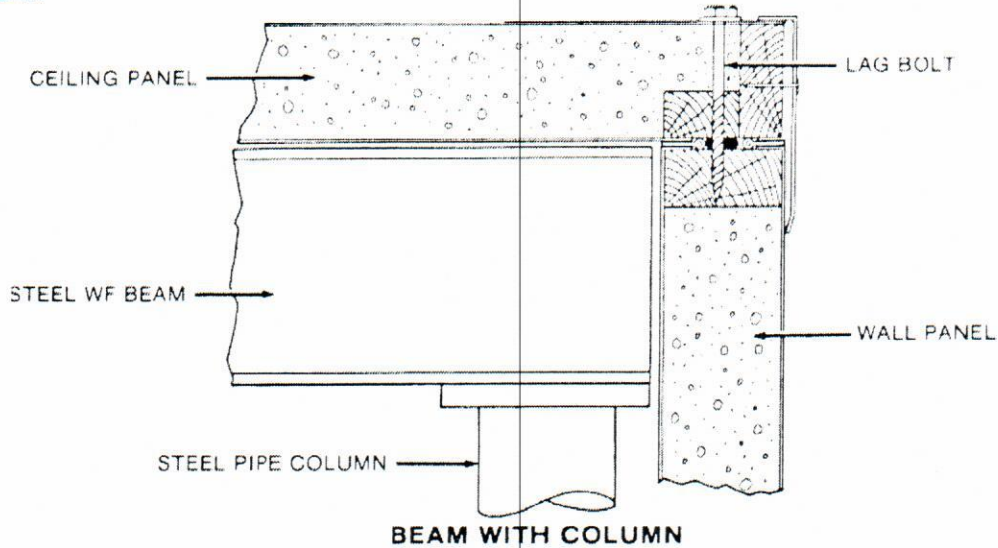
NOTE: Ceiling panels will not mate properly and gaps will occur if wall panels were not leveled on top and at panel seams during wall installation. Correct any wall gaps at this time or air infiltration may result during unit operation.

INSTALLATION OF NON-SELF-SUPPORTING CEILING PANELS

The maximum unsupported length for ceiling panels is 15' for 3 1/2", and 20' for 5 1/4". When dimensions of unit exceed maximum, the ceiling panels must be broken into two or more lengths and have some form of support.

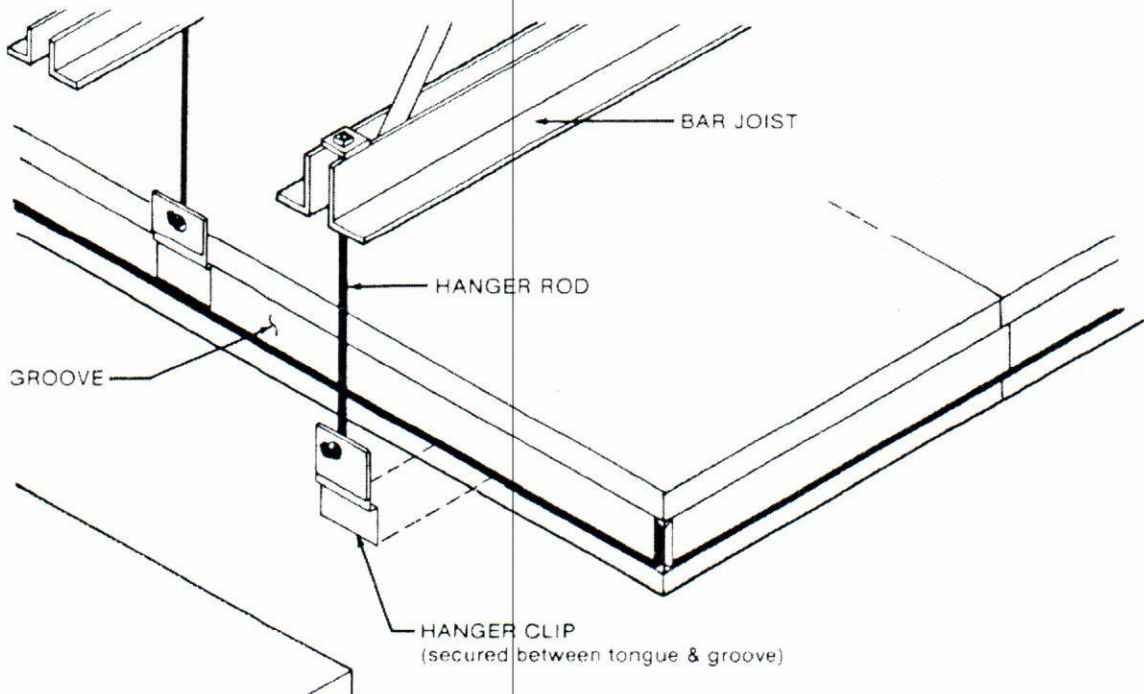
- A. Outside boxes use interior support columns and wide flange beams to follow ceiling panel seams.

FIGURE 21



- B. Inside units may use hanger connected to existing building joists, or support steel.

FIGURE 22

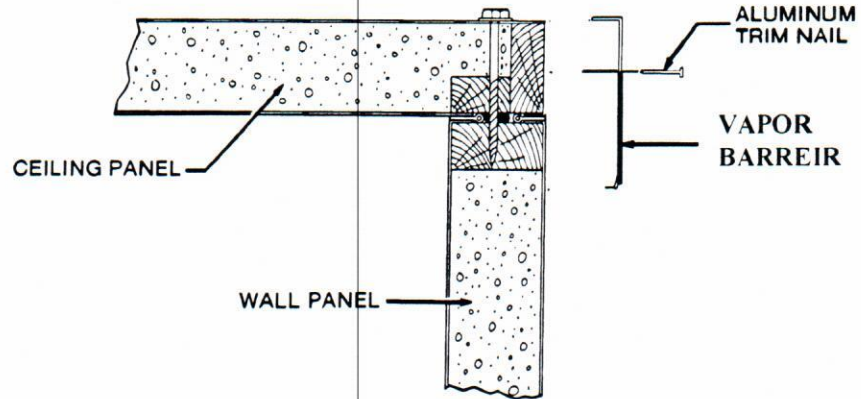


Consult the factory for detailed instructions on installation of units with non-self-supporting ceiling panels.

VAPOR BARRIER INSTALLATION

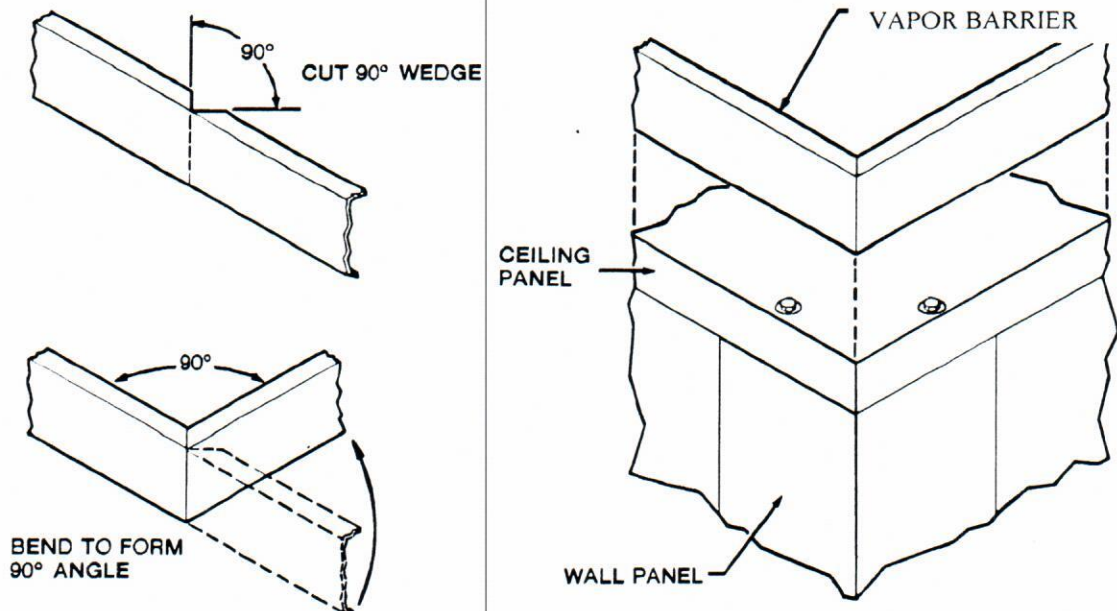
Vapor barrier is used around the exterior perimeter where ceiling and wall panels meet, follow the instructions in this section after ceiling panels have been installed.

FIGURE 23



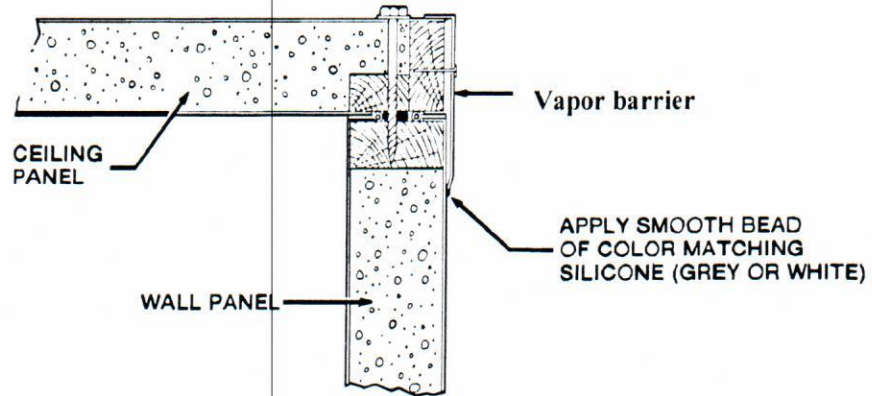
- STEP 1. Place vapor barrier as shown above.
- STEP 2. Use aluminum trim nails provided to attach vapor barrier to exposed portion of ceiling panel at 24" intervals. Drive nail until snug against vapor barrier. **If** nail is driven too far, a dimple will result in the vapor barrier surface.
- STEP 3. Mitre vapor barrier, then bend at 90" angle to wrap around corners.

FIGURE 24



STEP 4. Apply filler bead of silicone in any "voids" between vapor barrier and wall sections, to "finish" vapor barrier installation.

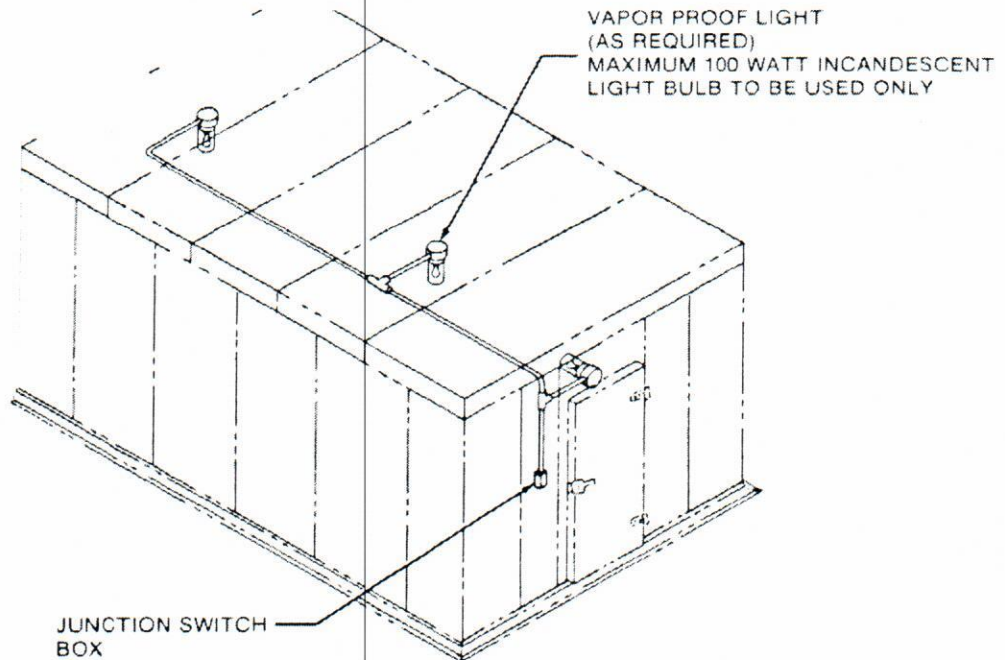
FIGURE 25



VAPOR PROOF LIGHT INSTALLATION

A junction switch box and vapor proof light assembly is provided for each compartment of your walk-in. These items are packed along with the miscellaneous assembly supplies such as caulk, silicone, and trim nails. By providing this material loose, you have the flexibility to place your light and switch where it will be best suited for your particular operation. A qualified electrician should be used to mount, wire and run conduit between these items. The power supply should be 120 volts, single phase, 60 cycle. A maximum 100 watt incandescent light should be used.

FIGURE 26

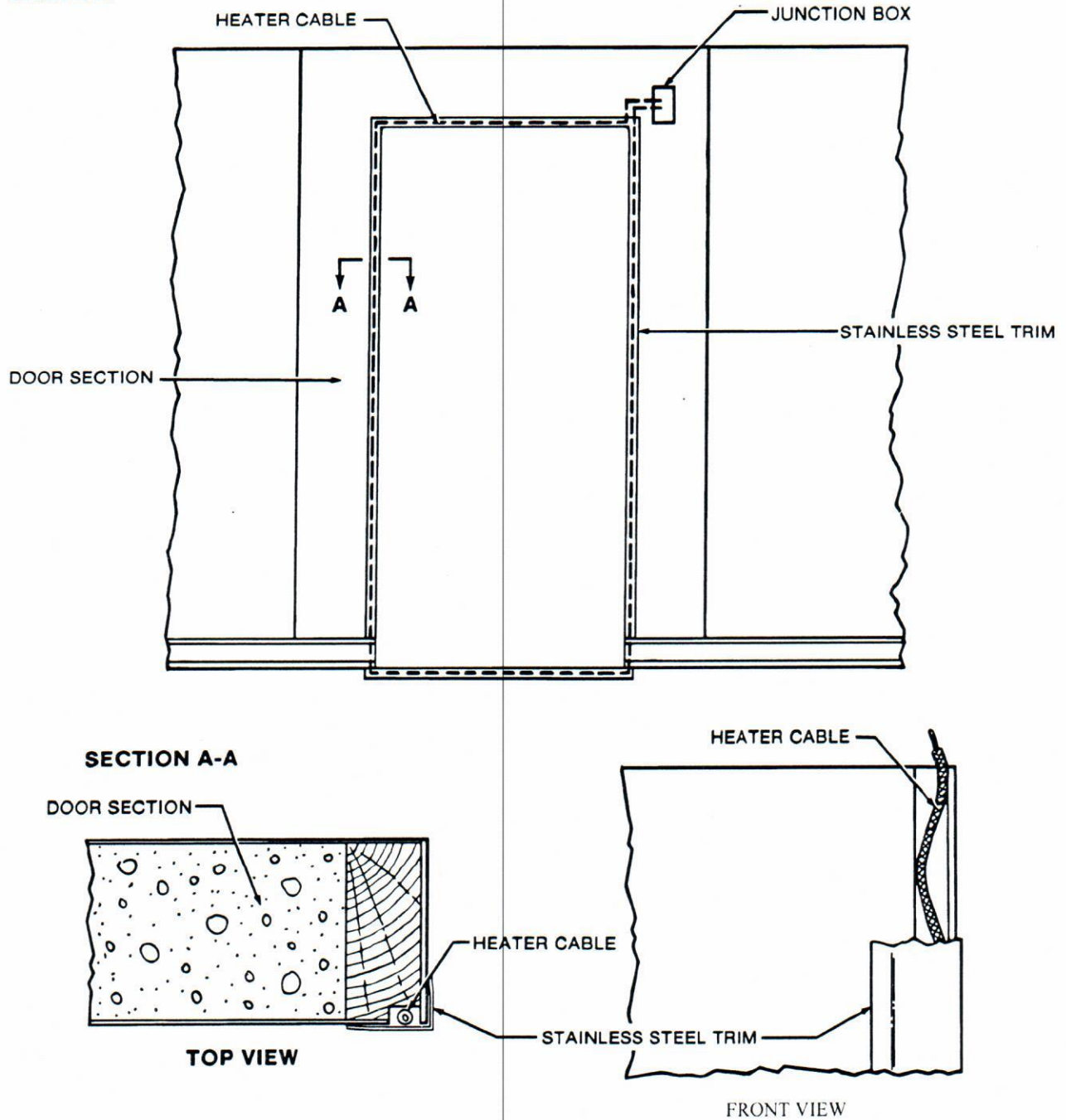


TYPICAL VAPOR PROOF LIGHT INSTALLATION

HEATER CABLE INSTALLATION

Freezer door units have a heater cable installed in the door jamb behind stainless steel trim strip.

FIGURE 27



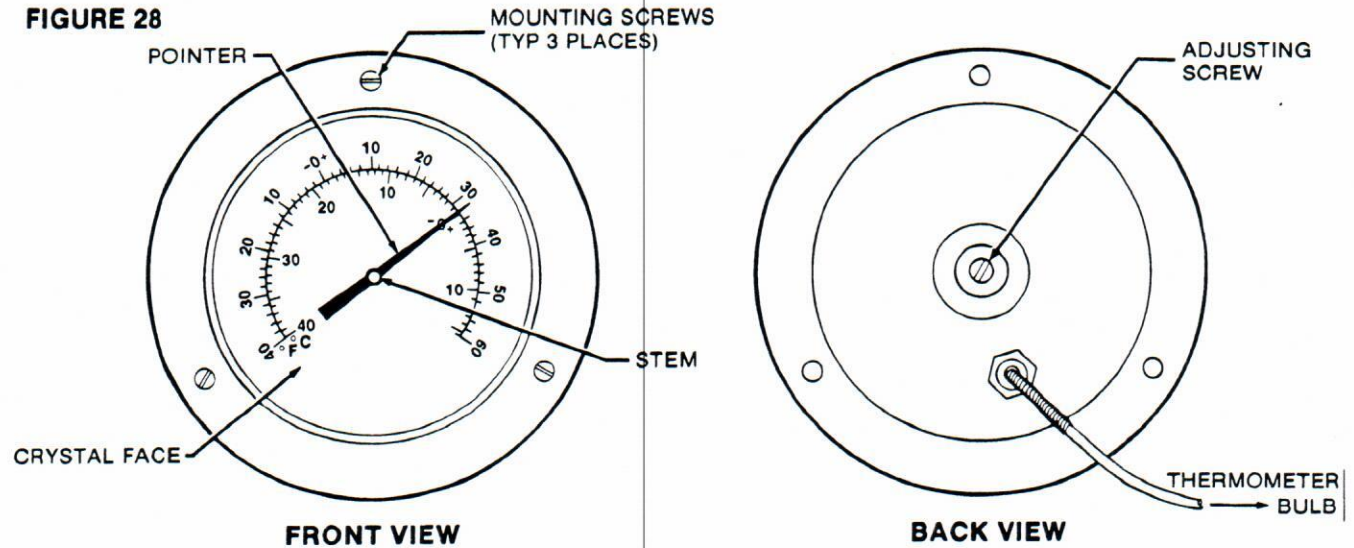
Heater cable leads are terminated in the junction box mounted to the face of the door section. These two leads should be connected to 115volt, 60 cycle service by a licensed electrician. The heater cable should be on at all times when freezer is under operation to prevent icing. The heater cable should be turned off if freezer is shut down to prevent heater cable from burnout.

THERMOMETER TESTING/CALIBRATION

Thermometers can be tested in two ways:

- A. Use a mercury thermometer to measure inside temperature with which to compare reading on factory installed dial thermometer.
- B. Mix crushed ice and water together to form a slush. Insert thermometer bulb in mixture and check thermometer reading which should be approximately 32°F.

If a disparity is found in testing, recalibrate your thermometer as follows, referring to thermometer illustration below.



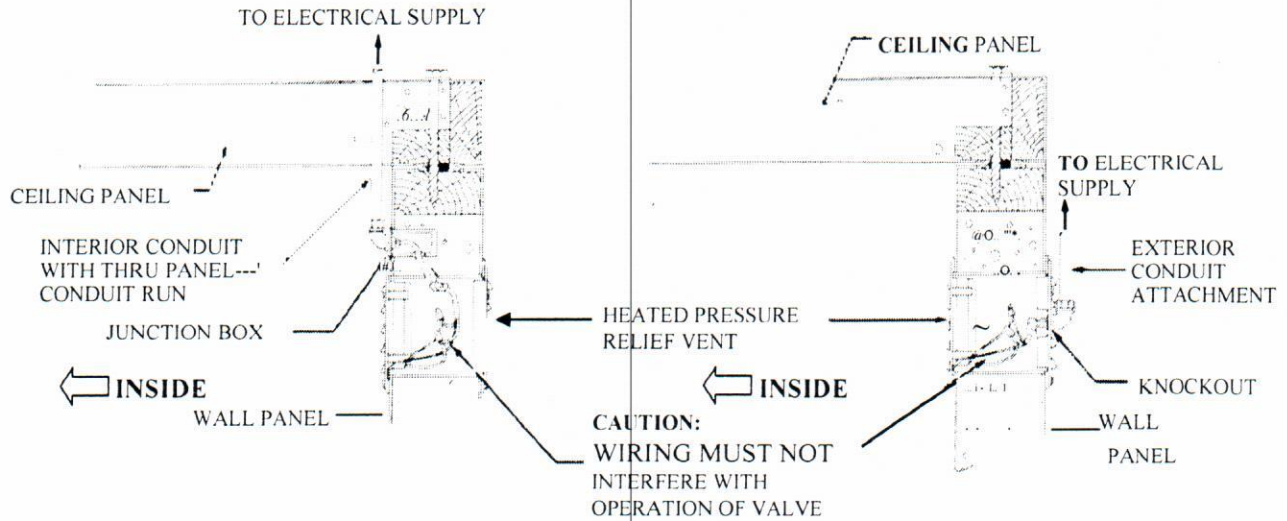
- STEP 1. Remove the three (3) mounting screws.
- STEP 2. Hold thermometer firmly and pull away from face of door section. Use a small screwdriver to lift edge away from door section, if necessary.
- STEP 3. Turn adjusting screw, located on back of thermometer, clockwise to reduce reading, counter-clockwise to increase reading, until desired reading shown by pointer.
- STEP 4. Place thermometer back on door section surface and replace mounting screws.

HEATED PRESSURE RELIEF VENT INSTALLATION

Each freezer compartment will have a heated pressure relief vent mounted to a door section at the factory. The purpose of this vent is to allow air exchange between the outside and inside of the freezer chamber should air pressure differences occur. It is mandatory that the vent be wired and left on at all times to prevent the vent from freezing which would render the vent inoperable.

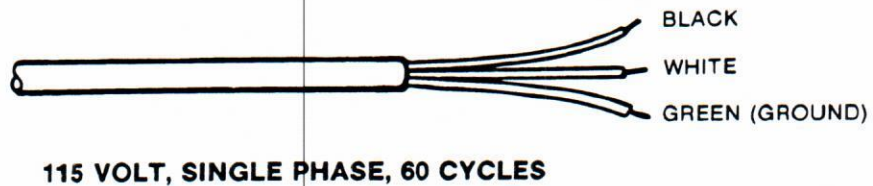
The vent can be wired from either side depending on where you desire to attach conduit.

FIGURE 29



- STEP 1. Determine whether interior or exterior conduit attachment is to be used.
- STEP 2. Remove appropriate knockout.
- STEP 3. Run conduit and wire so unit is on at all times. Wire 115 volt, single phase, 60 cycles.

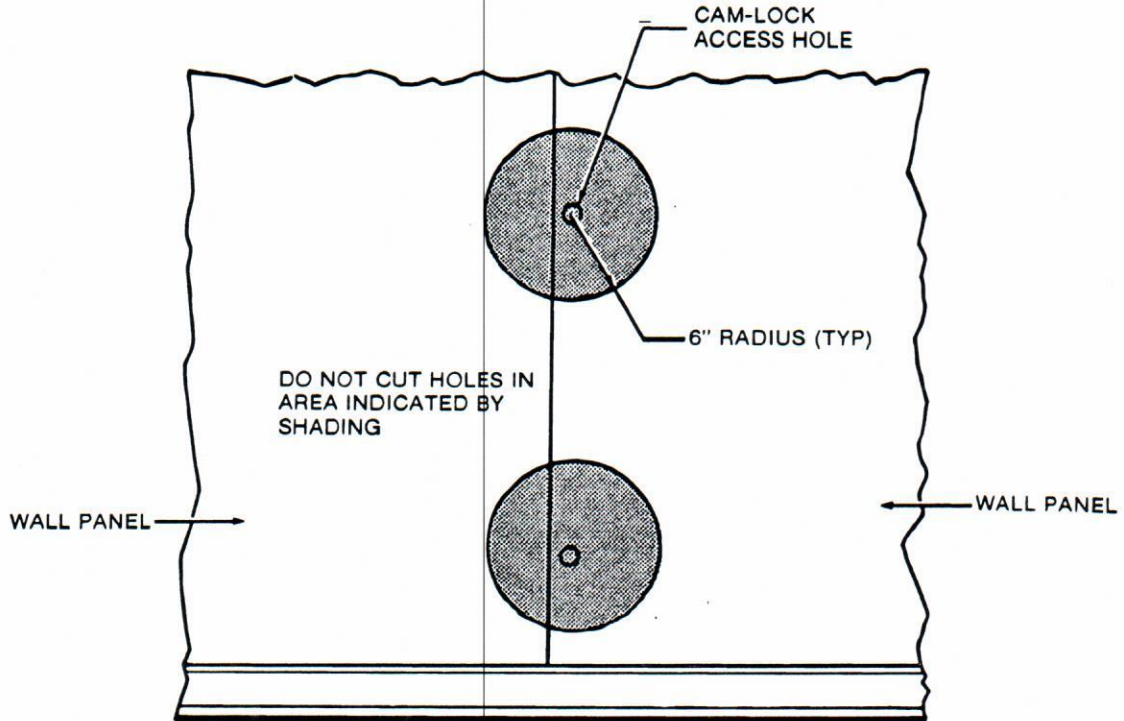
FIGURE 30



WALK-IN THROUGH PANEL PENETRATIONS

In some instances it will be necessary to make penetrations through panels for electrical or refrigeration lines. Some areas of walk-in panels contain working parts and should not be penetrated.

FIGURE 31



- STEP 1. Determine the exact location and size of the hole needed. Mark location and size on both interior and exterior of the panel.
- STEP 2. If available, use a bit of the correct size to make panel penetration. For larger holes, use metal shears to cut panel skin.
- STEP 3. Carefully remove remaining insulation from inside diameter of penetration.
- STEP 4. After electrical or refrigeration lines are run through panels, seal penetrations with a "foam-a-fill" liquid foam type product.

NOTE: The following lines must be insulated to prevent freezing or from moisture entering the interior of your walk-in.

- All interior coil drain lines in freezers should be wrapped with a heater cable and insulated.
- All lines (electrical conduit, flex hose, sprinkler lines, drain lines, etc.) for coolers or freezers should be insulated a minimum of 18" beyond panel exterior.

PRE-OPERATION CHECK LIST

After installation is complete, the following items should be checked for completeness to assure proper operation of your Walk-in Unit.

All panel penetrations sealed and insulated.

Adjustable wiper gasket sealing to floor when door shut.

Heater cable operational in door section of freezer doors. Door section perimeter should be warm to the touch.

NOTE: Heater cable should not be left on when walk-in is not operational as excessive heat build-up could damage heater cable.

Door section is plumb, square, without rack or twist and angle brackets installed.

Door gaskets are sealing to door section around entire perimeter of door. To check seal, stand inside unit, close door, turn off lighting inside unit. Light from outside the unit will make any voids visible.

Plug buttons installed in all cam-lock access holes.

All panel seams are tight and without voids. If not:

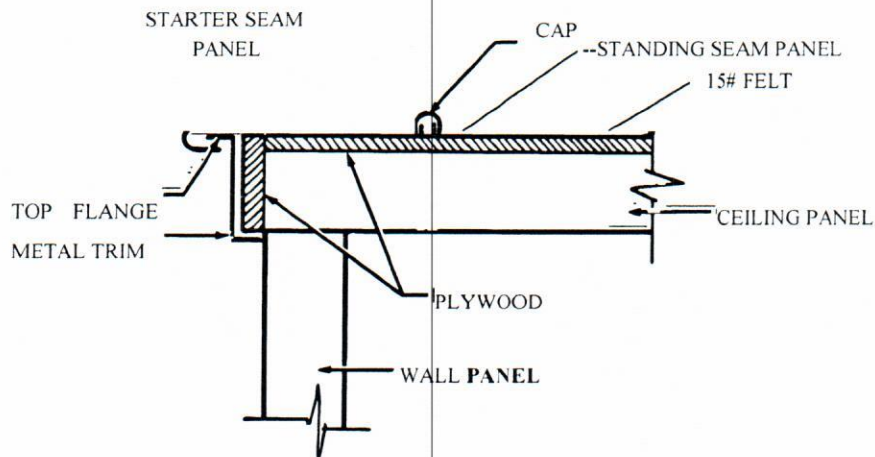
- a.) Caulk or grout voids between existing floor and wall panels/vinyl screed.
- b.) Silicone seams between panels.

Heated pressure relief vent operational with continuous power supply.

STANDING SEAM ROOF INSTALLATION

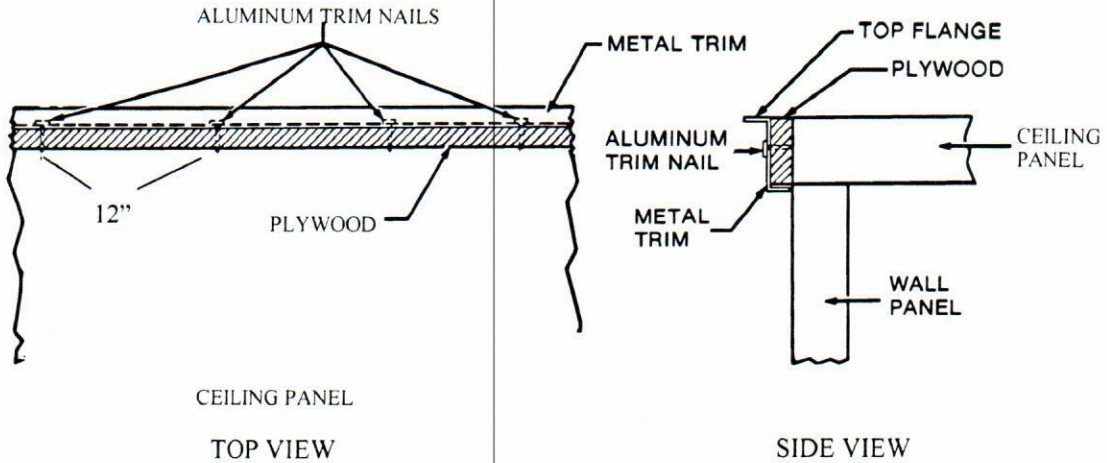
A standing seam roof is used on outside walk-ins to prevent water from accumulating on top of your walk-in and eventually entering your unit. Components of the standing seam roof are shown below.

FIGURE 32



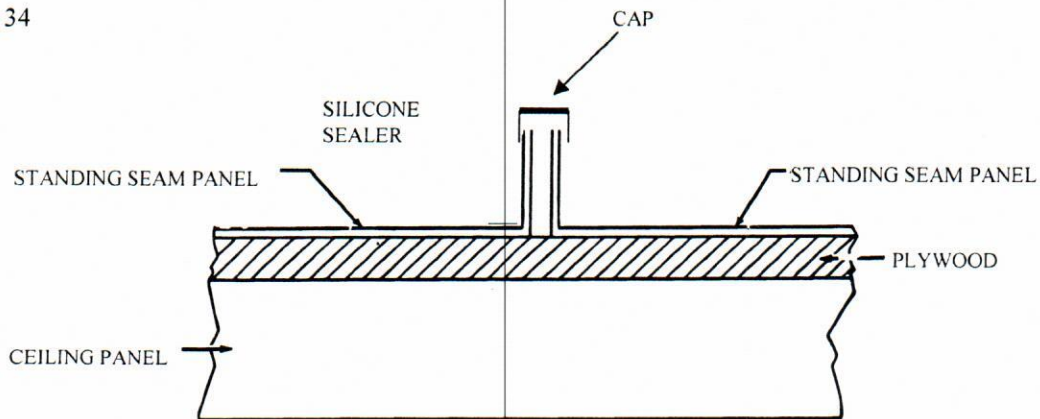
- STEP 1. Spread layer of 15 lb felt over plywood decking and staple fast. Overlap seams with a minimum of 4".
- STEP 2. Apply metal trim to perimeter of ceiling panels using aluminum trim nails provided. Nail trim at 12" intervals. Align top flange of trim to be flush with exterior top of ceiling panel.

FIGURE 33



- STEP 3. Start at one side of walk-in and lay down a starter pane I so that starter edges hook over metal trim.
- STEP 4. Lay down remaining panels on roof.
- STEP 5. Run a thick bead (1/2" or more) of silicone sealer inside cap.

FIGURE 34



- STEP 6. Place cap over seam of adjoining panels.
- STEP 7. Repeat Steps 5 and 6 until all caps are in position.
- STEP 6. Crimp caps to panels at 12" intervals.
- STEP 9. Crimp panels to metal trim top flange at 12" intervals.