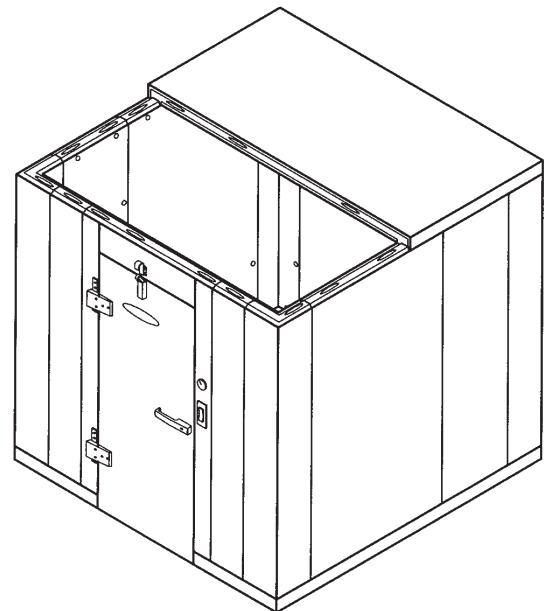
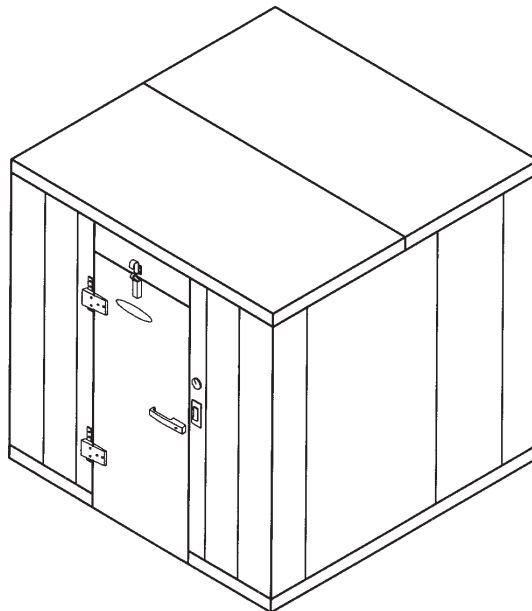
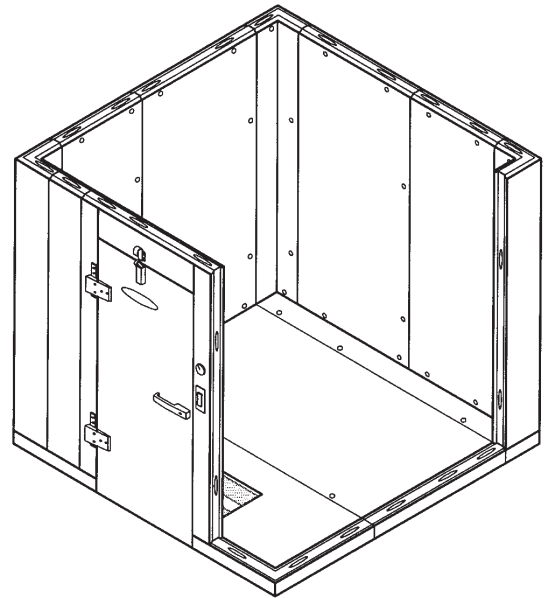
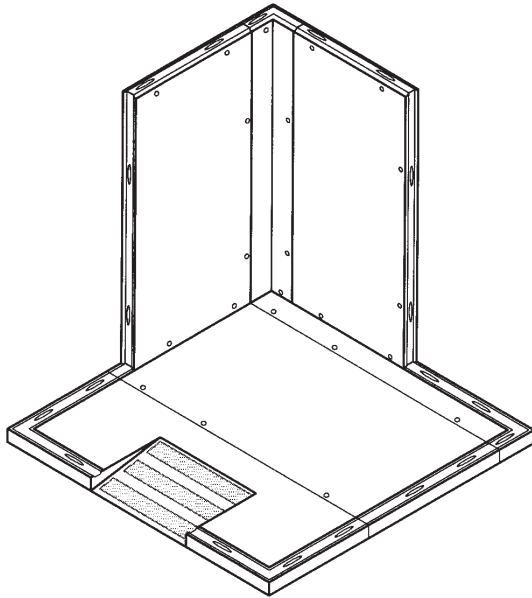


American Panel

Walk-In Installation & Maintenance Manual



OUR COMMITMENT TO YOU

Thank you, and congratulations on your purchase of an American Panel walk-in. We take great pride in engineering and manufacturing each of our walk-ins. With the goal of providing the highest accuracy and quality possible, our state-of-the-art manufacturing and quality control facility enables us to continually explore new technologies so that we can provide you with the finest walk-in equipment in the industry.

Because of our commitment to your satisfaction, we have developed this Installation & Maintenance manual to guide you through the complete installation process, and to help you maintain your walk-in properly. Familiarization and compliance with this manual will ensure years of trouble-free operation.

On occasion situations may arise that will require the help of the factory, whether it be technical information, service or replacement of parts. We have a highly trained Customer Service and Parts Department available to help when these situations arise. We also offer a national network of service agencies that may be contacted for warranty and out-of-warranty service.

When contacting the factory, please refer to the walk-in serial number which is located on the identification plate positioned on the interior of the door frame.

Thank you once again for your purchase of American Panel walk-ins.

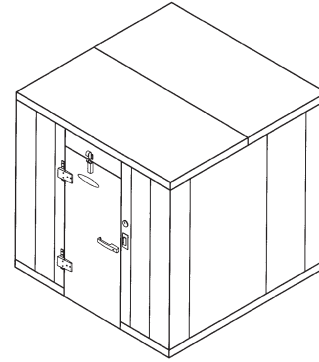
"Our reputation rests on the steadfast pursuit of your satisfaction".



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WALK-IN INSTALLATION

SECTION 1.1 - INTRODUCTION & AREAS OF RESPONSIBILITY

Walk-in coolers and freezers, or multi-compartment units supplied by American Panel Corporation can be installed in any size and configuration. These units are manufactured to meet your specific requirements.

Before any walk-in leaves our factory, it must pass our rigid quality control criteria:

- Every panel is fabricated and examined individually.
- All metal facings, lock locations and tongue-and-groove joints are carefully measured and checked for absolute accuracy.
- Every walk-in is test assembled for performance and certified free from defects prior to shipment.
- We make absolutely certain that each unit will be easy to assemble at your location.

Installation is fast and easy:

- Included are complete, step-by-step instructions, with every panel clearly identified and keyed to the text and illustrations.
- Complete and easy to read installation plan is also included.
- Cam-action locks simplify the process even further. They are operated by a single hex wrench (supplied with shipment).
- Factory applied gaskets require no sealant, silicone or other sealing materials.

IMPORTANT:

TO INSURE PROPER INSTALLATION PLEASE FOLLOW THESE INSTRUCTIONS CAREFULLY BEFORE AND DURING INSTALLATION. DAMAGE TO THE WALK-IN COULD OCCUR IF INSTALLATION INSTRUCTIONS ARE NOT FOLLOWED.

Typical Areas Of Responsibility

Responsibility	Trade	Item
Site Preparation	General Contractor	Area where walk-in is to be installed
Walk-in Installation	Equipment Dealer or Sub-Contractor	Assemble Walk-in
Refrigeration Installation	Refrigeration Contractor	Hang Evaporators, Run Refrigerant Lines, Set Condensing Units
Electrical	Electrical Contractor	Connect Power to Refrigeration Systems Connect Power to Walk-In Door Circuits For Light, Heater Wire & Heated Pressure Relief Vent (Freezer) And Any Other Electrically Operated Accessories
Plumbing	Plumbing Contractor	Run Condensate Drain Lines And Wrap Drain Line Heater Cable Around Freezer Drain Line
Refrigeration Start-Up	Refrigeration Contractor	Start-Up System and Check Operation
Service	Refrigeration Contractor	30 - Day, 90 - Day or 1 - Year Refrigeration Labor Service Policy (Optional)
Warranty	American Panel Corp.	10 - Year Panel Warranty 1 - Year Component Parts Warranty 5 - Year Compressor Warranty

SECTION 1.2 - RECEIPT OF SHIPMENT

IMPORTANT:

NOTIFY THE CARRIER IMMEDIATELY OF ANY SHORTAGE OR DAMAGE TO YOUR SHIPMENT. CLAIMS MUST BE FILED PROMPTLY WITH THE CARRIER.

American Panel Corporation walk-in panels and equipment have been shipped in a package designed to sufficiently protect from damage under normal shipping circumstances.

Upon receiving the shipment:

1. Carefully inspect the cartons for visible damage.
2. Check the number of cartons against the Bill of Lading.
3. Locate the accessory package which is usually smaller than other cartons, and may be located in a larger carton.
4. Identify, locate and forward electrical and plumbing installation instructions to the corresponding trades so that they can properly complete their portion of the installation.

NOTE: THE ACCESSORY PACKAGE WILL CONTAIN HEX WRENCH, LOCK HOLE PLUGS, FASTENERS AND REFRIGERATION CONTROLS (IF APPLICABLE). ALSO INCLUDED ARE THE FLOOR PLAN, INSTALLATION INSTRUCTIONS AND INFORMATION FOR THE ELECTRICIAN AND PLUMBER. UPON COMPLETION OF THE INSTALLATION THESE DOCUMENTS SHOULD BE RETAINED ON FILE IN A SECURE LOCATION FOR FUTURE REFERENCE.

After receipt of shipment, carefully and safely remove panels from the cartons and handle panels so that foreign matter does not accumulate on the tongue and groove routs. Panels should be handled carefully so that metal surfaces are not scratched or damaged. If panels are to be stored for a period of time prior to installation, the panels must be protected from weather conditions. Store panels above the floor area by placing on 2 x 4's and cover completely with plastic sheeting.

Under no circumstances may a damaged piece of equipment be returned to American Panel Corporation without first obtaining written permission.

SECTION 1.3 - READING THE FLOOR PLAN

Two floor plans for each walk-in will be included in your shipment. One will be located in the accessory box and the other will be attached to the exterior door and frame section.

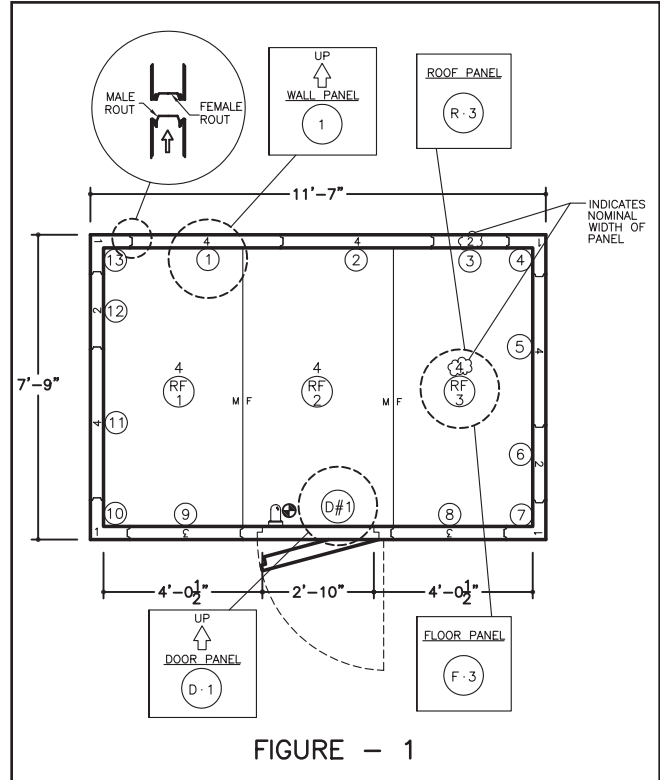


FIGURE - 1

A review of the floor plan (Refer to Fig. 1) will indicate all dimensions, as well as all wall, ceiling, floor and door locations. All wall, ceiling, floor and door and frame sections are numbered on the floor plan as well as on corresponding equipment. (All wall panels will have an arrow indicating which edge of the panel is up). The floor plan is designed to help you easily and systematically install all components of the walk-in. Typically installations start in the rear left or right corner and then progress forward.

SECTION 1.4 - GENERAL INSTALLATION PROCEDURE

All panels are manufactured with factory applied gaskets and therefore require no sealant, silicone, etc. prior to installation. A floor plan accompanies the walk-in and is located in the accessory box.

After receipt of shipment and site preparation, segregate the different types of panels, this will help minimize handling and extra labor. Each panel is clearly marked and corresponds to the floor plan. Study the floor plan and visualize how the walk-in is to be assembled for ease of installation.

Generally speaking, the assembling process and the locking sequence of panels on most walk-ins is the same. However, the assembly process may vary due to the size and dimensions of the walk-in, and the space provided for installation. For safety during installation a panel needs to be in a locked position and attached to an

WALK-IN INSTALLATION

adjacent wall, floor panel or screed before assembling any more panels. Consider all environmental and surrounding area conditions during the installation process.

The general installation requires assembling any floor panels or securing any screed before erecting wall or ceiling panels. Some walk-ins have wall panels that set directly on the building floor and are supplied with aluminum angles that will be attached after the walk-in has been erected. Depending on the design of the walk-in and local building codes, walk-ins can have various wall to floor applications.

The floor panels or screed should be laid out in correct sequence, squared, shimmed and leveled as required. Refer to the appropriate section for further detailed instructions.

After erection of the floor panels or screed, vertical panels can be installed. The upper edge of the floor panels or screed will contain the strike or pin portion of the cam-lock and the bottom edge of the wall panels will contain the hook or latch end. When installing vertical wall panels, the lock wrench holes are always located on the inside of the walk-in. Lock wrench holes on partition wall panels will be found on the freezer side of the combination cooler / freezer. All panels are clearly labeled and marked with an "UP" arrow for proper installation. Refer to the "Cam-Lock" section of this manual for further instruction.

Begin the installation of the vertical panels from a corner and work around the walk-in perimeter. Because of the space that the walk-in will fit into, you may want to start with a corner that may be inaccessible or adjacent to the building.

IMPORTANT:

DUE TO THE SIZE AND WEIGHT OF THIS EQUIPMENT, A MINIMUM OF TWO PEOPLE ARE REQUIRED TO INSTALL THIS EQUIPMENT SAFELY. ALL OSHA REGULATIONS MUST BE FOLLOWED WHILE ON THE JOB SITE.

SECTION 2.1 - PREPARING INSTALLATION SITE

An overall inspection should be done of the walk-in installation area to familiarize oneself with potential problems such as building walls, ceilings, floors or concrete slabs. These items need to be considered when preparing the site. It is critical that the walk-in fit properly into the space provided.

PLEASE REVIEW THE FOLLOWING IN PREPARATION FOR INSTALLING THE WALK-IN UNIT:

- ☐ Note any offsets for building columns.
- ☐ Check condition of floor or slab (clean, smooth and level).
- ☐ Check height restrictions (ceiling, beams, duct work, lights, piping, etc.).
- ☐ Check location of floor drains and condensate lines.
- ☐ Check compliance with all building, electrical and mechanical codes.
- ☐ Verify that door will open without restriction and does not obstruct frequent traffic patterns. The door should swing away from traffic flow when possible.
- ☐ Determine if panels of considerable length can be transported through door openings, hallways and stairways.
- ☐ Check and determine if the floor has been treated prior to installing the walk-in.
- ☐ Note location of any special accessories (heated relief vents, alarms, etc.).

SPECIAL NOTE TO GENERAL CONTRACTOR AND SUBCONTRACTOR OF QUARRY TILE OR CONCRETE WEARING FLOORS: THE SHEET METAL PANEL FACINGS ARE SUSCEPTIBLE TO STAINING DUE TO MOISTURE CREATED BY HYDRATION OF CONCRETE TYPE MATERIALS. THEREFORE, IT IS ABSOLUTELY NECESSARY THAT EACH ROOM BE PROPERLY VENTILATED. ALSO NOTE THAT SPECIAL PRECAUTIONS MUST BE TAKEN WHEN USING MURIATIC ACID DUE TO THE EFFECTS ACID FUMES HAVE ON METAL FINISHES.

SECTION 2.2 - EXISTING STRUCTURES

Walk-ins which are to be installed next to an existing building wall(s) must have a minimum of 2" clearance between the walk-in and the building wall(s). This space will allow for irregularities in the building wall(s) and will permit a free air flow between the structures.

NOTE: IT IS IMPORTANT THAT SUFFICIENT SPACE BE ALLOWED FOR SERVICE ACCESS SUCH AS REFRIGERATION AND ELECTRICAL LINES.

SECTION 2.3 - SQUARING THE INSTALLATION AREA

1. Locate the area where the walk-in is to be installed. Make sure the area is free of any debris and swept clean.
2. Refer to the floor plan which is located in the accessory box, and determine the positioning of the walk-in as it will set on the building floor.
3. Next, chalk line the outside dimensions of the walk-in on the building floor. If building walls are adjacent to the walk-in you must allow a 2" clearance between the walk-in and the building walls before marking the area of the walk-in. (If the walk-in is to be located outdoors, the 2" clearance may not be applicable). The 2" clearance is required for air circulation and any wall irregularities.

IMPORTANT:

THE FOLLOWING DIMENSIONS WILL NEED TO BE ADDED TO THE OVERALL WALK-IN DIMENSION IF THIS PARTICULAR FLOOR ATTACHMENT IS SUPPLIED. THESE DIMENSIONS ARE NOT INDICATED ON THE FLOOR PLAN.

- If vinyl floor screed is supplied add $\frac{1}{4}$ " to all sides.
- If standard aluminum angle ($1\frac{1}{4}$ " x $1\frac{1}{4}$ ") is supplied add $1\frac{1}{4}$ " to all sides.
- If heavy duty angle ($1\frac{1}{2}$ " x $1\frac{1}{2}$ ") is supplied add $1\frac{1}{2}$ " to all sides.
- If extra heavy duty angle (2" x 2") is supplied add 2" to all sides.

NOTE: IF WALK-INS ARE MULTI-COMPARTMENT, IT IS POSSIBLE TO HAVE THE FREEZER COMPARTMENT SUPPLIED WITH AN INSULATED FLOOR AND THE COOLER SECTION COMPARTMENT WITHOUT AN INSULATED FLOOR. IN THIS INSTANCE, ONLY ADD THE ABOVE DIMENSIONS TO THE OUTSIDE DIMENSIONS OF THE FLOORLESS WALK-IN.

4. After you have chalk lined the dimensions of the walk-ins make sure that the corners are 90 degrees. Next take diagonal dimensions from corner to corner (Refer to Fig. 2). These dimensions must be equal.
5. Next, refer to the "Leveling Section" of this manual and proceed as indicated.

SECTION 2.4 - LEVELING THE WALK-IN

A level walk-in floor is essential to aligning wall and ceiling panels properly. The following instructions should be used when installing insulated floor panels, vinyl screeds, or when the wall panel sets directly on the building floor or slab.

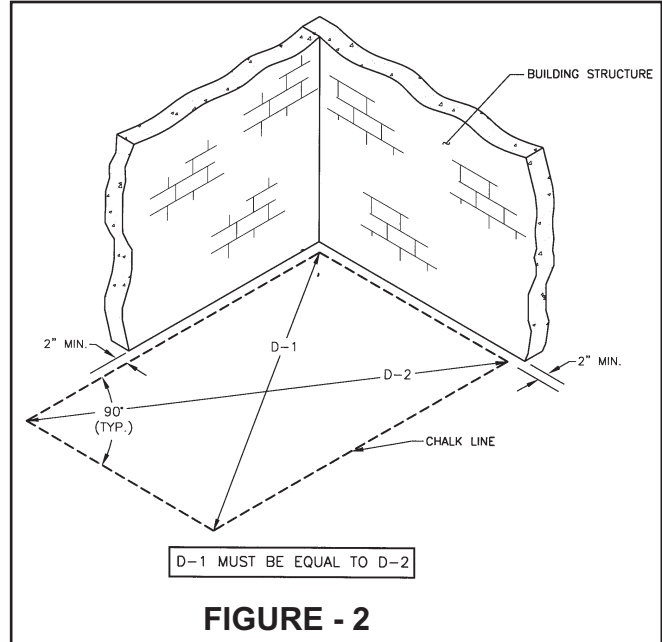


FIGURE - 2

(Refer to Figs. 3,4,5,6,7,8) for various methods of shimming.

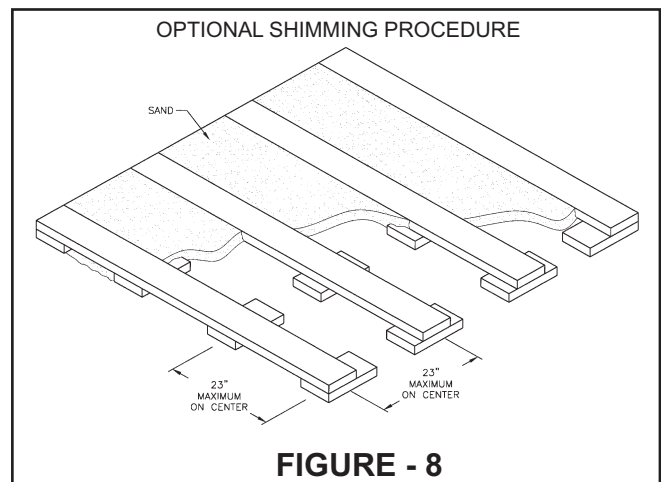
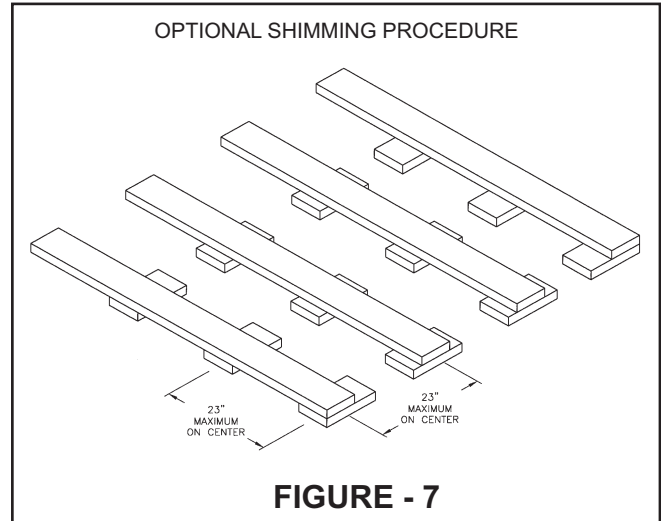
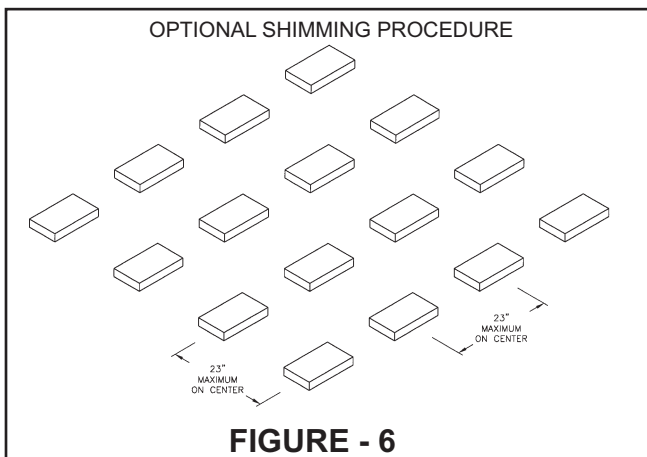
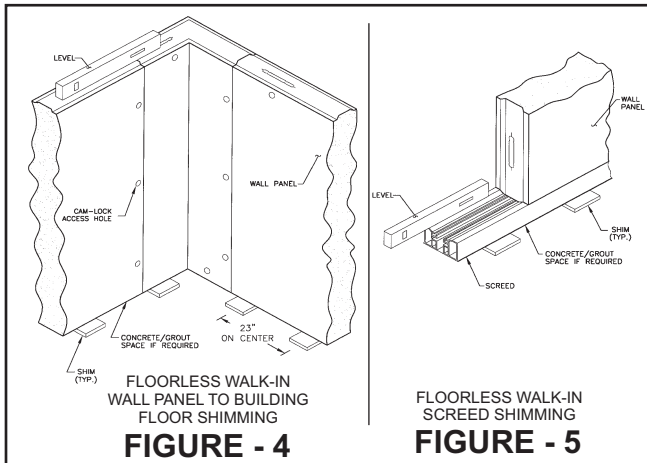
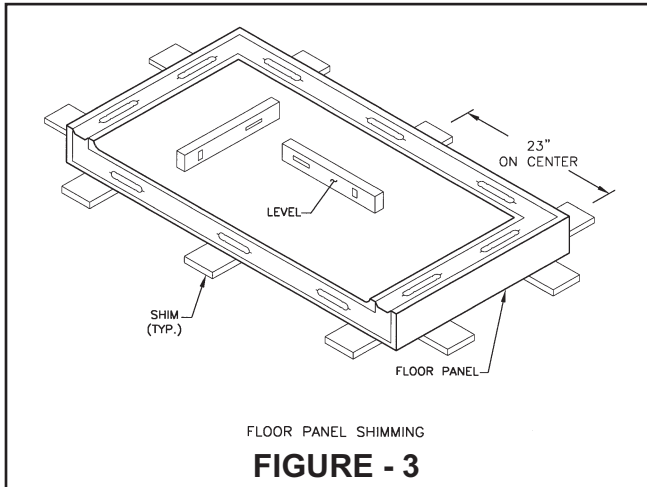
Once the walk-in outline has been chalked, determine the high point of the marked floor area and level from this point. Use of a transit level (rather than a spirit type) for walk-ins greater than 10' x 10' is recommended. Leveling is accomplished with either redwood or cedar shims which are placed under the corner and across the floor panel or screed. **(All shimming material is supplied by others).** Shims should be placed no more than 23" on center, this will provide sufficient support and keep the floor panels from sagging. Check each floor panel or screed to make sure it is level before assembling the next floor panel or screed section.

For walk-ins where a heavy product load will be stored, the entire underside of the floor panel must be supported. A sealer strip around the walk-in perimeter and dry sand poured level with the shims should provide the required support.

IMPORTANT:

AMERICAN PANEL STATIONARY FLOOR LOADS ARE DESIGNED FOR A UNIFORM 600 LBS. PER SQUARE FOOT. IF MOBILE EQUIPMENT SUCH AS DOLLIES OR CARTS ARE USED, THE FLOOR PANEL MUST BE REINFORCED WITH A DIAMOND ALUMINUM TREADPLATE. FORKLIFT TRUCKS OR PALLET JACKS ARE NOT TO BE OPERATED ON INSULATED FLOOR PANELS, UNLESS COVERED BY A MINIMUM OF 3" OF CONCRETE.

WALK-IN INSTALLATION



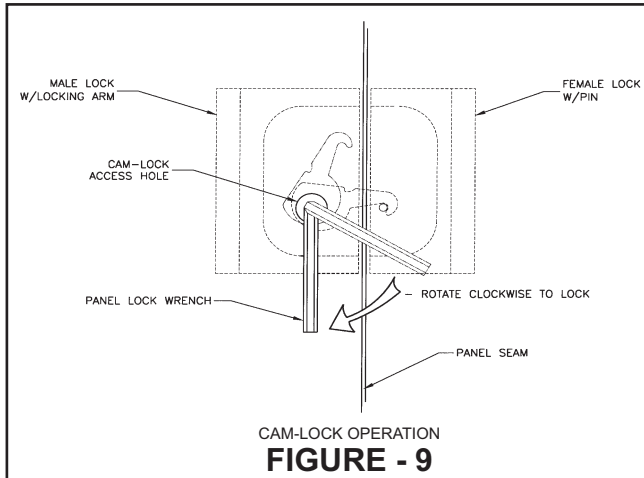
SECTION 3.1 - CAM-LOCK OPERATION

The cam-lock locking device is located in the perimeter edge of all panels. Generally speaking, most cam-lock access holes are located on the colder side of the panels. Exceptions are when panels are secured around existing structures such as a column located within the walk-in structure. Cam-lock holes will then be located on the exterior side of the panel that will enclose the column.

Generally speaking the male locks are located on the right side, top and bottom of the wall panels. Exceptions include special size units, unusual location of doors and walk-ins without floor panels or screeds, which require deviation from the standard panel.

The cam action of the lock will pull the panels together, compressing the factory applied gasket and providing an air tight seal.

WALK-IN INSTALLATION

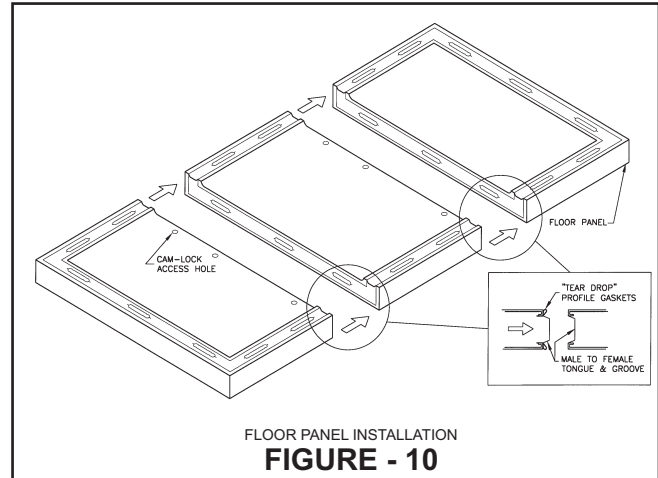


To operate the cam-lock, (Refer to Fig. 9) insert the panel lock wrench (located in the accessory box) through the lock access hole and into the hex opening in the male cam-lock. Turn the panel lock wrench counter clockwise to check that the locking arm is brought to a completely open position. Next, rotate the panel lock wrench clockwise $\frac{3}{4}$ of a full turn to actuate the lock by engaging the locking arm to the lock pin. The cam action of the lock will pull the panels together, compressing the factory applied gaskets and providing an air tight seal. Finally, rotate the panel lock wrench clockwise approximately $\frac{1}{4}$ turn to fully actuate the lock by securing the cam-lock arm to the pin. Once all the cam-locks in the walk-in are engaged, the access holes must be plugged with the supplied lock hole buttons (located in the accessory box).

- Male and female cam-lock mechanisms must line-up on adjacent panels, but are able to tolerate a $\pm 1/8$ " tolerance.
- Continually check to see that the tops of the adjacent panels are evenly lined up and flush before locking.
- Continually check to see that the interior seam of the panels being locked together is flush, tolerance is $\pm 1/64$ ".

SECTION 3.2. - FLOOR PANEL INSTALLATION

1. Before placing floor panels into position, check the floor plan for proper location.
2. **It is recommended that a (6) mil polyethylene sheet or a (15) lb. asphalt paper be placed between the floor panel and building floor or slab to prevent condensation. Overlap all seams approximately 4".**
3. (Refer to Fig. 10) Place the first floor panel along the high point of the marked area for the assembly of the walk-in. If the high point is located in the middle of the walk-in area you will need to shim level to the area of the first floor panel placement. Refer to the "Leveling The Walk-In" section of this manual.



4. If necessary, install shims under corners and along panel joints as needed to assure proper support and levelness of the floor panel. Make sure the shims are not more than 23" apart at any given point under the floor panel to eliminate potential sagging.
5. Recheck the floor panel to make sure it is level and properly supported.
6. Position remainder of the floor panels, ensure that all edges are flush, and if level, lock the floor panels together.

IMPORTANT:

STATIONARY FLOOR LOADS UP TO 600 POUNDS PER SQUARE FOOT CAN BE STORED ON A PROPERLY SUPPORTED INSULATED FLOOR PANEL. ADDITIONAL FLOOR COVERING OR SUPPORT WILL BE REQUIRED IF MOBILE EQUIPMENT IS TO BE UTILIZED SUCH AS CARTS, DOLLIES AND HAND TRUCKS. PALLET JACKS AND FORK LIFTS ARE STRICTLY PROHIBITED FROM USE IN WALK-INS WITH INSULATED FLOOR PANELS.

SECTION 3.2.1 - RECESS APPLICATION

When walk-in floor panels are required to be set into a recessed slab, the previous instructions regarding squaring, leveling and floor installation should be followed. Before starting the installation, be sure the pit is square (cross cornered dimensions), and the depth of the recess shown on the floor plan is accurate. If not, stop and resolve any discrepancy. (Various applications require differing recess depths). Recessed floor applications are often used to eliminate the need of stepping up or rolling onto an insulated floor panel surface.

Recessed areas are sized 2" larger on all sides. After the installation of the walk-in is completed, the 2" space must be concrete filled between the finished building floor and

WALK-IN INSTALLATION

the wall panel (Refer to Fig. 11). For tile and mud application after the walk-in installation is complete (Refer to Fig. 12). For recessed floors with a concrete wearing surface (Refer to Fig. 13).

NOTE: TO MINIMIZE THE GAP BETWEEN THE FLOOR PANEL AND THE FRONT EDGE OF THE RECESS YOU MAY WANT TO START THE INSTALLATION OF THE FLOOR PANELS AS FAR FORWARD AS POSSIBLE.

IMPORTANT:

SPECIAL NOTE TO GENERAL CONTRACTOR AND SUBCONTRACTOR OF QUARRY TILE OR CONCRETE WEARING FLOORS. THE SHEET METAL PANEL FACINGS ARE SUSCEPTIBLE TO STAINING DUE TO MOISTURE CREATED BY HYDRATION OF CONCRETE TYPE MATERIALS. THEREFORE, IT IS ABSOLUTELY NECESSARY THAT EACH ROOM BE PROPERLY VENTILATED. ALSO NOTE THAT SPECIAL PRECAUTIONS MUST BE TAKEN WHEN USING ACID DUE TO THE EFFECTS THE FUMES HAVE ON METAL SURFACES.

SECTION 3.3 - SECURING FLOORLESS WALK-INS

In some applications walk-in coolers and freezers will be supplied without insulated floor panels, or your application will have an insulated floor in one section and be floorless in the other section. Refer to the floor plan to determine which application pertains to your installation.

After determining which application is provided, refer to the proper section(s) for installation instructions. It is important to remember that whatever application is supplied, the same leveling and squaring procedures will apply.

The three most common attachments included in these instructions are:

- Vinyl screed
- Insulated screed
- Floor angle

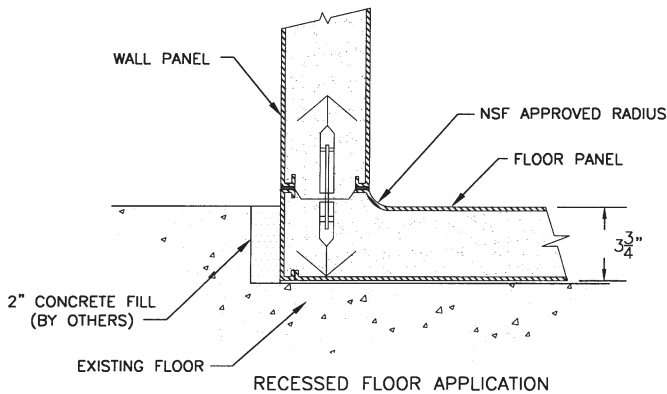
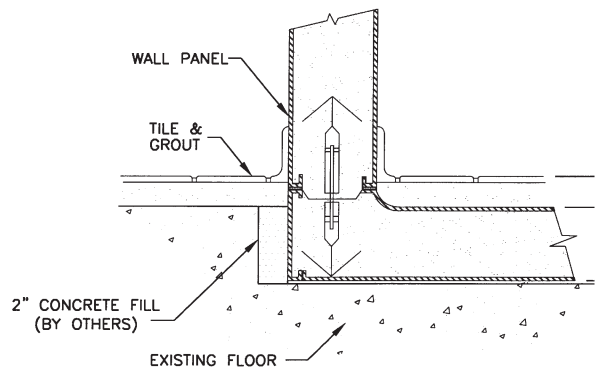
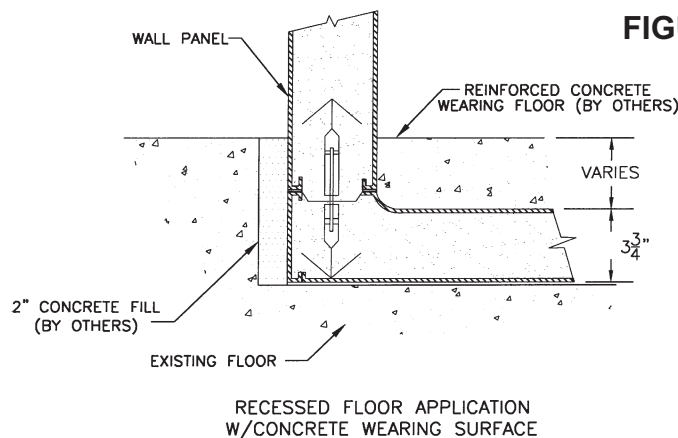


FIGURE - 11



**RECESSED FLOOR APPLICATION
W/TILE & GROUT WEARING SURFACE**

FIGURE - 12



**RECESSED FLOOR APPLICATION
W/CONCRETE WEARING SURFACE**

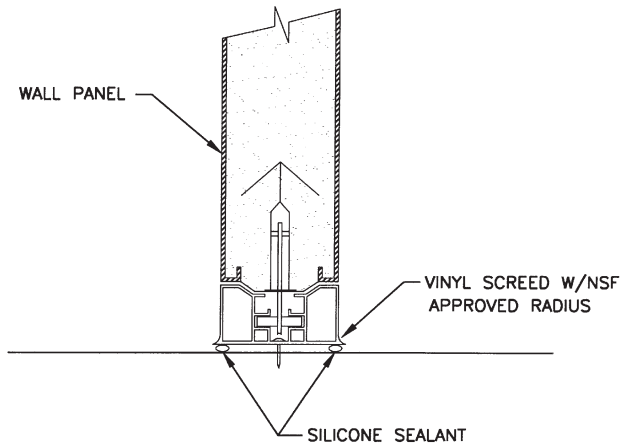
FIGURE - 13

SECTION 3.3.1 - VINYL SCREED ATTACHMENT

Before proceeding refer to the section "Preparing Installation Site" and the section on "Squaring The Installation Area". Make sure that an extra $\frac{1}{4}$ " has been added to all sides of the chalk line to take into account the beveled edge of the vinyl screed.

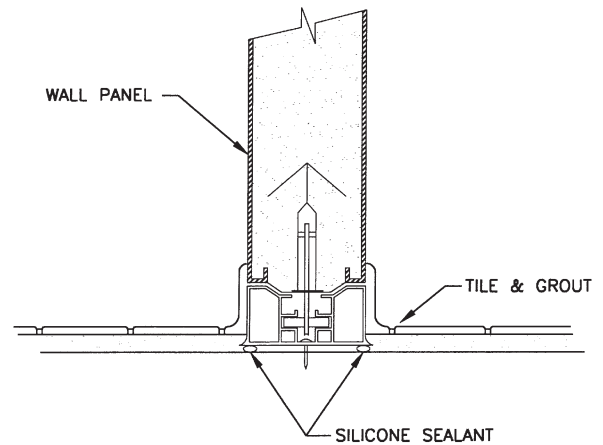
There are a number of applications for non-insulated concrete floors and insulated concrete floors with thermal barriers. (Refer to Figs. 14, 15, 16 & 17) for the proper vinyl screed attachment.

1. Refer to the walk-in floor plan for vinyl screed layout. All screed sections on the floor plan are identified by a



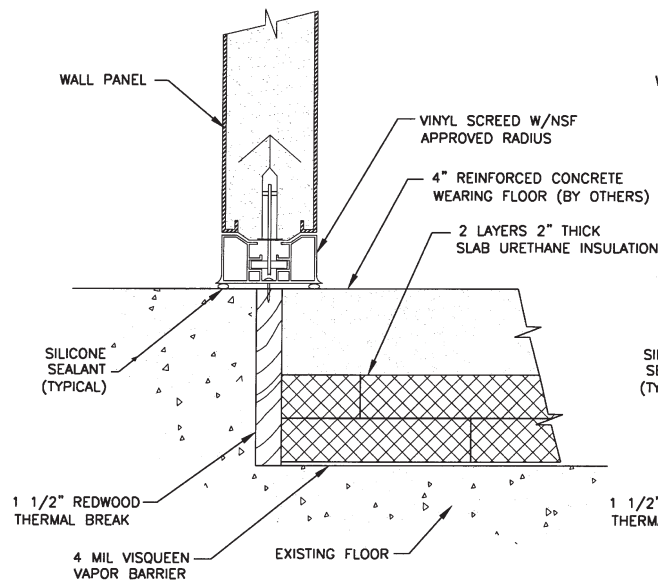
FLOORLESS APPLICATION W/VINYL SCREED.

FIGURE - 14



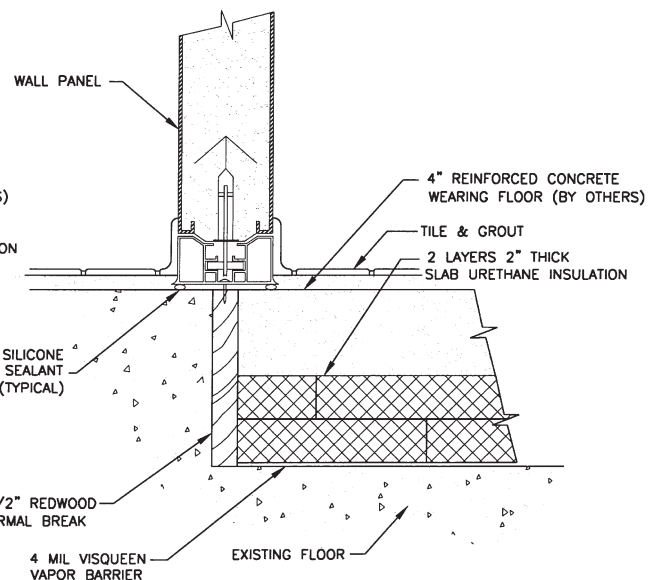
FLOORLESS APPLICATION W/VINYL SCREED AND TILE & GROUT ADDED IN & OUT.

FIGURE - 15



LOOSE INSULATED SLAB
W/CONCRETE WEARING SURFACE

FIGURE - 16



LOOSE INSULATED SLAB
W/TILE & GROUT WEARING SURFACE

FIGURE - 17

WALK-IN INSTALLATION

hexagon symbol containing the letter "S", paired with a number that corresponds to a section of screed. The screed itself will be labeled with just an "S" and the corresponding number.

2. Starting from a corner, position screeds making sure they are level, and aligned properly before securing to building floor. Refer to the section on "Leveling" for leveling screeds with shimming. When positioning screeds that form a 90 degree angle, a small metal insert is supplied for alignment of the 90 degree angle.
3. Place a bead of sealant on the interior and exterior underside of the screed before securing screeds to floor.
4. Fastening the screeds to the floor can be accomplished with the use of a ram set tool or with floor anchors. If the screed has been shimmed we recommend using the anchors to prevent cracking the screed. Make sure the shim is positioned under the point where the anchor will be secured. It is recommended that anchors be located 23" on center over the entire perimeter of the walk-in.
5. If gaps are left between the screeds and the floor due to shimming, they must be filled with a sealant after the screeds have been set.
6. Finally, wall panels are set on the screeds and locked into position. Refer to "Wall Panel Assembly" for procedures.

Some combination walk-ins may be supplied with an insulated floor in one section and floorless in the adjoining section. The vinyl screed will be positioned against the floor panel of the insulated floor section. See the floor plan for positioning.

In some instances walk-ins may be designed for loose insulated slabs with vertical redwood thermal barriers in place of insulated floor panels.

It is extremely important to make sure that the following be checked prior to installing the walk-in:

- A. Refer to the floor plan for location of thermal barriers, and measure outside corner to outside corner diagonally to ensure squareness. Refer to "Squaring The Installation Area" for squaring instructions.
- B. Ensure that the top of the thermal barrier is flush with the top of the concrete slab. If the thermal barrier is lower than the top of the slab surface, the slab will sweat or heave.
- C. The 1½" redwood thermal barrier should be cen-

tered directly under the center location of the wall panels. The insulated floor is comprised of two 2" layers of urethane insulation with staggered seams placed on top of a 4 mil visqueen vapor barrier.

- D. Once these checks have been completed and are satisfactory, installation of the walk-in may proceed.

SECTION 3.3.2 - INSULATED SCREED ATTACHMENT

Before proceeding refer to the section "Preparing Installation Site" and "Squaring The Installation Area". No additional dimension allowance is required to be added to the chalked outline of the walk-in.

1. Refer to the walk-in floor plan for the insulated screed layout. All insulated screed sections on the floor plan are identified by a hexagon symbol containing the letter "S", paired with a number that corresponds to a section of the insulated screed. The insulated screed itself will be labeled with just an "S" and the corresponding number.
2. Starting from a corner, position the foamed screeds making sure they are level, and aligned properly before securing to the building floor. 4" high insulated screeds are manufactured with a wood strip on the bottom of the screed. You will need to drill through the insulation and wood strip into the concrete floor. Fasten to the floor with a screw and anchor on 23" centers. (screw and anchor supplied by installer). Insulated screeds that are higher than 4" are fastened to the concrete floor with 2" angle clips and screws (supplied by factory and located in the accessory box). Refer to the section on "Leveling The Walk-in" for leveling the insulated screeds. The same shimming procedure for vinyl screeds applies to shimming the insulated screeds.

NOTE: ATTACHMENT OF THE INSULATED SCREEDS MAY VARY ACCORDING TO THE TYPE OF FLOOR APPLICATION. ALSO, STANDARD INSULATED SCREEDS ARE 4" IN HEIGHT, BUT MAY VARY IN HEIGHT ACCORDING TO THE APPLICATION. (Refer to Figs. 18, 19 & 20) FOR THE PROPER FINISHED FLOOR APPLICATION.

3. Place a bead of sealant on the interior and exterior underside of the foamed screed before securing the insulated screeds to the building floor.
4. Finally, wall panels are set on the insulated screeds and locked into position. Refer to "Wall Panel Installation" for procedure.

SECTION 3.3.3 - FLOOR ANGLE ATTACHMENT

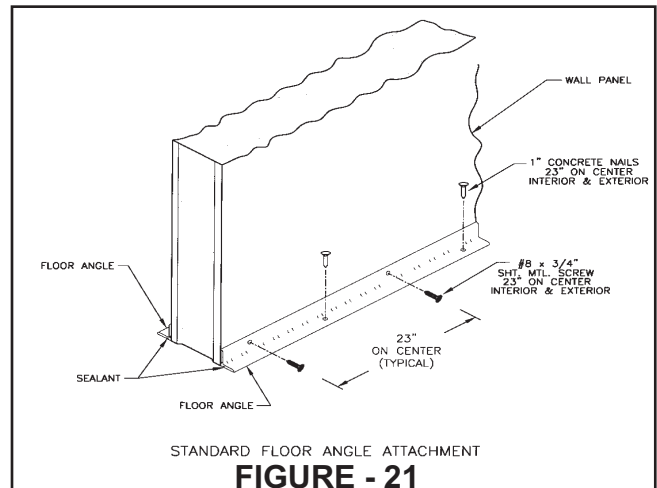
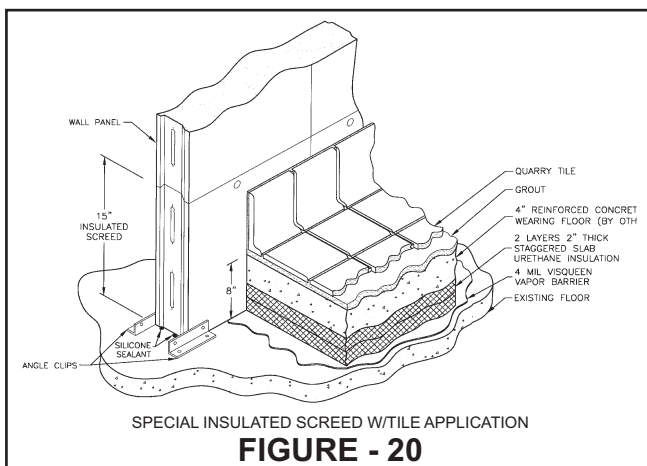
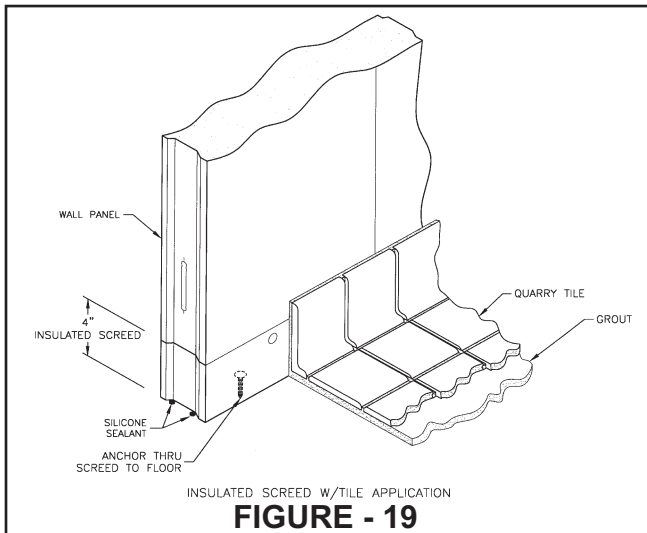
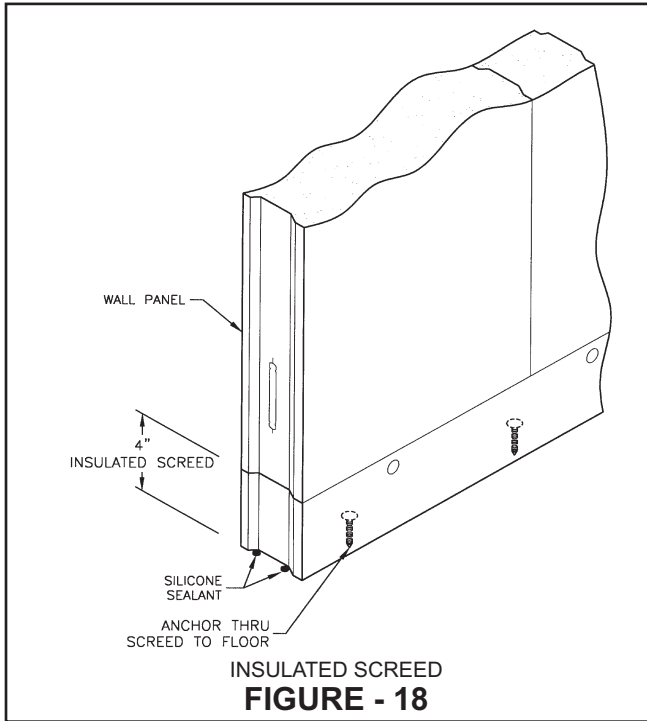
Before proceeding refer to the section "Preparing Site for Installation" and the section on "Squaring The Walk-in Area".

Make sure that an extra 1¼", 1½" or 2" has been added to all sides of the chalk line to take into account the dimension of the floor angle which has been supplied.

NOTE:

In some instances the floor angle will need to be positioned between the walk-in and the building structure. In this case the floor angle must be positioned and anchored to the building floor before the walk-in assembly begins. Once the floor angle is attached, place a 3/8" bead of sealant at the inside base of the floor angle, then install the wall panels against the floor angle. You will not be able to fasten the floor angle to the wall panels in this instance.

1. Common angle sizes are 1¼", 1½" and 2". The 2" is commonly referred to as extra heavy duty or hurricane angle. Refer to the walk-in floor plan for the proper location for installing the floor angle. All angle sections on the floor plan are identified by a hexagon symbol containing the letter "A", paired with a number that corresponds to a section of angle. The angle itself will be labeled with just an "A" and the corresponding number.
2. The floor angle has been pre-drilled and bundled for your convenience by inside (I/S) and outside (O/S) markings, along with the number of pieces in each bundle.
3. After setting up the walk-in in its entirety, place the floor angle in its proper location by matching the number on the floor angle with the number on the base of the wall panel. (Refer to Figs. 21, 22, 23 & 24) for various floor applications. Place a 3/8" bead of sealant at the base of the wall panel where it meets



WALK-IN INSTALLATION

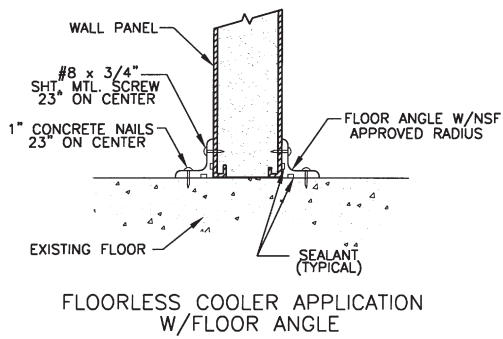


FIGURE - 22

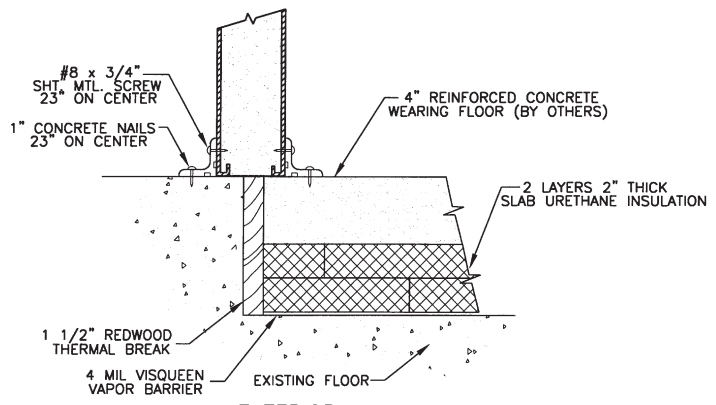


FIGURE - 23

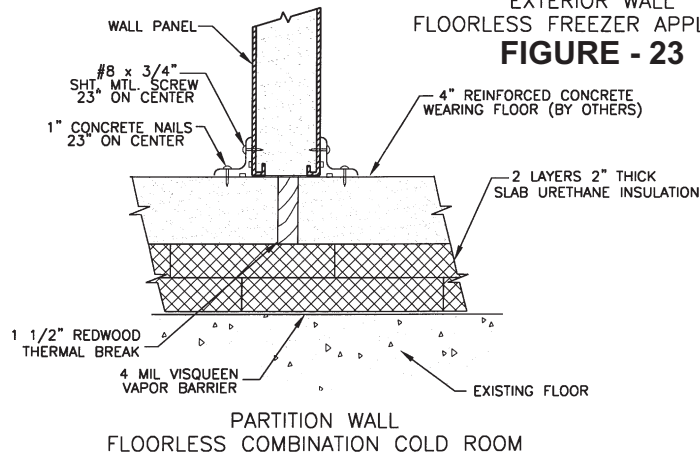


FIGURE - 24

the building floor, then press the floor angle into position.

- Through the bottom, or non-drilled side of the angle supplied, attach the floor angle to the building floor with 1" concrete nails and install on 23" centers. The top of the floor angle has been pre-drilled at 23" centers. Attach the predrilled, top portion of the floor angle to the wall panel with the #8 x 3/4" sheet metal screws.

SECTION 3.4 - WALL PANEL INSTALLATION

- Review the floor plan and select a specific corner to start the assembly of the wall panels. Generally the installation should start in the most restricted corner, or an area adjacent to building walls. Each wall panel will be marked with the panel number and an "UP" arrow for proper installation.

IMPORTANT:

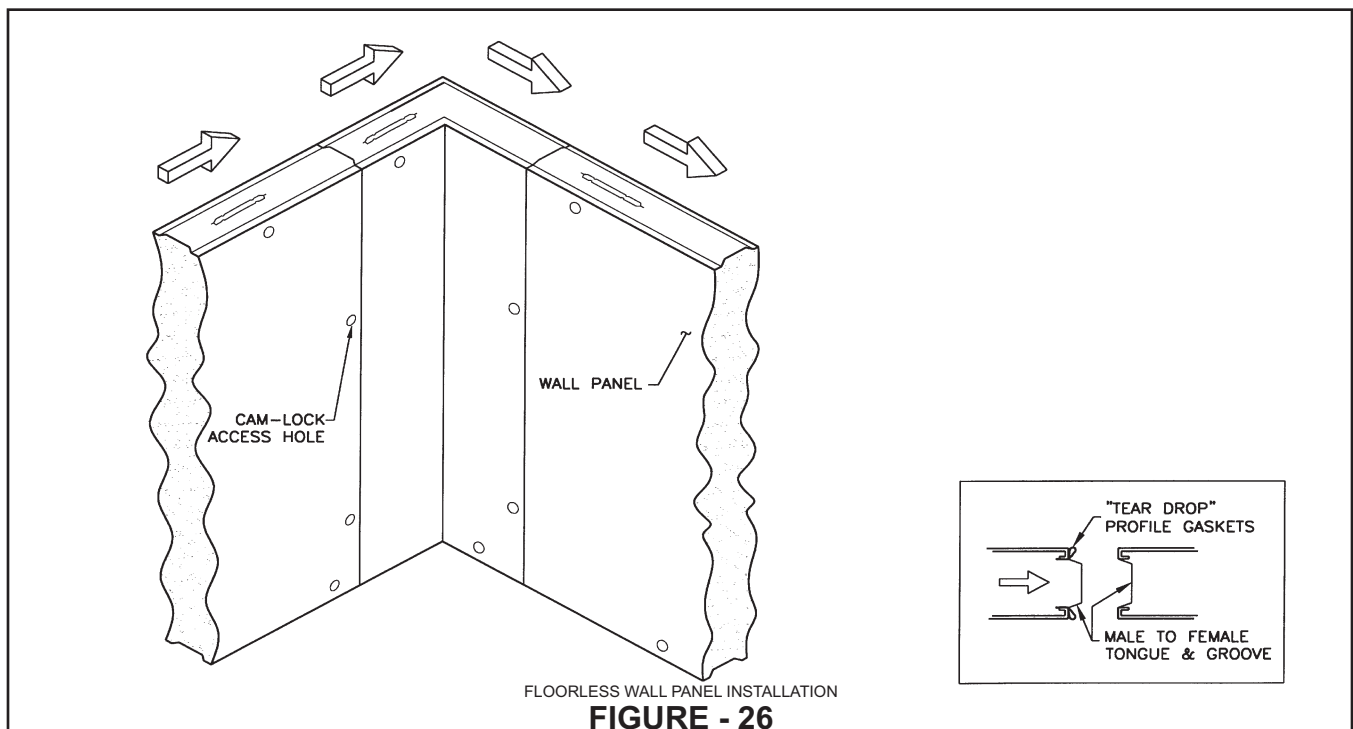
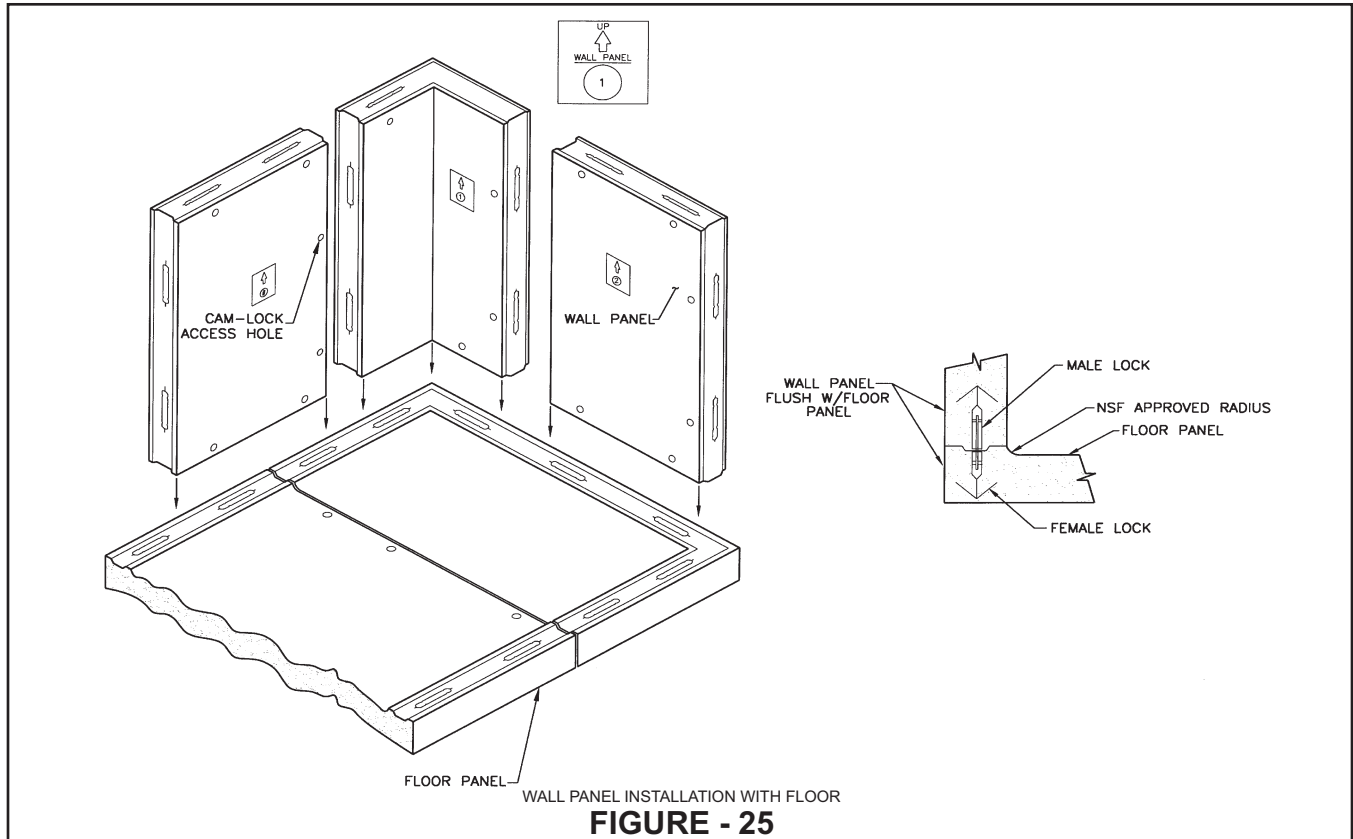
IF YOU ARE INSTALLING A MULTI-COMPARTMENT WALK-IN, READ STEP #5 BEFORE BEGINNING INSTALLATION.

- Start wall panel installation with a corner panel (*Refer to Fig. 25*) for insulated floor application and (*Refer to Fig. 26*) for floorless application. Generally you want to start in the rear left or right corner, this however may change depending on location of building structures or inaccessible corners. Place the corner panel into position but do not lock to the floor panel or screed at this time.
- Position an adjacent flat wall panel against the corner panel and engage the vertical Cam-locks to their fully locked position, making sure that the tops of the wall panels are flush and level.
- Continue erecting wall panels in both directions from the corner following the floor plan sequence. Continually check that each panel is aligned properly.
- On multi-compartment walk-ins, partition panels and possibly a door section will need to be installed prior to completing erection of the exterior walls. (For door and frame installation refer to the "Door and Frame Installation" section prior to installation of the door and frame).

WALK-IN INSTALLATION

6. Your last vertical wall panel to be erected will be a corner panel. Once the final corner panel is erected and locked into position, fully lock the vertical panels

to the floor panels or screed. All vertical panels should be flush with the exterior edges of the floor panel or screed.



WALK-IN INSTALLATION

SECTION 3.5 - DOOR AND FRAME INSTALLATION

All door and frame sections have been inspected at the factory for proper fit and operation. The door has all hardware mounted and comes to you in the locked position. The door and frame is the most critical part of the overall walk-in structure.

1. Place the walk-in door and frame section into position according to the floor plan. (Refer to Figs. 27, 28, 29 & 30) for various applications.
2. Securely lock the door and frame section to one of the adjacent wall panels. Verify the frame is plumb using a spirit level on the face of the door section.
3. Adjust the door and frame if necessary before locking to the next wall or corner panel. The door and frame at this time should be completely plumb, level and square. Do not attempt to open the door until the entire frame has been locked into position.
4. The door has been supplied with cam-lift type hinges that are self closing. When the door is in the open position (less than 120 degrees) the hinges will bring the door down to the position where the door closer will engage and seal the door in the closed position.
5. After the door and frame are installed refer to the "Door Threshold Installation" section for threshold installation instructions.

CAUTION

VERIFY THAT THE THRESHOLD WILL NOT BE BELOW THE LEVEL OF THE FINISHED FLOOR OR MORE THAN 3/8" ABOVE. FIXING A PROBLEM AT THIS TIME WILL AVOID MUCH BIGGER PROBLEMS LATER.

IMPORTANT:

HANDLE DOOR AND FRAME SECTION WITH EXTREME CARE. THE DOOR IS SHIPPED FROM THE FACTORY IN THE LOCKED POSITION. DO NOT UNLOCK DOOR UNTIL THE SECTION IS INSTALLED AND LOCKED TO ADJACENT WALL PANELS. IT IS CRITICAL TO THE PROPER OPERATION AND SEALING OF THE DOOR THAT THE SECTION BE INSTALLED PLUMB AND SQUARE.

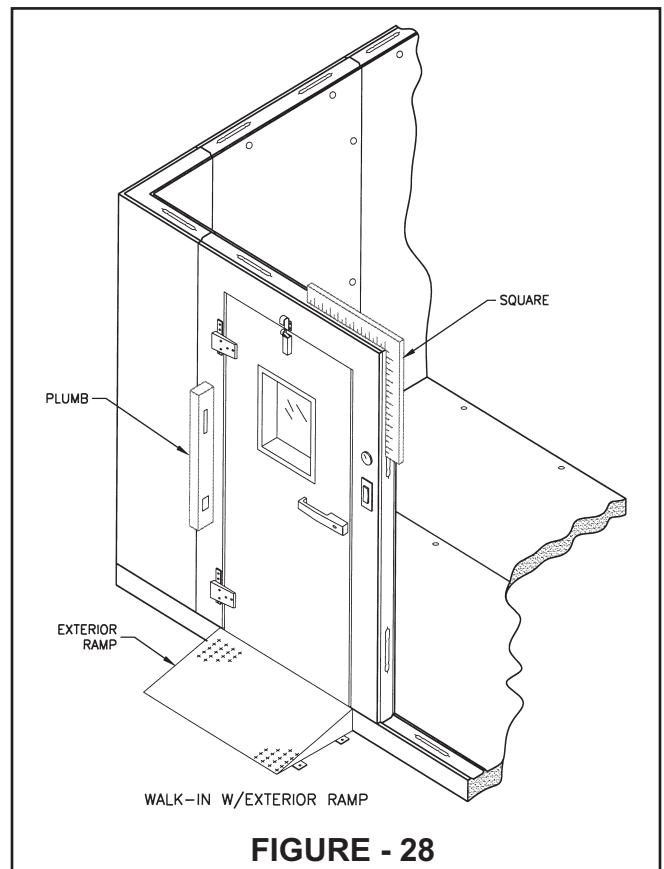
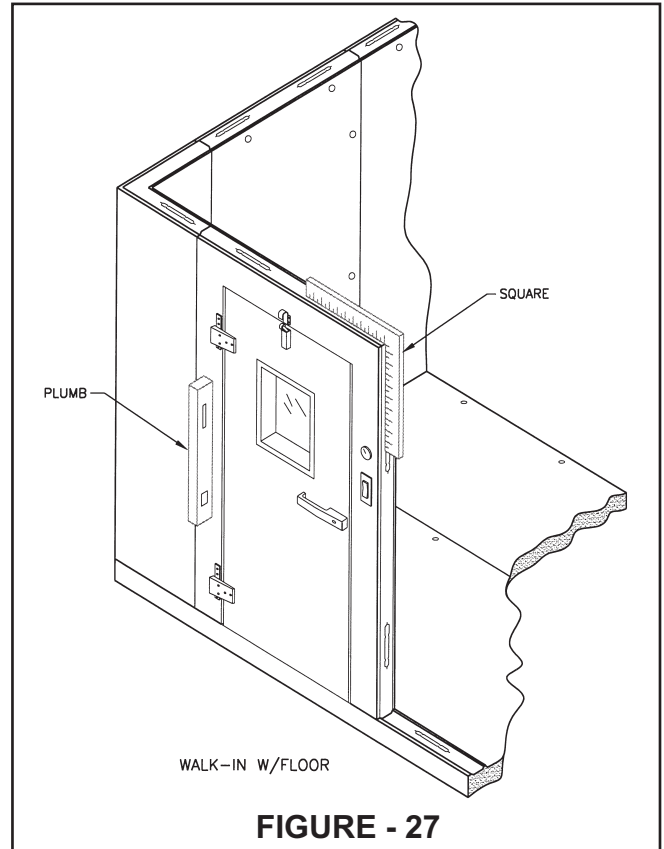
SECTION 3.6 - CEILING PANEL INSTALLATION

1. Review the floor plan and start with an end ceiling panel, generally at the rear of the walk-in. Place the ceiling panel in position on the wall panels.

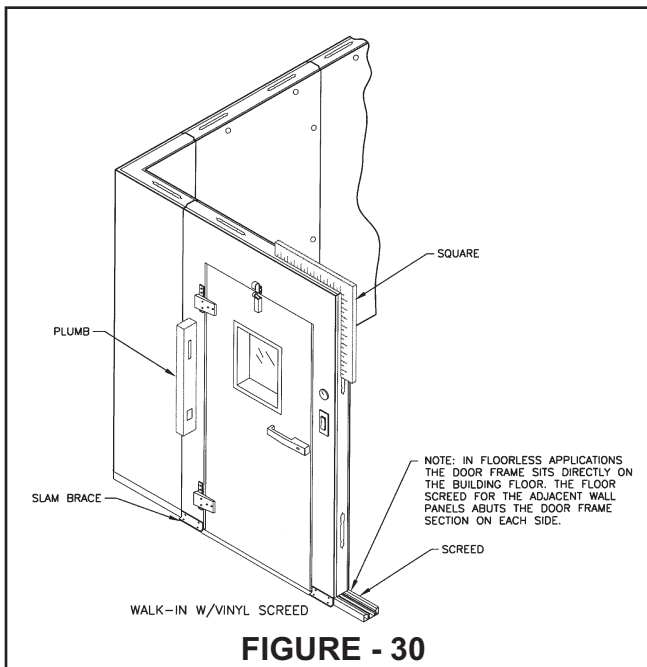
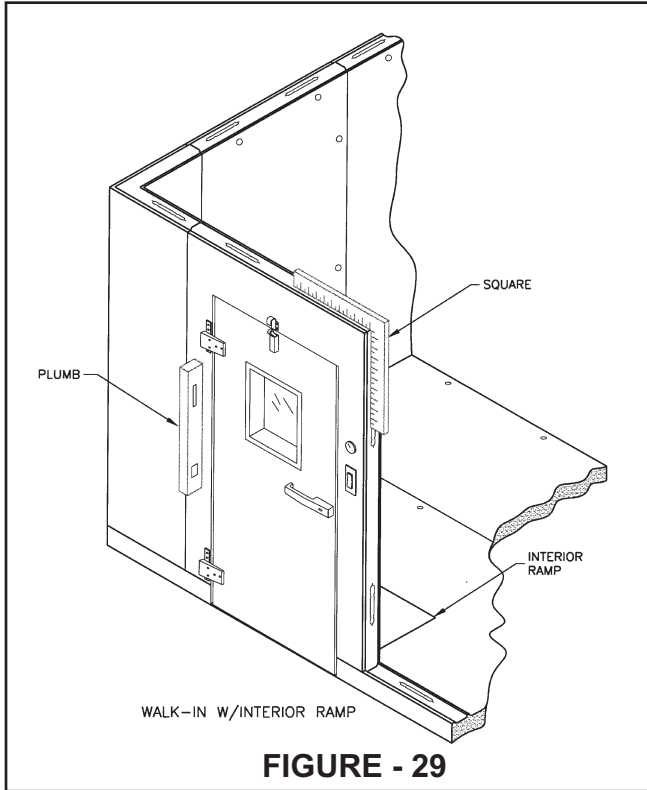
IMPORTANT:

DO NOT SLIDE CEILING PANELS OVER WALL PANELS, THIS WILL CAUSE GASKET DAMAGE. ALWAYS ELEVATE THE CEILING PANEL CLEAR OF THE WALL AND PLACE INTO POSITION.

NOTE: IF THE WALK-IN IS LOCATED IN A COMPLETELY ENCLOSED AREA WITH BUILDING WALLS IN CLOSE PROXIMITY TO THE WALK-IN,



WALK-IN INSTALLATION



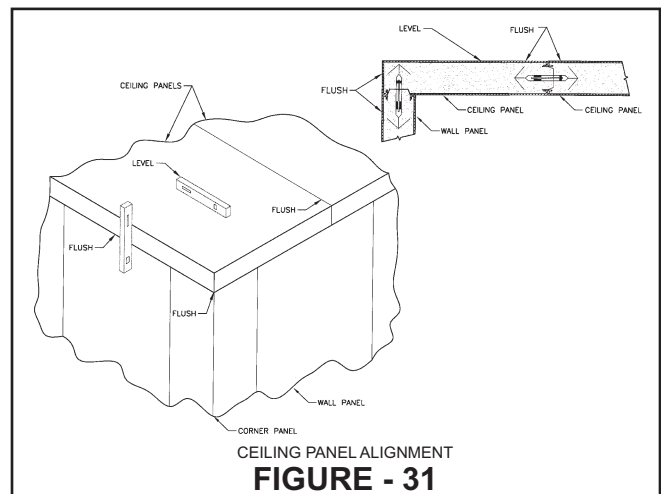
IT MAY BE NECESSARY TO PLACE CEILING PANELS IN POSITION ON THE WALL PANELS AS YOU GO ALONG. IN SOME INSTANCES YOU MIGHT HAVE TO STACK THE CEILING PANELS ON TOP OF EACH OTHER IN THE CORRECT ORDER OF PLACEMENT IN ORDER TO INSTALL IN THE CONFINED AREA.

2. Position adjoining ceiling panels on top of the wall panels and properly adjust the ceiling panel so that the metal end caps are flush with one another. At this time lock all of the ceiling panels together in their fully locked position, do not lock to wall panels at this time. If building structures make it difficult to view alignment of the ceiling panel, you may need to position a ladder near the interior of the wall panels to visually inspect the alignment. Ceiling panels should be flush top and bottom, left and right.
3. After the last ceiling panel is positioned and locked you can start locking the ceiling panels to the wall panels. Make sure all wall to ceiling joints are aligned and flush. (Refer to Fig. 31).
4. On multi-compartment walk-ins you should start with the "TEE" ceiling panel above the partition rather than an end ceiling panel. However, in doing this it is imperative that the ceiling panel be positioned properly over the partition wall. Do not lock the ceiling panels until all ceiling panels are in position and aligned properly.

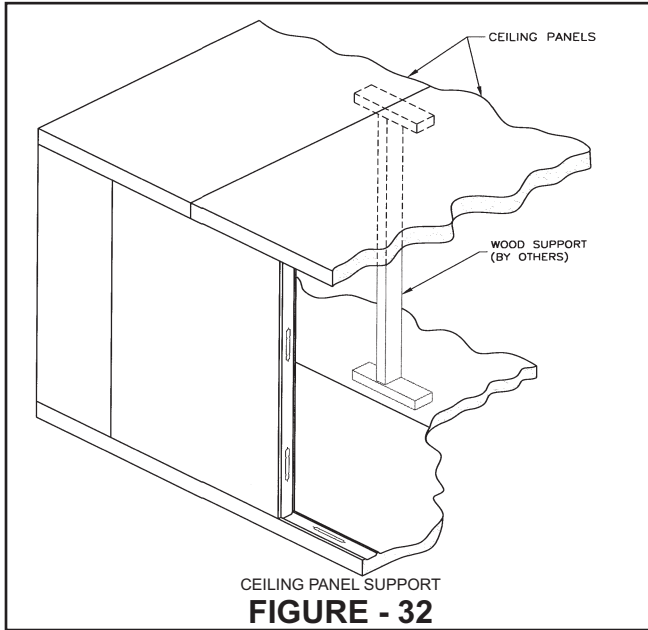
CAUTION:

DO NOT WALK OR CLIMB ON UNLOCKED CEILING PANELS, OR CEILING PANELS WITH A SPAN FROM WALL PANEL TO WALL PANEL GREATER THAN 10 FT. YOU MUST SUPPORT THE CEILING PANELS FROM THE UNDERSIDE WITH A WOOD SUPPORT (REFER TO FIG. 32). REFER TO THE SPECIAL APPLICATION SECTION ON INTERNAL STEEL AND SUSPENDED CEILING SUPPORT IF THIS IS SUPPLIED WITH THE WALK-IN FOR FURTHER DETAILS ON INSTALLATION PROCEDURES.

NOTE: ON LARGE INSTALLATIONS CEILING PANELS MUST BE LOCKED TO THE WALL PANELS AS YOU MOVE ALONG. THIS WILL ALLOW YOU TO KEEP THE WALK-IN SQUARE AS YOU INSTALL.



WALK-IN INSTALLATION



SECTION 3.7 - DOOR THRESHOLD INSTALLATION

The door threshold helps maintain the squareness of the door frame, and also houses a portion of the door heater wire. It will be necessary to attach the door threshold to the insulated floor, interior ramp, or the finished building floor. (Refer to Fig. 33, 33-A & 33-B) for attachment detail.

ATTENTION FLOOR CONTRACTOR:
THE FINISHED FLOOR MUST NOT COVER THE THRESHOLD SURFACE, AND THE ADJACENT FINISHED FLOOR MUST NOT BE HIGHER THAN THE THRESHOLD FOR PROPER DOOR SEAL AND OPERATION.

The necessary hardware for attaching the threshold is located in the accessory box.

IMPORTANT:
PRIOR TO ATTACHING THE DOOR THRESHOLD, THE DOOR AND FRAME MUST BE COMPLETELY PLUMB, SQUARE AND LEVEL.

INSULATED FLOORS OR INTERIOR RAMPS:

When attaching the door threshold to an insulated floor or interior ramp, drill four holes into the floor panel or ramp with a 5/32" or #22 bit following the hole pattern on the threshold plate. Next, fasten the door threshold plate with the supplied sheet metal screws. Seal all open areas with silicone.

FLOORLESS WALK-INS:

After the door is properly leveled and fitting flush with the frame, secure the threshold to the building floor. Using the holes in the threshold as a guide, drill into the floor beneath the threshold with the 5/32" masonry bit

provided. Install the provided Tap-Con screws through the cover plate into the drilled holes. Next, install the (4) slam braces (refer to the "Slam-Brace Installation" section of this manual).

TILE - THROUGH DOORS:

The door frame in this application is not attached to the building floor with the threshold, the frame must be secured to the floor with slam braces. Secure the frame to the floor with the slam braces (refer to the "Slam-Brace Installation" section of this manual) after the door is leveled and fitting flush. Use the #10 metal screws to fasten the slam brace into the frame or insulated floor panels and Tap-Con screws into the masonry. The slam braces will become buried, so they can be located anywhere provided they are below the top of the threshold.

SECTION 3.8 -SLAM BRACE INSTALLATION

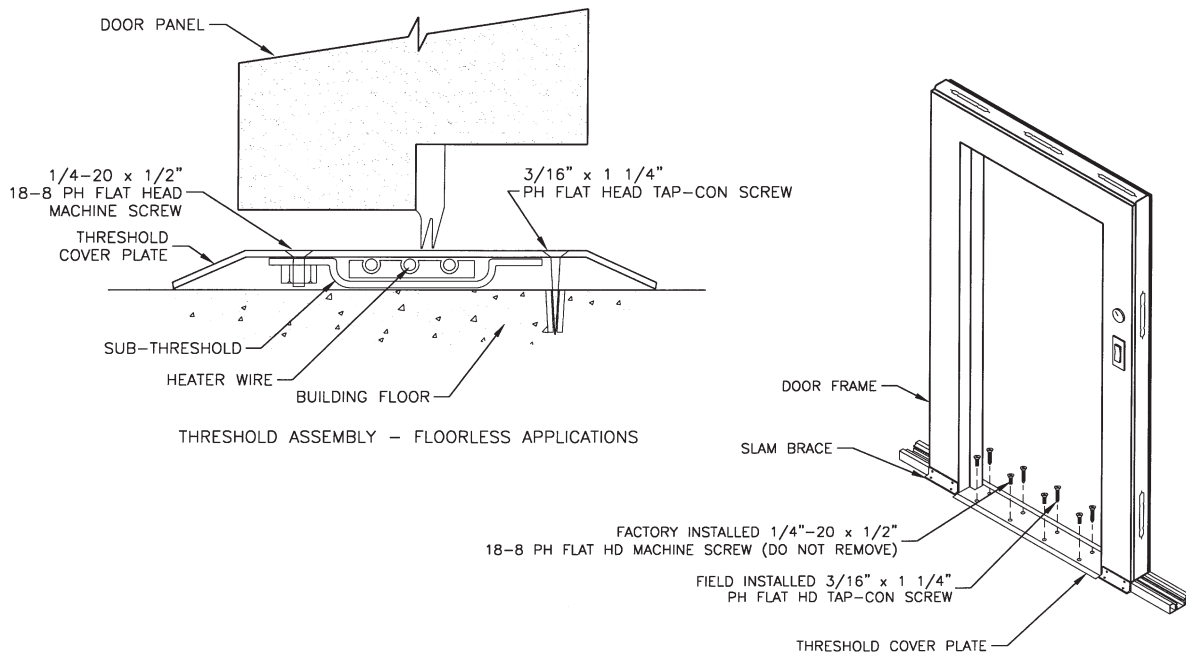
Slam braces are supplied to secure the frame to the building floor. Four slam braces are supplied with attachment hardware (located in accessory box). Two slam braces must be installed on both the interior and exterior side of the door frame section.

IMPORTANT:
MAKE SURE THE DOOR FRAME ASSEMBLY IS PERFECTLY PLUMB BEFORE ANCHORING THE SLAM BRACES TO THE FLOOR.

1. Place slam braces at each interior and exterior leg of the door frame. (Refer to Fig. 34) for positioning and attachment instructions.
2. Fasten the slam brace to the frame legs with #10 metal screws so that the slam brace will be in contact with the building floor.
3. Next, plumb and level the door frame.
4. Anchor slam brace to the building floor. Using the holes in the slam brace as a guide, drill holes into the building floor using the supplied 5/32" masonry bit, and then secure the slam braces to the building floor with the supplied Tap-Con screws.

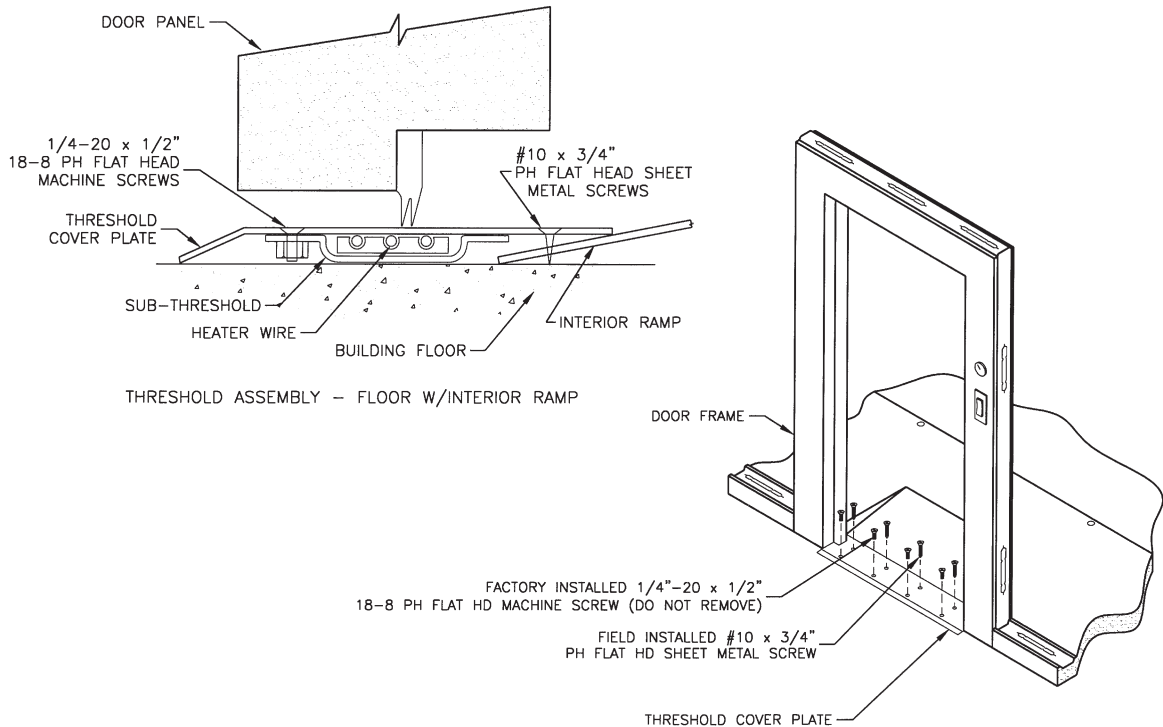
SECTION 3.9 - PENETRATIONS

Penetrations including all refrigeration and electrical lines should be well planned and executed with care and precision. Determine the exact location and size of the hole required and mark the location on both the interior and exterior of the walk-in panel. Some areas of the walk-in contain working parts and should not be penetrated, especially the door and frame sections. If drilling or cutting is required near a cam-lock location, a



THRESHOLD INSTALLATION - FLOORLESS WALK-INS

FIGURE - 33



THRESHOLD INSTALLATION - W/FLOOR & INTERIOR RAMP

FIGURE - 33-A

WALK-IN INSTALLATION

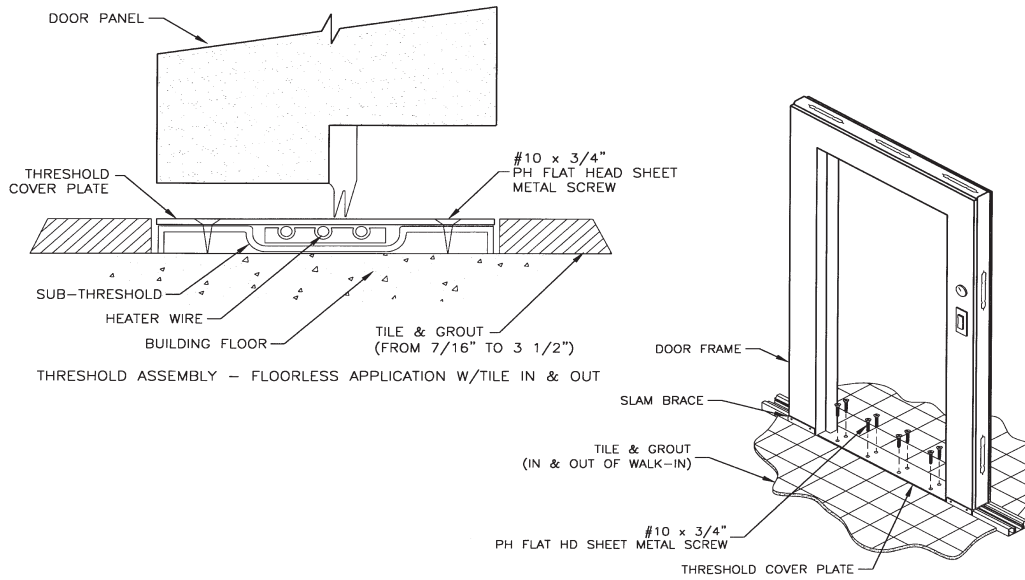


FIGURE - 33-B

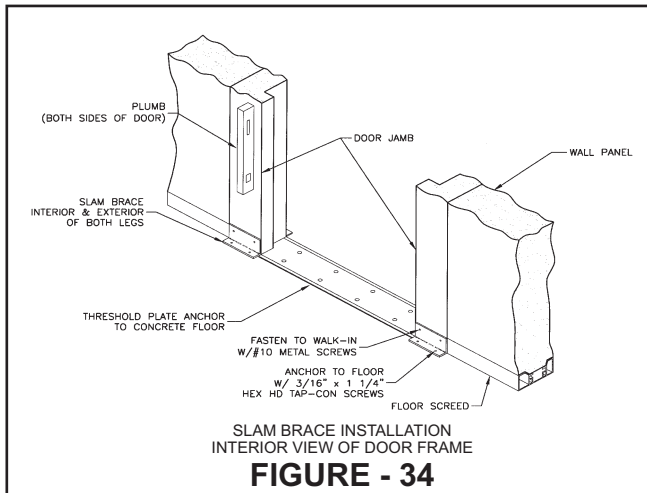


FIGURE - 34

minimum of a 6" radius from the cam-lock hole is required. (Refer to Fig. 35).

If a drill bit of the correct size is available, it can be used to make the penetration. For holes too large to drill, a hole saw may be utilized or metal shears may be used to cut the metal skin on the interior and exterior of the walk-in panel. After peeling away the cut metal skin, you will need to remove the insulation with a knife or saw blade.

After refrigeration or electrical lines are in place, seal between the lines and the penetrations with an approved sealant. Condensation in electrical conduit and junction boxes is caused by warm ambient air passing from the exterior to the interior of the walk-in. This problem is avoidable by installing a seal-off fitting positioned at the entrance to the walk-in panel.

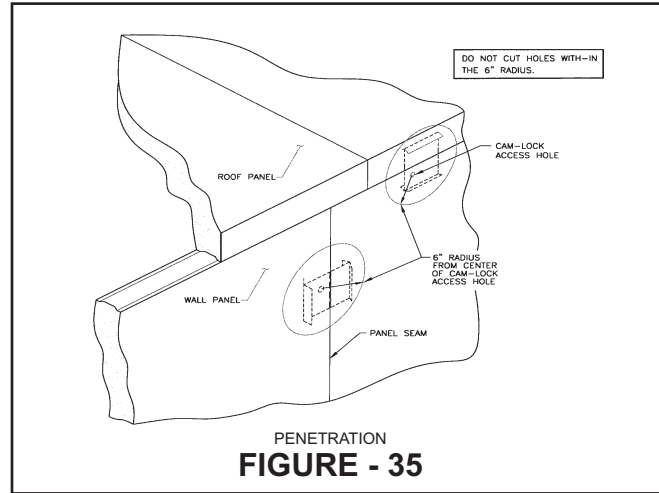


FIGURE - 35

IMPORTANT:
IT IS IMPERATIVE THAT EVERY ELECTRICAL LINE PENETRATING THE WALK-IN CONTAINS AN ELECTRICAL SEAL-OFF ON THE EXTERIOR SIDE OF THE PANEL ADJACENT TO THE PENETRATION. PACK PERMAGUM SEALANT AROUND THE WIRING TO PREVENT INTRUSION OF WARM AIR THAT WILL CONDENSE AND FORM MOISTURE IN THE ELECTRICAL LINES AND FIXTURES.

IMPORTANT:
IT IS IMPERATIVE THAT THE FACTORY BE CONSULTED BEFORE CUTTING HOLES IN THE DOOR FRAME. THE DOOR AND FRAME SECTIONS CONTAIN ELECTRICAL WIRING.

SECTION 3. 10 - ELECTRICAL CONNECTIONS

CAUTION:

ELECTRICAL CONNECTIONS TO THE WALK-IN MUST COMPLY WITH ALL APPLICABLE NATIONAL AND LOCAL ELECTRICAL CODES THAT MAY HAVE JURISDICTION OVER THE INSTALLATION.

IMPORTANT:

A DEDICATED ELECTRICAL POWER SUPPLY CIRCUIT FOR THE WALK-IN IS REQUIRED.

WARNING:

DISCONNECT THE SELECTED POWER SUPPLY CIRCUIT AND ATTACH A RED TAG TO THE DISCONNECT SWITCH INDICATING THAT THE CIRCUIT MUST NOT BE ENERGIZED WHILE SOMEONE IS WORKING ON THE LINE.

The cooler or freezer door frame contains several standard electrical components that have been prewired at the factory. They include the door frame heater, light switch, and vapor proof light fixture. It is the responsibility of the electrical contractor to provide the required wiring, connections, conduit and fittings for the hook-up. This may require additional wiring for additional optional electrical accessories.

For wiring procedures (*Refer to Fig. 60 on page 37*). The wiring diagram is also located on the interior of the door frame. A 4" x 4" junction box with a 16-pin terminal block is attached adjacent to the light fixture which is mounted on the interior of the door frame above the door opening. This junction box will contain the electrical leads that are prewired to the components in the frame. Typically power is brought to the junction box through the ceiling of the walk-in, directly above the junction box.

IMPORTANT: An electrical seal-off is required on the exterior side of the conduit when penetrating the walk-in. Both the interior and exterior of the conduit must be thoroughly sealed. Failure to do so will allow moisture laden air to enter the conduit, which will condense into water and accumulate in the junction box and light switch. (*Refer to the "Penetration" section of this manual for proper penetration procedure*).

Attached to the interior of the door frame is a label which describes the electrical characteristics and the energy consumption described in watts and amperes. This information is critical in determining the proper wire size especially when several door sections are wired on the same circuit. (Light bulbs are supplied by others).

SECTION 4.1 - OUTDOOR INSTALLATION PROCEDURE

When installing an outdoor walk-in, the same procedures for installation (in previous sections) will apply. However, there are other situations that must be considered when installing an outdoor walk-in.

CAUTION:

DO NOT INSTALL WALK-IN ON RAINY DAYS. WET PANELS AND SEAMS WILL BE A PROBLEM.

An overall inspection should be done of the area where the walk-in is to be installed. Refer to the floor plan for special situations:

- ☐ Outside slab recessed below kitchen grade or flush with kitchen grade. (If recessed, make sure the dimension below the interior building floor is as per plan).
- ☐ Doors opening into the building (building wall opening being the proper size as per plan).
- ☐ Refrigeration location.
- ☐ Electrical supply to walk-in.
- ☐ Positioning of walk-in to existing structures, such as building walls.
- ☐ Walk-in attachment to slab.

IMPORTANT:

FOLLOW ALL LOCAL BUILDING AND ELECTRICAL CODES. ADHERE TO ALL OSHA SAFETY REGULATIONS AND GUIDELINES. A MINIMUM OF TWO PEOPLE WILL BE REQUIRED TO INSTALL THE WALK-IN.

After all of the above has been taken into consideration, the installation can begin.

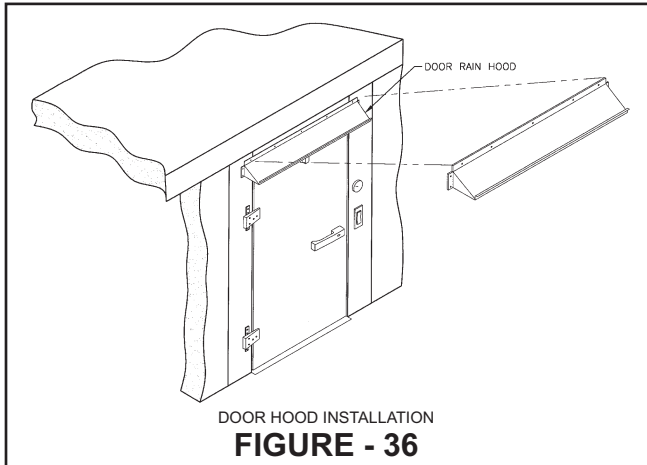
1. Refer to the floor plan and previous instructions for installing the walk-in.

CAUTION:

IF THE CEILING PANEL SPAN IS GREATER THAN 10 FT. REFER TO THE INTERNAL STEEL SUPPORT SPECIAL APPLICATION SECTION FOR INSTALLATION INSTRUCTIONS.

2. After the walk-in has been installed refer to the floor plan for details on attachment to the slab. In certain areas hurricane or seismic attachment may be required, refer to the "Special Applications Sections" supplied with this manual.
3. If the walk-in door is supplied with the optional door rain hood, install at this time. (*Refer to Fig. 36*).
4. Install all evaporators, lights and fixtures. Make sure that all bolt heads are round type low profile and

WALK-IN INSTALLATION



smooth, this will prevent damage to the vinyl rain roof material.

5. Make all penetrations required for refrigeration and electrical lines. **This should be done in the wall panels and not the ceiling panel.** Refer to "Penetration" section of this manual.
6. Install the rain roof, refer to the "Vinyl Rain Roof Installation" section of this manual. **DO NOT CUT HOLES IN THE RAIN ROOF.**

CAUTION:

IF THE ROOF SPAN EXCEEDS 10 FT. WALL TO WALL PROPER SUPPORT OF THE CEILING PANEL IS REQUIRED PRIOR TO CLIMBING ON THE CEILING PANELS. REFER TO THE "CEILING PANEL INSTALLATION" OF THIS MANUAL.

SECTION 4.2 - DOOR HOOD INSTALLATION

Outdoor walk-ins may be supplied with the optional door hood. This is designed to prevent rain water from entering the upper gasketed area of the door and frame. The door hood has been pre-fitted at the factory, but must be field installed with sheet metal screws which are located in the accessory box.

NOTE: DOOR HOODS SHOULD BE INSTALLED PRIOR TO INSTALLING THE VINYL RAIN ROOF.

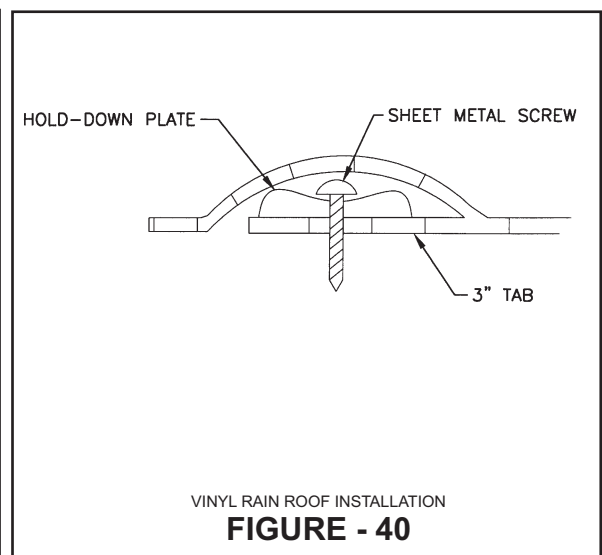
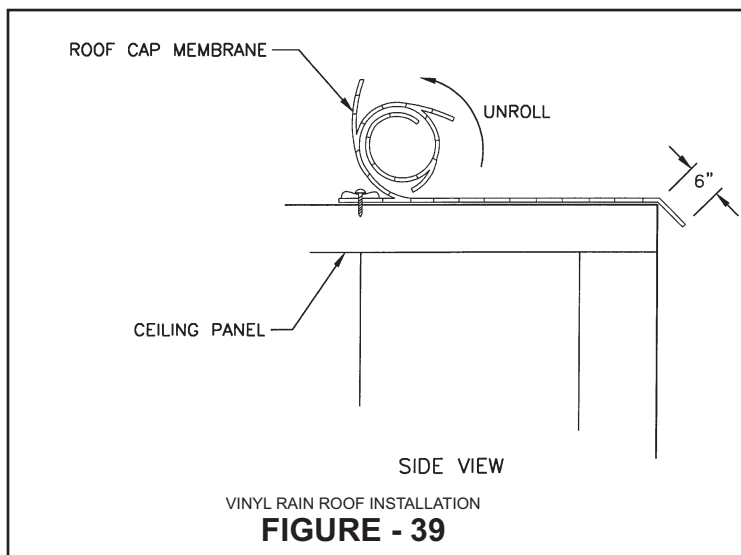
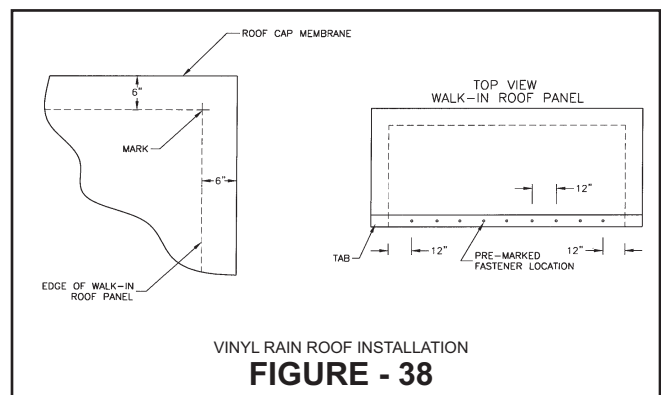
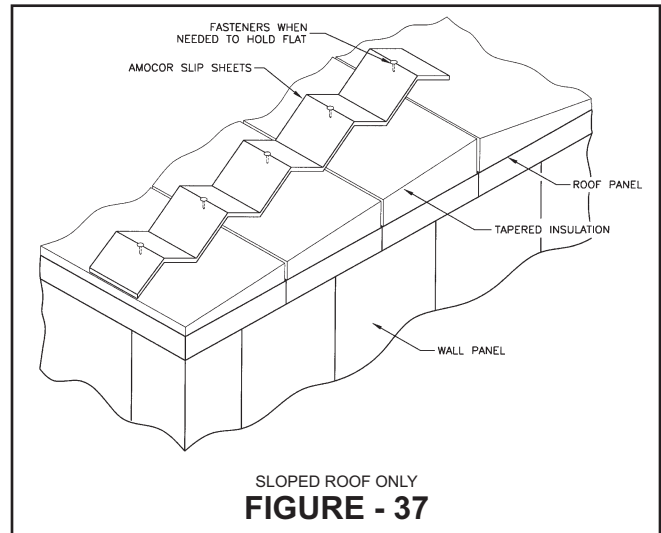
1. Center the door hood over the door opening and above the door closer. Position as close to the door closer as possible so as not to impede the opening and closing operation of the door. The closer wheel is the highest point of the door as it opens. (Refer to Fig. 36).
2. Attach the door hood with the sheet metal screws to the door frame.
3. Seal all edges of the door hood with a weatherproof sealant.

SECTION 4.3 - VINYL RAIN ROOF INSTALLATION

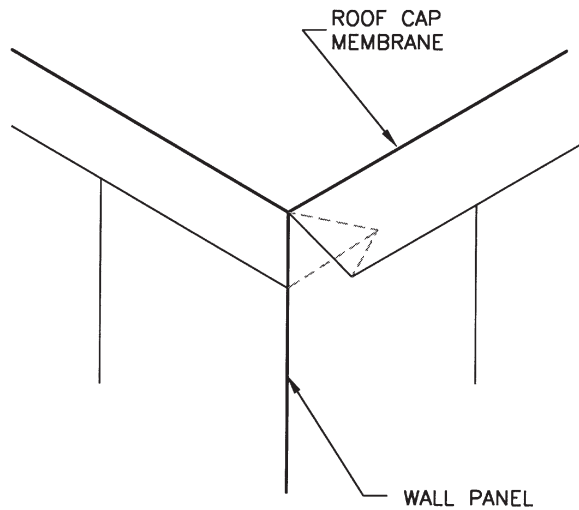
1. Erect walk-in per floor plan and in accordance with the instructions in this manual.
2. Hang all evaporators, lights, etc. before starting the installation of the vinyl rain roof. Keep bolt heads and washers as smooth, flat and free of debris as possible to avoid damage to the vinyl rain roof. If a door hood is provided, install as low as possible over the door opening. (Refer to Fig. 36). Plan for all electrical conduits and refrigeration lines to enter through the wall panels (**NOT THROUGH THE CEILING PANELS**).
3. Check the width and length of the vinyl rain cover. It should be 12" wider and 12" longer than the overall size of the walk-in.
4. If the rain roof is designed to be sloped or pitched, tapered insulation is supplied to accomplish this. (Refer to Fig. 37). Position the tapered insulation on top of the ceiling panels per supplied plan. Slip sheets may be provided and should be placed on top of the tapered insulation. Use the supplied fasteners to keep slip sheets flat. Fasten the slip sheets to the insulation, staggering the seams when possible and trim to fit.
5. With the smooth finish of the vinyl rain roof facing up and the 3" flaps down, make a mark 6" from the side and end of the vinyl rain roof to aid in allowing for a 6" overhang on each side of the walk-in. (Refer to Fig. 38). Roll the vinyl rain roof back so that when the rain roof is unrolled, the tabs become exposed. (Refer to Fig. 39).
6. After the vinyl rain roof is properly positioned, fasten to the ceiling panels with the supplied sheet metal screws and washers through the 3" tabs which have been pre-marked at the factory. (Refer to Fig. 40). Start fastening the middle tab and work outward toward the edges. If tapered insulation has been installed on the ceiling panel for slope purposes, use the shorter screws until they no longer engage securely, then switch to the longer screws.
7. Once the first tab is attached, continue by unrolling the remaining vinyl rain roof and repeat step 6. If a door hood has been installed the vinyl rain roof may have to be customized to fit over the hood.
8. Repeat step 6 until the end of the vinyl rain roof has been reached. As you proceed check the 6" overhang on each side before attaching each tab to assure that all the slack has been removed and that you are progressing squarely.

WALK-IN INSTALLATION

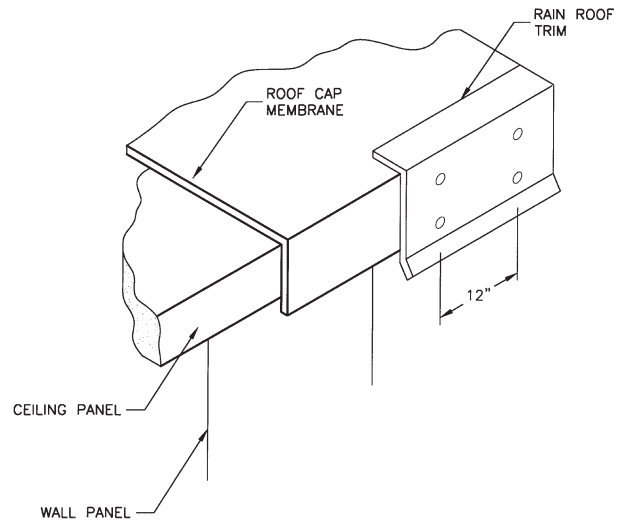
9. Once the attachment of the vinyl rain roof has been completed, neatly fold the corners (*Refer to Fig. 41*). Next install the supplied metal edge trim around the perimeter using the supplied sheet metal screws spaced 12" apart. (*Refer to Fig. 42*). If a door hood has been installed the trim may need to be customized to fit over and adjacent to the door hood.
10. If one or more sides of the vinyl rain roof flashes up against a building wall, an inverted trim strip will be supplied for attachment. (*Refer to Fig. 43*). Seal between the vinyl rain roof and building wall and between inverted trim and vinyl rain roof. Screw the trim into building wall. (Counter flashing should be installed and supplied by others).
11. Penetrations cannot be made through the vinyl rain roof without voiding the warranty. If there is no alternative to a roof penetration, call American Panel Corporation for the name of a local approved contractor to come and make the penetrations. (There will be a charge for this.)
12. When pressure-treated 4" x 4" mounting curbs are provided for placement of the refrigeration condensing unit on top of the vinyl rain roof, the bottom side of the 4" x 4" curbs have had strips of vinyl bonded to it with 2" extending on each side (*Refer to Fig. 44*). After the vinyl rain roof has been secured, place the curbs perpendicular to and within 2" of the edge (Check mounting centers of the condensing unit for proper spacing), this allows water to pass through, and places some of the weight of the condensing unit above the wall. Be careful to not place the curbs on top of any bolt heads supporting the evaporator. After the curbs are in place use the supplied adhesive to bond the 2" flap around the curb to the vinyl rain roof. Follow the instructions on the adhesive container.



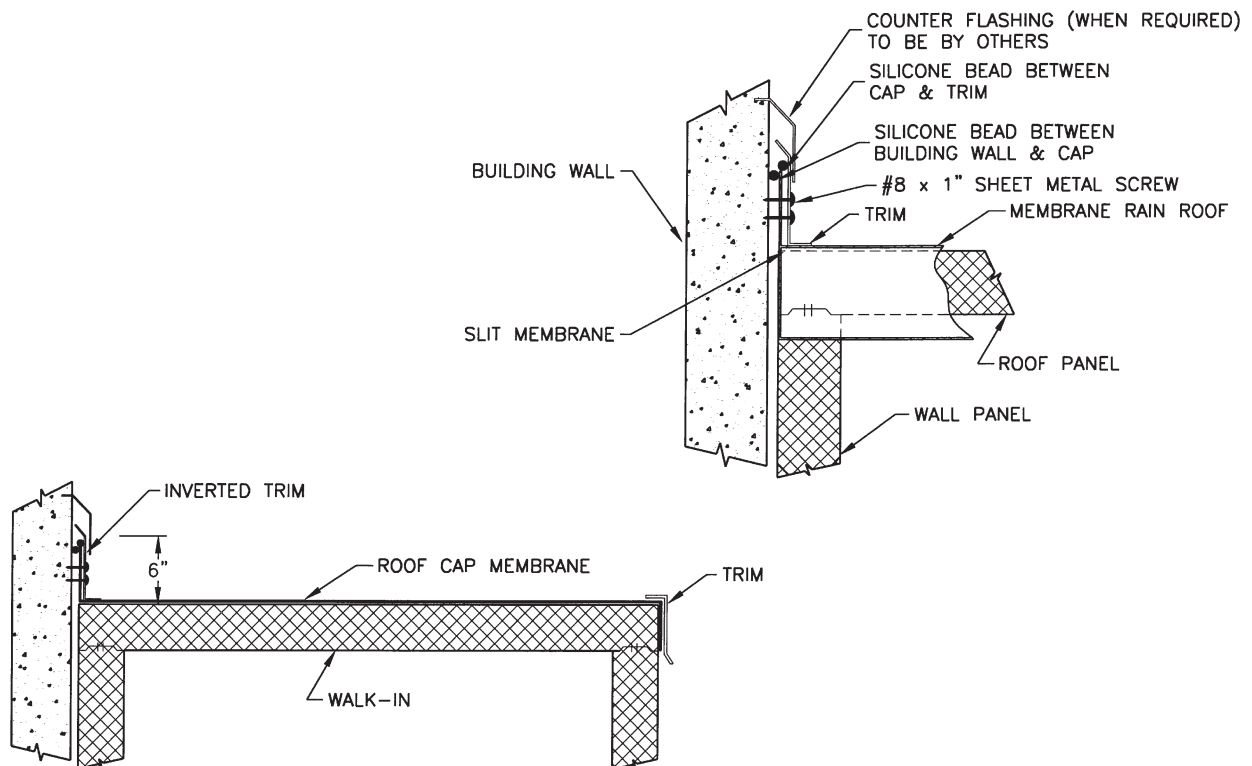
WALK-IN INSTALLATION



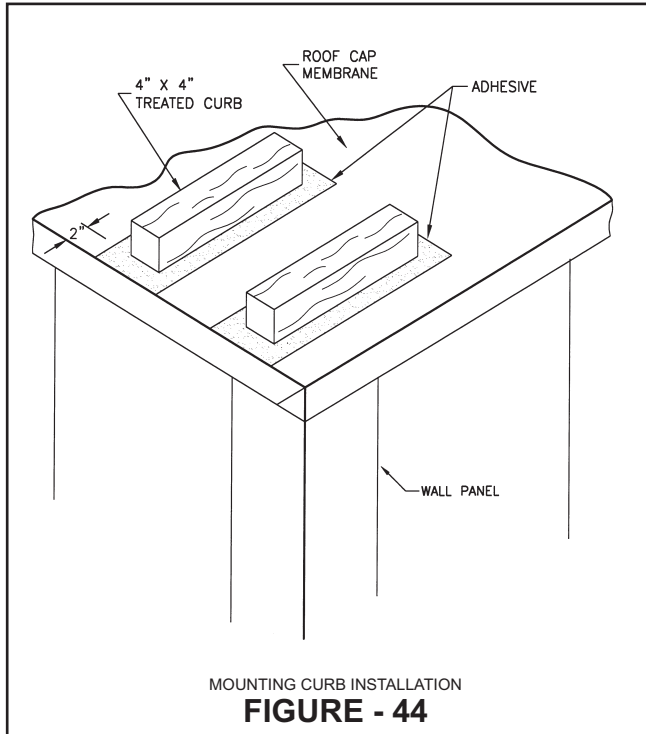
VINYL RAIN ROOF INSTALLATION
FIGURE - 41



VINYL RAIN ROOF INSTALLATION
FIGURE - 42



VINYL RAIN ROOF FLASHING
FIGURE - 43



SECTION 5.1 - ELECTRICAL INSTALLATION

In order to eliminate any confusion arising in the field pertaining to the electrical work on the walk-ins, we provide the following description of what exactly needs to be done.

READ CAREFULLY PRIOR TO MAKING ELECTRICAL CONNECTIONS.

IMPORTANT:
MAKE SURE THAT THE POWER IS TURNED OFF AT THE SOURCE PRIOR TO MAKING ELECTRICAL CONNECTIONS.

IMPORTANT:
FOLLOW ALL NATIONAL AND LOCAL ELECTRICAL CODES REQUIRED IN YOUR AREA.

(Refer to Fig. 60). A vapor proof light, switch and heater wire have been factory installed and pre-wired on each door and frame section. These items require a 115 volt power supply. Adjacent to the vapor proof light fixture is a factory mounted 4" x 4" covered handy box, all power supply and connections are made in this location. Electrical conduit (supplied by electrician) should be connected to the handy box.

When running the conduit, drill a clean hole, **DO NOT PUNCH** in the ceiling panel directly above the handy box when possible. (For outdoor walk-ins the conduit must be installed through a wall panel to the handy box, do not drill through the ceiling panel). Be sure to use a seal-off on the exterior of the walk-in wherever conduit penetrates the exterior metal surface. Also use a seal-off on the cooler side of a partition wall if the conduit is penetrating the wall. A wiring diagram is attached to the interior side of the door frame for your reference. (Wiring diagrams for optional electrically connected components are supplied separately, and can be found in the accessory box).

NOTE: THE DOOR FRAME HEATER IS CONTROLLED BY A FACTORY MOUNTED THERMOSTAT AND WILL NOT BE ENERGIZED UNTIL THE ROOM TEMPERATURE IS LOWERED BELOW 45° F.

CONTACT THE MECHANICAL CONTRACTOR PRIOR TO WIRING REFRIGERATION SYSTEMS.

Enclosed in the accessory box are typical wiring diagrams suggested for your use in wiring the refrigeration systems. In the case of low temperature systems, the evaporator fan is controlled by a temperature lockout and will not operate until the evaporator coil reaches an internal temperature of 20°F. Medium temperature evaporator fans will operate continuously.

In the case of low temperature systems, the condensate drain line must be wrapped with the supplied drain line heater cable. The drain line heater cable should be wrapped around the entire length of the interior portion of the condensate drain line. Make sure that the drain line heater does not overlap, as this will cause the heater cable to eventually burn out.

SECTION 5.2 - PLUMBING INSTALLATION

In order to eliminate any confusion arising in the field pertaining to the plumbing work on the walk-ins, we provide the following description of what exactly needs to be done.

IMPORTANT:
READ CAREFULLY PRIOR TO RUNNING THE CONDENSATE DRAIN LINE.

IMPORTANT:
FOLLOW ALL NATIONAL AND LOCAL PLUMBING CODES REQUIRED IN YOUR AREA.

Each refrigeration evaporator coil (supplied by American Panel) is supplied with the drain pan fitting which has

WALK-IN INSTALLATION

been pre-installed by the manufacturer. An adapter (supplied by plumber) is required to adapt the drain pan fitting to 3/4" ID copper tubing required for the evaporator condensate drain line. Through previous experience, we recommend the use of hard drawn copper tubing for running the drain line. PVC type tubing has a tendency to crack and split, and should not be used.

Often only one "safe waste" is supplied by the contractor for multi-unit walk-ins. A copper tee fitting may be required to connect more than one drain line to the "safe waste". A drain line pitch of a minimum of 1/4" per foot is required for proper condensate drainage.

Drill a clean hole, DO NOT PUNCH, for the drain line. Make sure that the drain line hole is a minimum of 6" away from the cam-lock access hole. From there pipe in the most direct line to the "safe waste". A p-trap is required somewhere in the drain line on the exterior of the walk-in (never on the interior). When connecting a drain line between a combination walk-in cooler and freezer, always run the drain line from the freezer into the cooler (never from the cooler into the freezer). The cooler evaporator will continually drain condensate, whereas a freezer only drains condensate when the evaporator is in the defrost cycle. This method will prevent the cooler condensate from freezing in the freezer drain line when the freezer unit is in a non-defrost mode.

The hole that has been drilled should be sealed completely between the wall panel and the copper tubing on the interior and exterior after the copper tubing has been installed. **Should soldering be required, the flame cannot make contact with the walk-in as it will damage the panel insulation and discolor the walk-in finish.**

SECTION 6.1 - TRIM STRIP ATTACHMENT

If your walk-in is located near a building structure, optional trim strips may have been ordered and supplied. Trim strips are designed to be attached between the walk-in and interior or exterior building structures to close off any open spaces. (Refer to Fig. 45) for various details regarding trim strip attachment. Choose the proper application for your installation and follow the attachment procedure.

1. Place the trim strip between the walk-in and the building structure and fasten to the walk-in with the supplied sheet metal screws located in the accessory box.
2. After the trim strip has been installed, run a smooth bead of silicone around all perimeter edges. This will help prevent the build-up of dirt and debris at the seam.

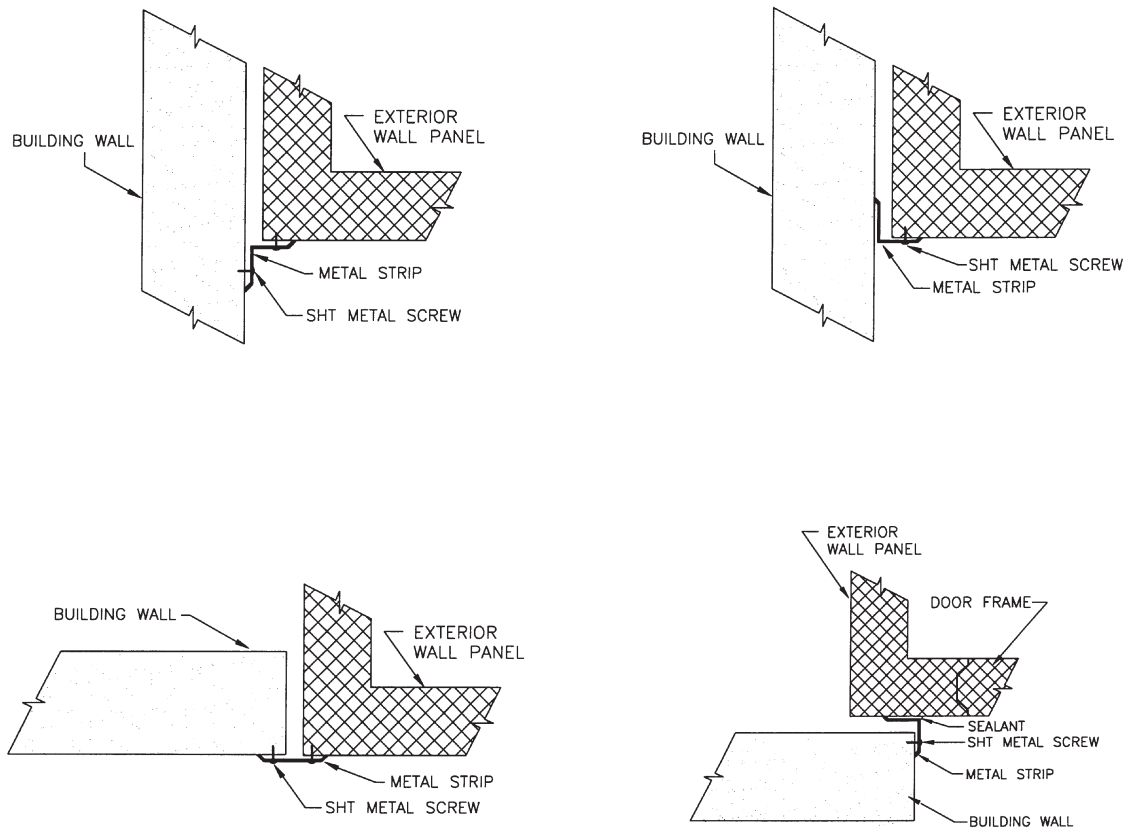
SECTION 6.2 - CLOSURE PANEL ATTACHMENT

Optional closure panels may be supplied to close the open space between the top of the walk-in and the building ceiling structure. Closure panels are designed to be attached to both the walk-in and the building ceiling structure. (Refer to Figs. 46, 47 & 48) for your application. Choose the proper application for your installation and follow the attachment procedure.

1. Refer to the floor plan for location of the closure panel.
2. Fasten the closure panel per the appropriate section. All supplied screws are located in the accessory box.
3. Closure panels designed to be stationary should be sealed with a smooth bead of silicone around all perimeter edges. This will help prevent the build-up of dirt and debris at the seams.
4. Closure panels designed to be removable should only be sealed around the mounting channel which is fastened to the walk-in and building ceiling structure.

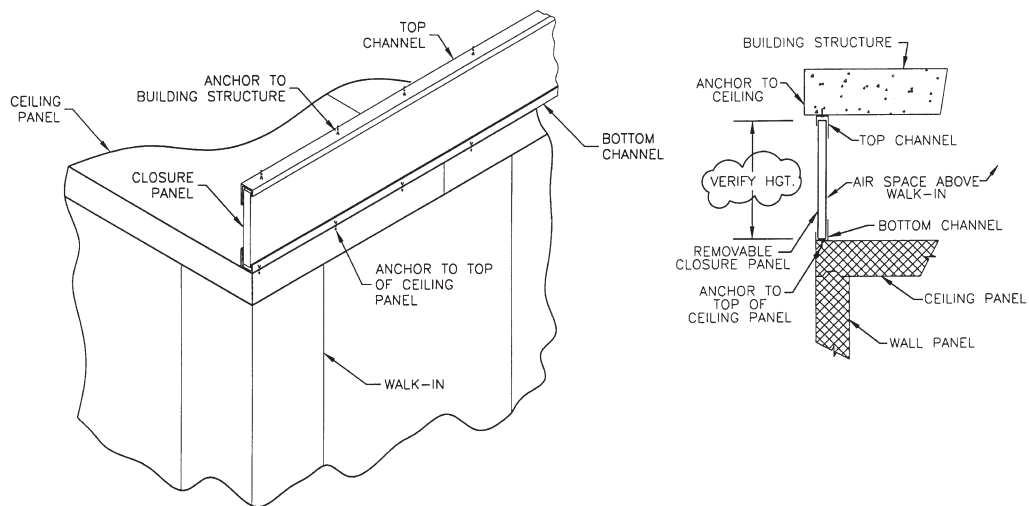
Different types of closure panels:

- Fabricated sheet metal
- Wood backed and metal covered
- Expanded metal or screen
- Louvered



TRIM STRIP DETAILS

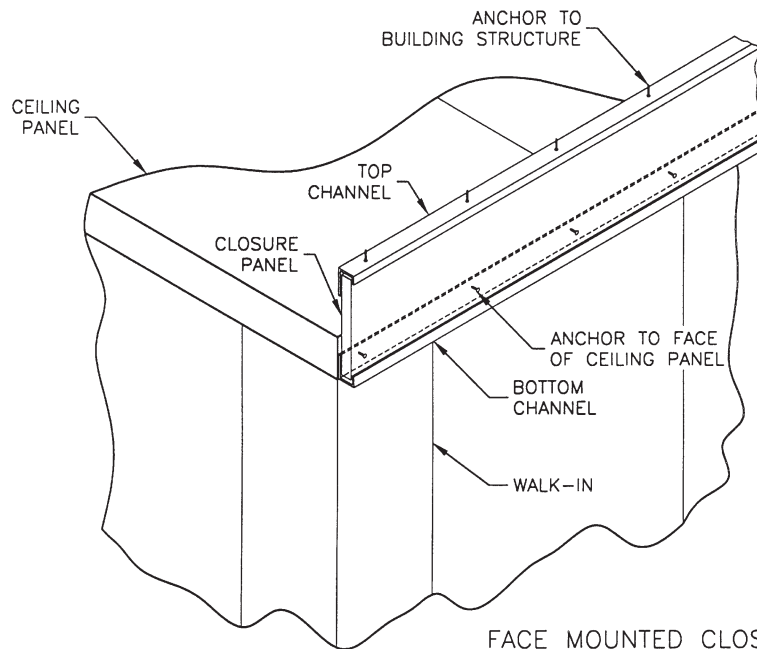
FIGURE - 45



CEILING MOUNTED CLOSURE PANEL

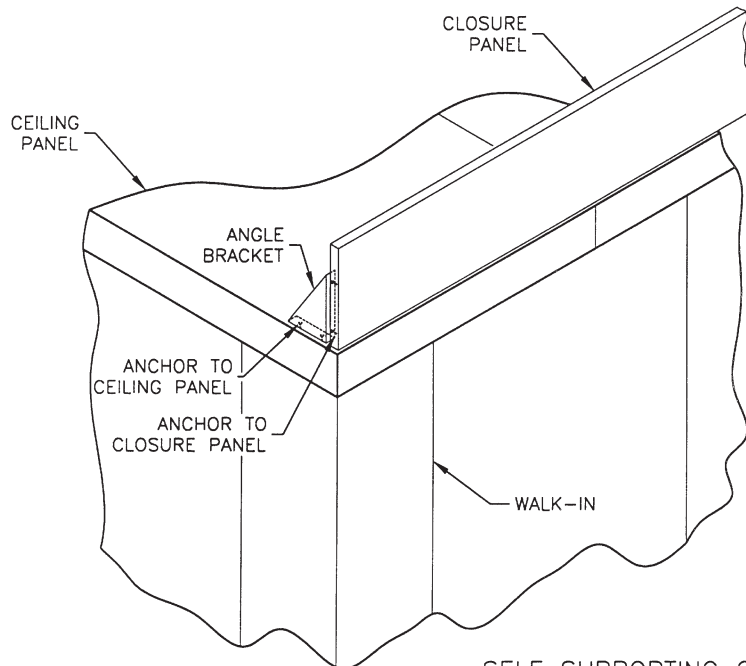
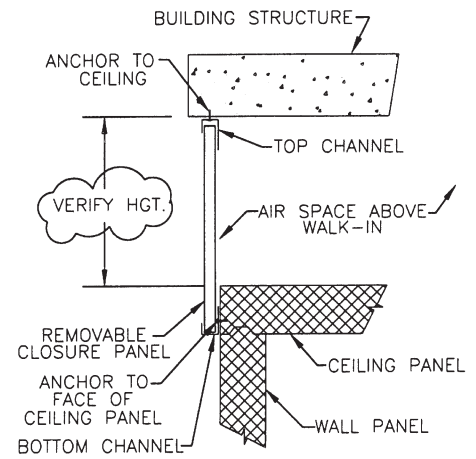
FIGURE - 46

WALK-IN INSTALLATION



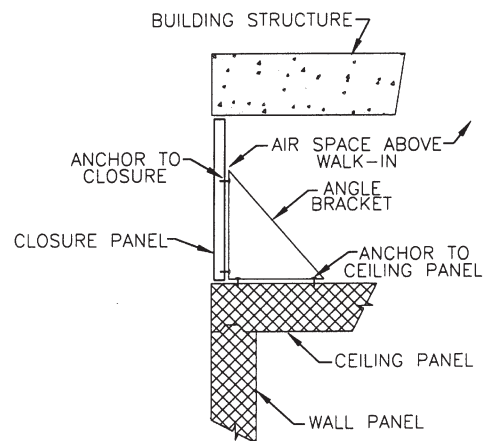
FACE MOUNTED CLOSURE PANEL

FIGURE - 47



SELF SUPPORTING CLOSURE PANEL

FIGURE - 48



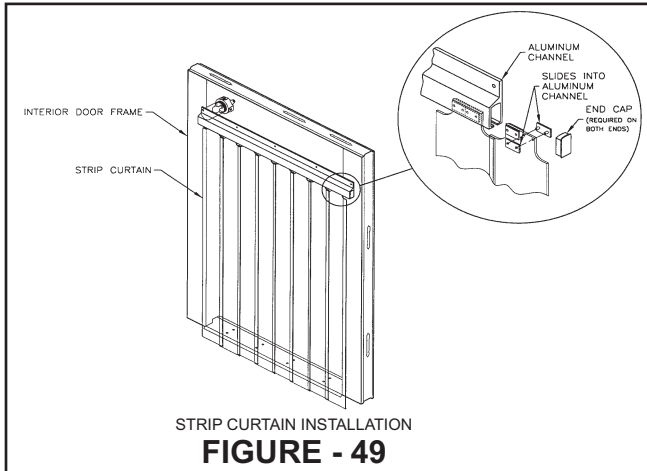


FIGURE - 49

SECTION 6.3 -STRIP CURTAIN INSTALLATION

Strip curtains are designed to be installed on the interior of the cooler / freezer door frame. Strip curtains help to minimize the exchange of cold and warm air.

1. Refer to the floor plan and determine the location of the strip curtain.
2. (Refer to Fig. 49). Using the aluminum channel as a template, make sure channel is level and centered over door opening. The bar height should allow strips to clear floor 1/4". Mark mounting hole pattern.
3. Drill holes and mount channel with proper fasteners.
4. Insert one end cap at either end of channel.
5. Insert strips through the un-capped end of channel.
6. After verifying that all strips are evenly placed and overlapping properly, insert other end cap and trim the strips for proper length if necessary.

NOTE: THE STRIP CURTAIN CAN BE PERIODICALLY CLEANED WITH THE USE OF A MILD CLEANER OR WARM SOLUTION OF SOAP AND WATER. DRY WITH A CLEAN SMOOTH CLOTH. DO NOT ATTEMPT TO CLEAN WITH A PRESSURE WASHER UNLESS THE STRIPS ARE REMOVED FROM THE WALK-IN. DO NOT CLEAN WITH ABRASIVE CLEANERS OR PADS AS THE VINYL STRIPS MAY BECOME SCRATCHED AND IMPEDE VISIBILITY.

NOTE: THE ABOVE ARE GENERAL INSTRUCTIONS FOR MOUNTING MOST STRIP CURTAINS. DEPENDING ON THE TYPE OF APPLICATION VARIOUS TYPES OF CURTAINS MAY BE SUPPLIED. REFER TO THE SPECIFIC INSTRUCTIONS SUPPLIED WITH EACH CURTAIN.

SECTION 7.1 - REMOTE REFRIGERATION SYSTEMS

RECEIVING & INSPECTION

Inspect the units for visible damage. Units are delivered to the carrier in good working condition, and the carrier assumes the responsibility to deliver the shipment without damage. Carriers limit their responsibility for concealed damage to five days after they deliver the equipment as the time allowable to determine whether or not damage has resulted in shipment. Concealed damage can result from rough handling even though the outside carton/crate is not damaged.

Carefully observe these guidelines to insure proper installation and good operation.

IMPORTANT:

ALL WORK IS TO BE IN COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.

Typical controls supplied by the factory (located in the accessory box) consist of the following:

Thermostatic expansion valve
 Contactor (three phase systems)
 Sight glass
 Low ambient safety controls
 (crankcase heater, head master or fan control)
 Filter drier
 Pressure control
 Defrost timer (low temp. Standard)
 12 foot drain line heater (low temp. Standard)
 Thermostat control
 Solenoid valve

NOTE: MECHANICAL CONTRACTOR TO SUPPLY ALL COPPER TUBING, SUCTION LINE INSULATION, FITTINGS AND VIBRATION ELIMINATORS.

Mechanical contractors work to include the following as a minimum guideline:

- All condensate drain lines will be run in 3/4" O.D. hard drawn copper tubing, and will be trapped and pitched as required by code.
- Insulate suction line completely from the evaporator all the way to the compressor service valve with 1/2" wall Armaflex.
- Liquid and suction lines to be run in ACR copper tubing. Soft copper tubing to be used in connection with flared fittings (SAE). Hard drawn tubing to be utilized in connection with all soldered joints with the use of silver solder.

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- All refrigeration lines shall be adequately secured and horizontal runs pitched for proper oil return.
- All walk-in penetrations will be drilled and sealed. (Refer to the "Penetration" section of this manual for procedure).
- Thermostatic expansion valve sensor bulb to be located on suction line behind evaporator and must be insulated. Bulb to be positioned per manufacturer's instructions.
- On semi-hermetic condensing units, loosen compressor mounting bolts (DO NOT REMOVE).
- All compressor stands and covers must be properly secured. Pitch pan and building roof penetrations, if required are by others.
- Dispose of all packaging material properly.

Electrical connections and wiring are by the electrician. You may be required to aid the electrician in determining how lines are to be run and how controls are to be wired. (This will save you a number of extra trips to the job site).

INITIAL OPERATION:

Allow the unit to run for four to eight hours before putting a product load in the walk-in. This will give the unit a chance to cool the walk-in and will not overload the unit.

CONTROLS:

Your unit is controlled by a thermostat which shipped loose for field installation. This thermostat should be set to hold the room temperature between 34°F and 40°F for coolers, -6°F to 0°F for 0° freezers and -10°F to -4°F for -10° freezers. This setting, however, can easily be changed by inserting the blade of a small screwdriver into a slot near the dial face of the control. By turning the screwdriver, the dial face is rotated thus altering the desired room temperature settings.

WARNING: Adjusting coolers to operate at less than 34°F can result in excessive ice accumulation and loss of system capacity.

Low temperature units are also provided with a timer for the control of the duration and frequency of the defrost cycle. The adjustment of the timer is critical. This should be observed during the first few defrost cycles after the refrigerated space has been brought to the desired temperature. The duration of the defrost cycle should be such that all of the frost is removed from the coil, but it is not desirable to allow the defrost cycle to continue for extended periods after the frost has been removed. The frequency of defrost should be regulated so as not to allow the evaporator to build up an excessive frost load.

A six-hour interval between defrost will suffice for most average conditions. Instructions for setting the timer are contained in the cover of the timer.

DRAIN LINE HEATER:

This cable must be installed (wrapped around the drain line) before starting the unit. Care must be taken to insure that the heater cable does not overlap. For best results use a minimum of ½" spacing between wraps of the heater cable.

GENERAL:

Your unit should be located so that air can freely circulate around the compressor housing to insure proper operation of the compressor. It is very important that the condenser be kept clean at all times. An accumulation of dust or dirt will cut down the efficiency of the compressor. The condenser should be cleaned with a vacuum cleaner attachment or whisk broom.

Oiling the compressor is unnecessary with your unit. The compressor is sealed and has all necessary lubrication contained within the mechanism. Some of the fan motors will require oil. Use SAE 20 oil on both standard temperature and low temperature units.

Outside installation can be made. In all instances provisions must be made to protect the unit from outside weather conditions. If ambient temperatures are between +20°F and +55°F, this unit requires winterization controls. For temperatures below +20°F, LASA controls are required. Contact the factory for further information.

SECTION 7.2 - PRE-ASSEMBLED REMOTE SYSTEMS

RECEIVING & INSPECTION

Inspect the unit for visible damage. Units are delivered to the carrier in good condition and the carrier assumes the responsibility to deliver the shipment without damage. Carriers limit their responsibility for concealed damage to five days after they deliver the merchandise as the time allowable to determine whether or not damage has resulted in shipment. Concealed damage can result from rough handling even though the outside carton/crate is not damaged.

Carefully observe these few instructions to insure good operation and long life of your refrigeration system.

**IMPORTANT:
FOLLOW ALL MECHANICAL AND ELECTRICAL
CODES REQUIRED IN YOUR AREA.**

NOTE: MECHANICAL CONTRACTOR TO SUPPLY ALL COPPER TUBING, SUCTION LINE INSULATION, FITTINGS AND VIBRATION ELIMINATORS.

INSTALLATION:

The pre-assembled remote system consists of factory pre-piped and pre-wired condensing units and evaporator coils with properly selected refrigeration and electrical components already mounted.

The evaporator coil should be secured to the ceiling of the walk-in cold room or suspended on rod hangers. Care should be taken to insure that the unit is mounted level for proper condensate drainage from the drain pan. The condensing unit must be installed on a horizontal, level surface.

Field piping must be run to connect the suction and liquid lines of the condensing unit to the evaporator coil. After evacuation of the system and checking for leaks, the unit must be charged with the appropriate quantity and type of refrigerant. **The factory piping, which has already been leak checked at the factory, should be rechecked for possible leaks under the operating pressure of the system at the site.** Due to shipping vibrations and handling in transit, connections might have loosened since final inspection at the factory. The unit ships with a 30 psi holding charge.

Each unit is clearly tagged indicating the voltage, frequency and phase for proper connection. Electrical wiring must be run from the handy box mounted on the evaporator coil to the terminal board in the electrical control box on the condensing unit (medium temp systems) or defrost timer (if supplied), see the electrical wiring diagram. An electrical schematic diagram is also provided for additional information. Connect the required electrical input power wiring to the terminals as shown on the wiring diagram. On semi-hermetic condensing units only, loosen the compressor mounting bolts so the compressor floats freely on the springs. **DO NOT REMOVE THE BOLTS.** After installing the compressor housing (as required), your unit is ready for operation. Seal all penetrations to the walk-in walls/ceilings.

INITIAL OPERATION:

Allow the unit to run for four to eight hours before putting a product load in the walk-in. This will give the unit a chance to cool the walk-in and will not overload the unit.

CONTROLS:

Your unit is controlled by a thermostat located on the rear of the cooling coil. This thermostat is factory pre-set to hold the room temperature between 34°F and 40°F for coolers, -6°F to 0°F for 0° freezers and -10°F to -4°F for -10° freezers. This setting, however, can easily be changed by inserting the blade of a small screwdriver into a slot near the dial face of the control. By turning the screwdriver, the dial face is rotated thus altering the desired room temperature settings.

WARNING: Adjusting coolers to operate at less than 34°F can result in excessive ice accumulation and loss of system capacity.

Low temperature units are also provided with a timer for the control of the duration and frequency of the defrost cycle. The adjustment of the timer is critical. This should be observed during the first few defrost cycles after the refrigerated space has been brought to the desired temperature. The duration of the defrost cycle should be such that all of the frost is removed from the coil, but it is not desirable to allow the defrost cycle to continue for extended periods after the frost has been removed. The frequency of defrosts should be regulated so as not to allow the evaporator to build up an excessive frost load.

A six hour interval between defrosts will suffice for most average conditions. Instructions for setting the timer are contained in the cover of the timer.

DRAIN LINE HEATER:

Because the drain line in the walk-in is field connected, the drain line heater cable is supplied prewired and hanging loose from the coil. This cable must be installed (wrapped around the drain line) before starting the unit. Care must be taken to insure that the heater cable does not overlap. For best results use a minimum of ½" spacing between wraps of the heater cable.

GENERAL:

Your unit should be located so that air can freely circulate around the compressor housing to insure proper operation of the compressor. It is very important that the condenser be kept clean at all times. An accumulation of dust or dirt will cut down the efficiency of the compressor. The condenser should be cleaned with a vacuum cleaner attachment or whisk broom.

Oiling the compressor is unnecessary with your unit. The compressor is sealed and has all necessary lubrication contained within the mechanism. Some of the fan motors will require oil. Use SAE 20 oil on both standard temperature and low temperature units.

Outside installation can be made. In all instances provisions must be made to protect the unit from outside weather conditions. If ambient temperatures are between +20°F and +55°F, this unit requires winterization controls. For temperatures below +20°F, low ambient safety controls are required. Contact the factory for further information.

Each unit has been thoroughly inspected and tested before leaving the factory. However, provisions should be made so that a competent service man is in position to properly service this unit. Complete service information is available from the factory in the event these details are necessary.

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SECTION 7.3 - PRE-CHARGED SPLIT SYSTEM WITH QUICK CONNECT COUPLINGS

RECEIVING & INSPECTION

Inspect the unit for visible damage. Units are delivered to the carrier in good condition and the carrier assumes the responsibility to deliver the shipment without damage. Carriers limit their responsibility for concealed damage to five days after they deliver the merchandise as the time allowable to determine whether or not damage has resulted in shipment. Concealed damage can result from rough handling even though the outside carton/crate is not damaged.

Carefully observe these few instructions to insure good operation and long life of your Packaged Refrigeration System.

**IMPORTANT:
FOLLOW ALL MECHANICAL AND ELECTRICAL
CODES REQUIRED IN YOUR AREA.**

INSTALLATION:

The condensing unit should be mounted on a horizontal surface. The unit can be secured in place with four machine bolts or lag screws depending upon the type of pad selected for the installation. The evaporator coil may be secured to the ceiling or suspended on rod hangers. Care should be taken to insure that the unit is mounted level for proper condensate drainage from the drain pan.

The condensing unit, as well as the evaporator coil, is factory pre-charged. The interconnecting suction and liquid lines (also pre-charged) are fitted with quick-connect, self-sealing refrigerant couplings, covered by protective caps (which should not be removed until ready for coupling). Coupling halves are connected by a hexagonal union nut using the following procedure:

1. Remove protective caps including black neoprene seal. Check caps carefully to ensure black seal is still in cap and has not been lodged in quick-connect coupling.
2. Wipe all coupling seals and threaded surfaces clean to prevent inclusion of dirt or foreign matter in the system.
3. Lubricate rubber seal in the male half with refrigerant oil.
4. Thread couplings together halfway by hand to insure proper mating of threads. (Be careful not to cross thread the couplings). Tighten with proper wrenches until coupling bodies "bottom" or until a definite resistance is felt. Then tighten an additional 1/6 to 1/4 turn.

5. All connections should be leak tested after tightening. Low side connections should be wrapped with insulation tape.

Connect the "loose end" of the wiring harness from the condensing unit to the handy box on the rear of the evaporator and wire nut like-colored wires as shown on the wiring diagram. Each unit is clearly tagged indicating the voltage, frequency and phase for proper connection. Connect the required electrical input power to the terminals on the condensing unit as shown on the wiring diagram. On semi-hermetic condensing units only, loosen the compressor mounting bolts so the compressor floats freely on the springs. **DO NOT REMOVE THE BOLTS.** After installing the compressor housing (as required), your unit is ready for operation. Seal all penetrations to the walk-in walls/ceilings.

INITIAL OPERATION:

Allow the unit to run for four to eight hours before putting a product load in the walk-in. This will give the unit a chance to cool the walk-in and will not overload the unit.

CONTROLS:

Your unit is controlled by a thermostat located on the rear of the cooling coil. This thermostat is factory pre-set to hold the room temperature between 34°F and 40°F for coolers, -6°F to 0°F for 0° freezers and -10°F to -4°F for -10° freezers. This setting, however, can easily be changed by inserting the blade of a small screwdriver into a slot near the dial face of the control. By turning the screwdriver, the dial face is rotated thus altering the desired room temperature settings.

WARNING: Adjusting coolers to operate at less than 34°F can result in excessive ice accumulation and loss of system capacity.

Low temperature units are also provided with a timer for the control of the duration and frequency of the defrost cycle. The adjustment of the timer is critical. This should be observed during the first few defrost cycles after the refrigerated space has been brought to the desired temperature. The duration of the defrost cycle should be such that all of the frost is removed from the coil, but it is not desirable to allow the defrost cycle to continue for extended periods after the frost has been removed. The frequency of defrosts should be regulated so as not to allow the evaporator to build up an excessive frost load. A six-hour interval between defrosts will suffice for most average conditions. Instructions for setting the timer are contained in the cover of the timer.

DRAIN LINE HEATER:

Because the drain line in the walk-in is field connected, the drain line heater cable is supplied prewired and hanging loose from the coil. **This cable must be installed (wrapped around the drain line) before starting the unit. Care must be taken to insure that the heater cable does not overlap.** For best results use

WALK-IN INSTALLATION

a minimum of ½" spacing between wraps of the heater cable.

GENERAL:

Your unit should be located so that air can freely circulate around the compressor housing to insure proper operation of the compressor. It is very important that the condenser be kept clean at all times. An accumulation of dust or dirt will cut down the efficiency of the compressor. The condenser should be cleaned with a vacuum cleaner attachment or whiskbroom.

Oiling the compressor is unnecessary with your unit. The compressor is sealed and has all necessary lubrication contained within the mechanism. Some of the fan motors will require oil. Use SAE 20 oil on both standard temperature and low temperature units.

Outside installation can be made. In all instances provisions must be made to protect the unit from outside weather conditions. If ambient temperatures are between +20°F and +55°F, this unit requires winterization controls. For temperatures below +20°F, LASA controls are required. Contact the factory for further information.

Each unit has been thoroughly inspected and tested before leaving the factory. However, provisions should be made so that a competent service man is in position to properly service this unit. Complete service information is available from the factory in the event these details are necessary.

SECTION 7.4 - FINAL INSTALLATION CHECKLIST

This final check before operation will help insure that your American Panel walk-in has been installed in the prescribed manner as directed in this manual.

- ☐ Walk-in is square and level.
- ☐ Wall panels are plumb and square.
- ☐ Ceiling panels are flush with the wall panels.
- ☐ All wall, ceiling and floor gaskets are intact and sealing fully.
- ☐ All cam-locks are engaged and plug hole buttons are in place.
- ☐ Any gaps under screed or floor angle (due to shimming) must be sealed completely.
- ☐ All penetrations are insulated and sealed.
- ☐ Door sets flush and level.
- ☐ Door closes as designed.
- ☐ Heater wire is operating properly. (Note: Circuit does not activate until walk-in is below 45 degrees F.)
- ☐ Door gaskets seal properly.
- ☐ Door sweep makes contact with threshold plate.
- ☐ Make sure that all optional equipment supplied has been installed properly.
- ☐ Thermometer is reading accurately.
- ☐ Lights and switches are functioning properly and wired per local code.
- ☐ Leak check all refrigeration equipment and connections.
- ☐ All refrigeration controls set to specifications and operating properly.
- ☐ Compressor mounting bolts loosened (on semi-hermetic units only).
- ☐ Overall appearance of walk-in has been inspected, and cleaned if required.
- ☐ Area cleared of all packing material and debris and disposed of properly.
- ☐ Job number, date of installation and installers name has been written on this manual.
- ☐ Keep all documents in a secure location for further reference.

WALK-IN MAINTENANCE

SECTION 8.1 - CLEANING AND CARE OF YOUR WALK-IN

IMPORTANT:

NEVER USE A CHLORINE, ACID OR CAUSTIC CLEANER ON YOUR WALK-IN. PANEL DAMAGE IN THE FORM OF DISCOLORATION OR PITTING CAN RESULT FROM USING THESE TYPES OF CLEANERS.

FLOORS MUST BE KEPT DRY AND CLEAN AT ALL TIMES. WET OR GREASY FLOORS MAY BECOME SLIPPERY AND CAN RESULT IN PERSONAL INJURY.

NEVER FLUSH THE WALK-IN WITH WATER OR USE A PRESSURE HOSE TO CLEAN ANY PART OF THE WALK-IN. PANEL GASKETS ARE DESIGNED TO PROVIDE AN AIR TIGHT SEAL AND DO NOT PREVENT LIQUID OR MOISTURE FROM PENETRATING THE PANEL JOINTS AND INSULATION. EXCESSIVE WATER MAY DAMAGE THE PANELS OR CREATE A HAZARDOUS SITUATION.

GENERAL CLEANING:

Bacteria growth is a major concern in any food handling and storage operation, and steps should be taken to keep the walk-in as clean as possible. Cleaning of the walk-in on a regularly scheduled basis helps in the limiting of bacterial growth. Using a damp clean cloth with a mild soap solution is the preferred method for cleaning floors, walls, ceiling and shelves. Clean spills immediately using the same process and dry thoroughly. In addition, liquids passing through the panels may collect under the walk-in and create foul odors. Standing fluids may also create bacteria which could become a hazardous health condition if left unattended.

The entire interior and exterior of the walk-in is manufactured with either aluminum, galvanized steel, galvalume, stainless steel, or any combination of these metals. When attempting to clean hand prints or difficult stains a non-abrasive metal polish applied to a clean soft cloth is recommended.

CLEANING DOOR AND SWEEP GASKETS:

Door and sweep gaskets should be cleaned on a regular basis as well. American Panel gaskets are manufactured of thermoplastics that are designed to be resistant to fats and greases. However, gaskets can be a collection point for bacterial growth. The prescribed method for cleaning gaskets utilizes a baking soda and warm water solution. After the gaskets are cleaned dry with a clean soft cloth.

REFRIGERATION SYSTEM CARE AND MAINTENANCE:

A maintenance program should also be instituted for the refrigeration systems. This should include the cleaning of the evaporator and condensing unit and removing any dirt or grease build up from the condenser coil and fins. Always make certain that the air circulation around this equipment is not impeded. As a suggestion, you may want to contact your local refrigeration service company and contract a maintenance program for maintaining your refrigeration equipment.

OUTDOOR INSTALLATIONS:

Walk-ins that are installed outdoors or in a damp environment may experience a condition called oxidation. This is a natural condition that results in the darkening of the metal surface when the walk-in is exposed to moisture. The oxidation of metal cannot be reversed.

Outdoor units will weather with time and eventually lose their sheen. Painted surfaces may be desired for aesthetic purposes on outdoor units.

SECTION 8.2 - ROUTINE MAINTENANCE

With any piece of equipment daily observations using the five senses will help identify existing and potential problems. Pooling of liquids, foul air or gas smells, strange noises, noticeable temperature changes, etc. are clues that a problem exists and should be rectified immediately.

CHECK LIST:

- Heater wires around door opening should feel warm to the touch. If frost or sweating is noticed, the heater wire may need to be replaced. Refer to the "Heater Wire Replacement" section of this manual.
- Check that door gaskets and door sweep seals properly and are clean and clear of any debris. If gasket or door sweep needs to be replaced, refer to the "Door Gasket Replacement" and "Door Sweep Replacement" section of this manual.
- The interior of the walk-in panels should be checked for missing lock hole plug buttons. These should be replaced immediately to prevent moisture from entering the insulation.
- Door hinges are the self closing type, with a nylon cam and bushing. The hinges should be lubricated with a petroleum jelly at approximately two month intervals.

- Door closer is a hydraulic device which enables the door to close firmly. There is no lubrication maintenance required to keep the closer working properly. The door closer has been adjusted at the factory, should it become necessary to field adjust the door closer refer to the "Door Closer Adjustment" section of this manual.
- Check all door hardware and make sure all fasteners are firmly anchored.
- Inspect all refrigeration units frequently for proper functioning of evaporators, drain pan heaters, defrost controls and drain line heaters. Condensing units must have the proper air circulation for optimum efficiency. Periodically remove dust and grease buildup from the condenser coil and fins and on the evaporator coils and fins.

SECTION 8.3 - SENSOR CALIBRATION

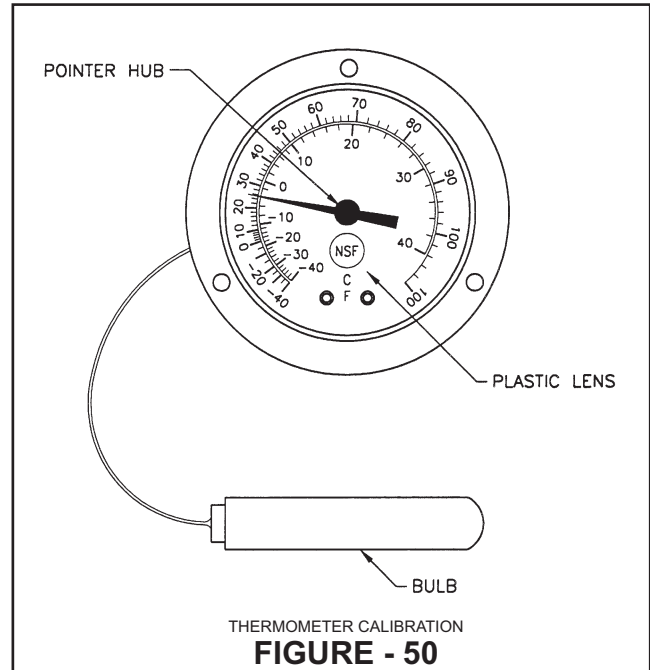
For calibrating the air sensor probe for a Walk-in Monitoring System 100 or 200, refer to your Owner's Manual shipped with the walk-in or visit our Website for detailed instructions.

Prior to calibrating the thermometer (Refer to Fig. 50) for details.

1. In a small container prepare a (slush) solution of ice and water, this will give you an accurate temperature of +32°F.
2. Remove the dial thermometer from the door frame by removing the three sheet metal screws on the face of the thermometer, and the bulb clip on the interior of the door frame.
3. After removing the plastic polycarbonate lens using a thin flat blade screwdriver, immerse the thermometer bulb in the center of the (slush) solution and allow to stand until the pointer stops moving.
4. Using the thin flat blade screwdriver place it in the small slot at the pointers hub and rotate until the pointer is set to +32°F.
5. Remove the thermometer bulb from the (slush) solution and let set for a few minutes until the pointer starts to rise. Then replace the bulb back into the (slush) solution to make sure it reads +32°F.
6. Reinstall the thermometer in the door frame.

SECTION 8.4 - DOOR GASKET REPLACEMENT

It is recommended that the door be removed from the frame prior to removing and re-installing the door gasket.



CAUTION:
FOR SAFETY REASONS TWO PEOPLE ARE REQUIRED TO REMOVE AND REPLACE THE DOOR FROM THE FRAME ASSEMBLY.

CAUTION:
IF THE DOOR IS SUPPLIED WITH A HEATED VIEW WINDOW, DISCONNECT THE POWER FROM THE SOURCE AND THE POWER LEAD FROM THE DOOR FRAME ASSEMBLY.

CAUTION:
IF A SPRING KIT HAS BEEN INSTALLED ON THE HINGE, THE SCREW HOLDING THE SPRING WILL HAVE TO BE REMOVED BEFORE LIFTING THE DOOR.

PREPARATION:

1. Open the door and lift the door straight up to disengage the hinge pins from the bushings of the cam-lift hinges.
2. Place the door on a clean surface with the door gasket facing up.

NOTE: THE DOOR GASKET IS SUPPLIED ALREADY MITERED, SEALED AND SIZED ACCORDING TO THE DOOR OPENING SIZE.

DOOR GASKET REMOVAL:

1. (Refer to Fig. 51) for a cross sectional view of the door

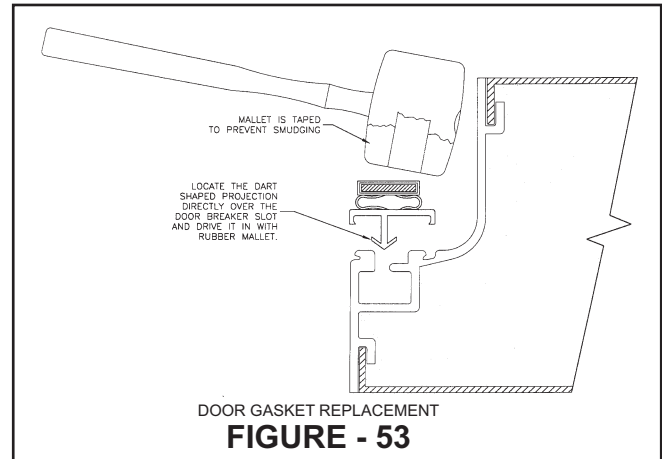
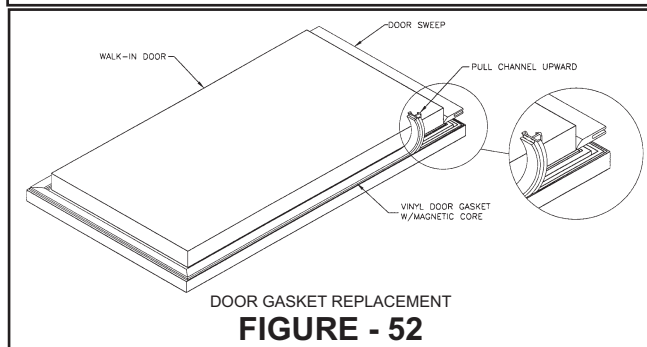
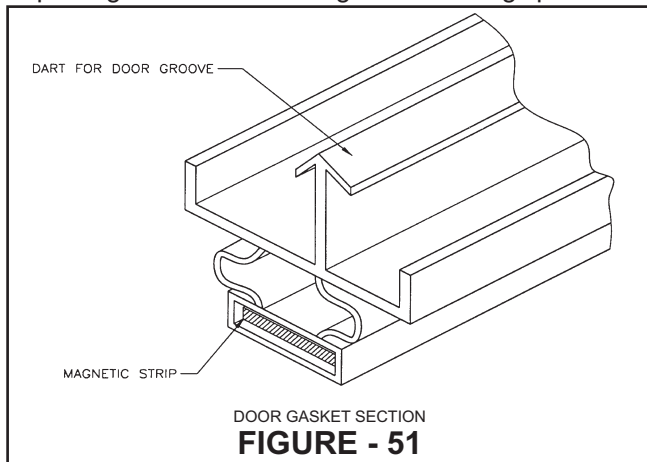
WALK-IN MAINTENANCE

gasket assembly. The door extrusion consists of a cavity which houses the magnetic door gasket. (Refer to Fig. 52). The dart shaped projection is the means of attachment.

2. Starting in one of the corners pull the magnetic gasket out of the retainer cavity. Pull slowly to avoid tearing of dart shaped projection. Next check to make sure that the cavity is clear of any gasket material or debris.

INSTALLING NEW MAGNETIC GASKET:

1. Starting at one of the top corners of the door assembly, insert the dart shaped projection into the retainer cavity with the use of a rubber mallet. (Refer to Fig. 53).
2. Attach only about three inches (3") of the magnetic gasket at each corner. Move to the center of the magnetic gasket and attach to the retainer cavity working in both directions until the gasket is fully installed.
3. Next, attach the magnetic gasket at the bottom corners of the long edges.
4. After the magnetic gasket is fully installed, lift the edge of the gasket making sure that the dart shaped projection is completely engaged in the retainer cavity.
5. Replace the door assembly to the door frame by placing the cam-lift bushings over the hinge pins.



SECTION 8.5 - DOOR SWEEP REPLACEMENT

It is recommended that the door be removed from the frame prior to removing and re-installing the door sweep gasket.

CAUTION:
FOR SAFETY REASONS TWO PEOPLE ARE REQUIRED TO REMOVE AND REPLACE THE DOOR FROM THE FRAME ASSEMBLY.

CAUTION:
IF THE DOOR IS SUPPLIED WITH A HEATED VIEW WINDOW, DISCONNECT THE POWER FROM THE SOURCE AND THE POWER LEAD FROM THE DOOR FRAME ASSEMBLY.

CAUTION:
IF A SPRING KIT HAS BEEN INSTALLED ON THE HINGE, THE SCREW HOLDING SPRING WILL HAVE TO BE REMOVED BEFORE LIFTING THE DOOR.

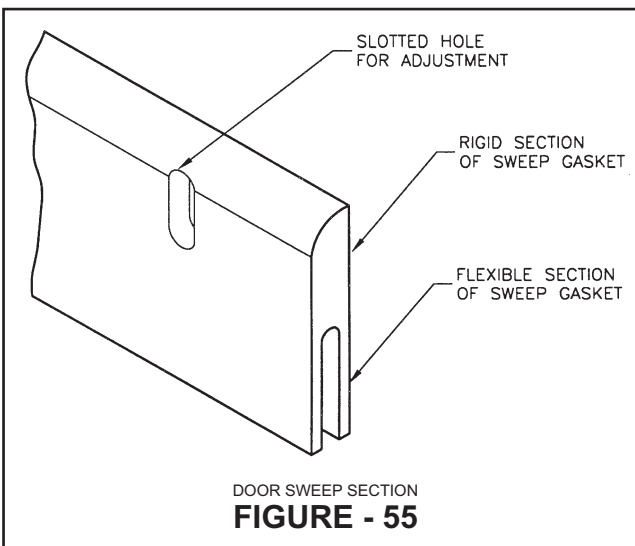
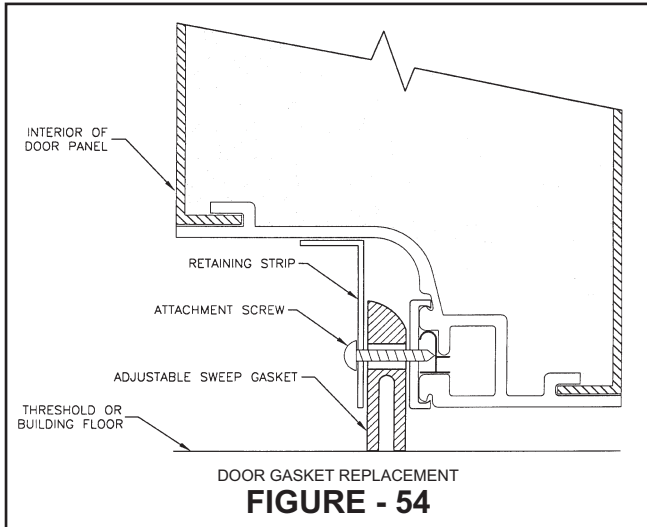
1. Open the door and lift straight up to disengage the hinge pins from the bushings of the cam-lift hinges.
2. Place the door on a clean surface with the interior of the door facing up.

DOOR SWEEP REMOVAL:

1. (Refer to Fig. 54) for a cross sectional view of the door sweep assembly. Remove attachment screws and retaining strip, then remove old gasket.
2. Clean the exposed sweep extrusion area of any debris or residue.

INSTALLING NEW DOOR SWEEP:

1. Position the new sweep gasket at the base of the door section and reattach the retaining strip and attachment screws. (Refer to Fig. 55). Do not completely tighten screws. Be sure the rounded



edge of the gasket is facing towards the door.

2. Once the sweep gasket is snug, push or pull the gasket to achieve the desired seal. Positioned all the way up, the flaps should protrude 3/8". Positioned all the way down, the flaps should protrude 1 1/8".
3. Place the door back in the door frame and check the seal. When closed, the flaps should be slightly curled when touching the floor or the threshold cover plate. When final alignment is achieved, the attachment screws should be tightened completely.
4. Any openings at either ends of the sweep gasket should be filled with silicone to prevent dirt entrapment.

SECTION 8.6 - DOOR CLOSER ADJUSTMENT

The door closer is a hydraulic operated device which enables the door to close firmly to the door frame. There is no lubrication maintenance required to keep the closer

working properly. The door closer has been factory mounted and adjusted so that the rubber roller portion of the roller arm, in a horizontal position barely contacts the closer hook and revolves upward into the hook as the door closes. The door closer roller arm must remain in a horizontal position when the door is open. If, for any reason the roller arm is bumped into a vertical position, it must manually be moved to the horizontal position for the door to close.

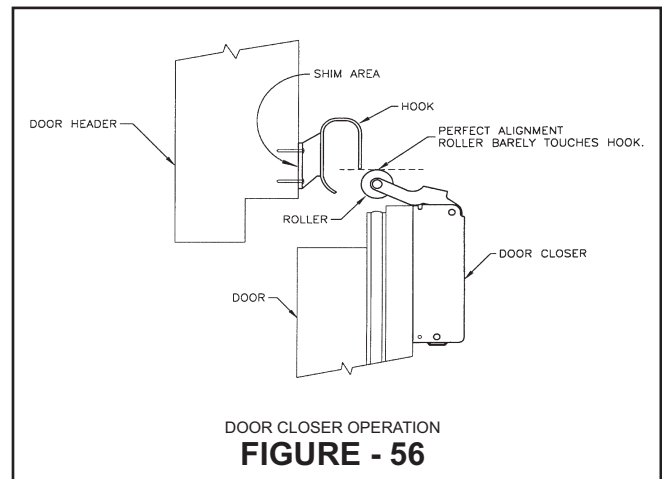
If the rubber roller does not meet the hook properly (Refer to Fig. 56), the hook portion of the door closer can be adjusted by raising, or lowering. In some instances a shim (small washer is recommended) can be positioned behind the mounting screws at the shim area behind the hook. To raise the hook place shims behind the bottom screws, and to lower hook place shims behind the top screws.

CAUTION:

DO NOT ATTEMPT TO BEND THE HOOK AS A MEANS OF ADJUSTMENT.

IMPORTANT:

PROPER OPERATION OF THE DOOR CLOSER REQUIRES THAT THE DOOR AND FRAME ASSEMBLY HAS BEEN INSTALLED PLUMB, SQUARE AND LEVEL.



SECTION 8.7 - CORRECTING DOOR SITUATIONS

Doors and frames have been factory fitted for proper fit and operation. Door situations can occur at time of installation or a later date. Typical reasons for door situations are as follows:

- Unleveled floor
- Frame not installed square and level
- Settling of walk-in floor
- Adjacent wall panels not plumb and square

NOTE: BEFORE STARTING MAKE CERTAIN THAT THE FLOOR IS LEVEL. IF THE FLOOR IS NOT

WALK-IN MAINTENANCE

LEVEL, YOU WILL HAVE TO SHIM THE DOOR FRAME PRIOR TO MAKING ANY ADJUSTMENTS.

IMPORTANT:
TWO PEOPLE ARE REQUIRED TO PERFORM THESE PROCEDURES.

PROCEDURE TO CORRECT A SAGGING DOOR: *(Refer to Fig. 57)*

1. Lock the inside release to prevent the door from opening.
2. Unlock the cam-locks in the door frame and adjacent wall panels from the ceiling panels and floor panels (if supplied).
3. Unlock the adjacent wall panels from the corner panels or "tee" panels.
4. Next, shim under the door frame so that the door is positioned squarely in the frame. Shim may need to be positioned left or right depending on which way the door sags. The reveal should be of equal distance

around the top and sides of the door. After the frame has been shimmed, seal any space under the frame with sealant.

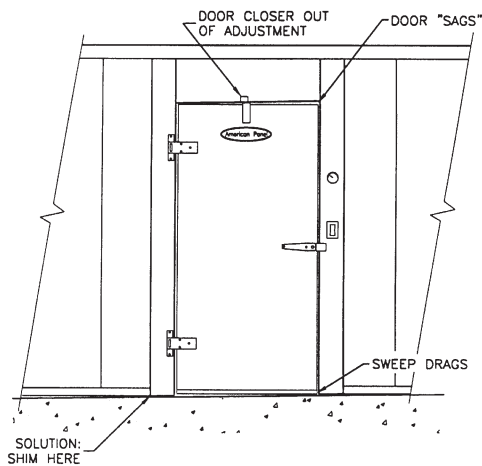
5. After the door is positioned properly, relock all of the cam-locks and replace the lock hole plugs.

PROCEDURE TO CORRECT NON-PARALLEL FRAME LEGS: *(Refer to Fig. 58)*

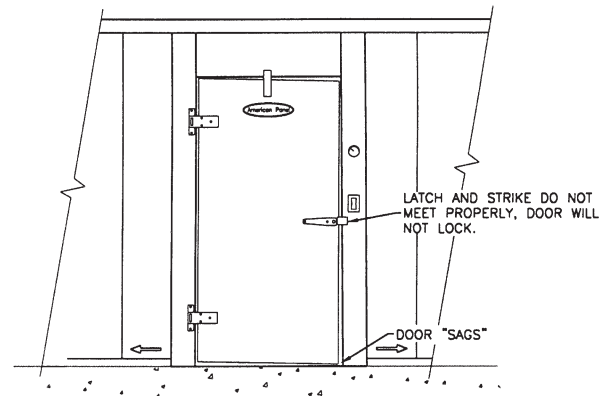
1. Follow the same procedure used in correcting a sagging door.

PROCEDURE TO CORRECT FRAME LEGS THAT ARE NOT ALIGNED FRONT- TO- BACK: *(Refer to Fig. 59)*

1. Lock the inside release to prevent the door from opening.
2. Unlock the cam-locks in the door frame from the ceiling panels and floor panels (if supplied). In some instances you may need to unlock the adjacent wall panels.



SAGGING DOOR
FIGURE - 57



FRAME LEGS NOT PARALLEL SIDE-TO-SIDE

FIGURE - 58

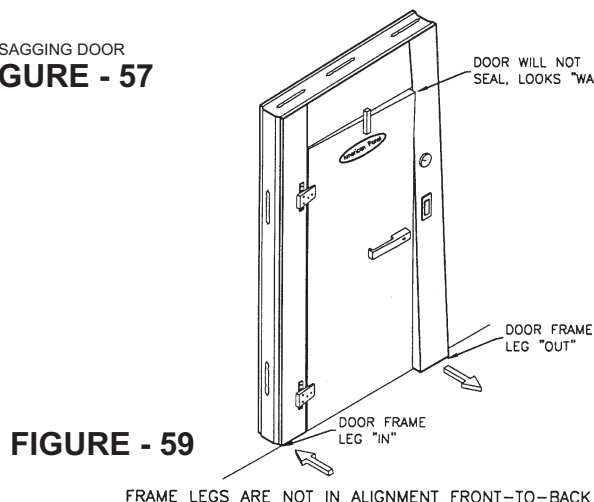


FIGURE - 59

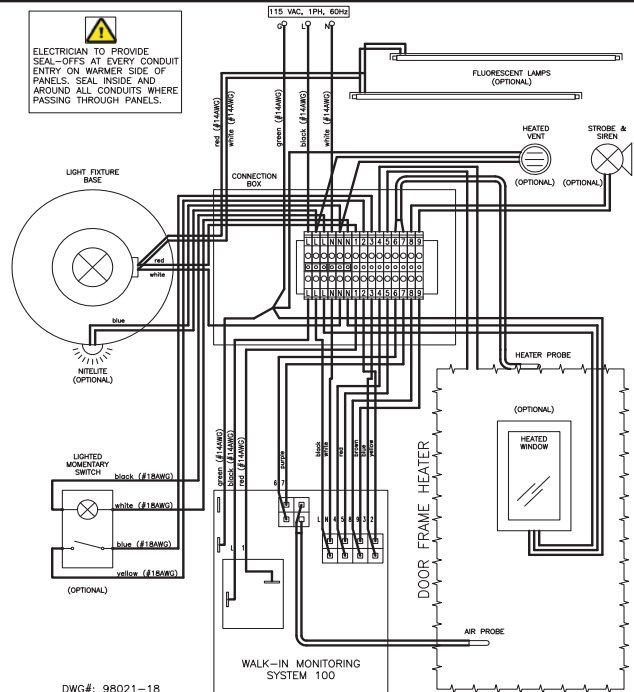
3. The person positioned on the exterior of the walk-in on the latch side of the door should push against the adjacent wall panel and door frame simultaneously until the desired alignment of the door frame is achieved. If this does not correct the problem, move to the hinged side of the door and follow the same procedure. The inside person using a flashlight should watch the door shift and notify the outside person that alignment has been achieved.
4. While pressure is kept on the exterior of the walk-in, the inside person should relock the panels in the following order, making certain that all panel-to-panel seams are flush:
 - A. Door frame to ceiling panel.
 - B. Adjacent wall panels to ceiling panels.
 - C. Adjacent wall panels to door frame.
 - D. Wall panels to corner panels.
 - E. Wall panels to floor panels (if supplied).

SECTION 8.8 - HEATER WIRE REPLACEMENT

Each door frame heater wire assembly must be connected to a 115 volt power supply. The connection point is located in the handy box with the 16-pin terminal block adjacent to the light fixture. If power is connected and the heater is not operating, proceed with the following instructions.

1. (Refer to Fig. 60A or 60B) which is the heater wire circuit diagram. With power DISCONNECTED, disconnect the wire going to the klixon and the wire to the heater control if supplied.
2. With an ohm meter check the continuity through the heater wire. If there is no continuity, the heater is burned out. Proceed to step #5.
3. If the heater has continuity, check the heater control if supplied. In the "high" position there should be continuity. As the slide on the heater control is lowered toward the "off" position the reading should change and go to "zero". If the heater control checks properly, reconnect and proceed with checking the klixon.
4. The klixon should show continuity when the temperature is below 45 degrees. If it has been inside the cooler or freezer, there should be continuity. If okay, reconnect.
5. If the klixon and heater control (if supplied) are both working properly, proceed with changing the heater wire.
6. Using a putty knife or thin edged flat screwdriver, carefully snap off the magnetic covers from door frame. (Refer to Figs. 61, 62). Work from bottom to

WALK-IN MAINTENANCE



DWG#: 98021-18

FOR DETAILS, SEE THE ELECTRICAL SCHEMATIC IN THE OWNER'S MANUAL
FOR SYSTEM 100 / SYSTEM 100B / SYSTEM 200

DOOR FRAME WIRING DIAGRAM
IF THERE IS WALK-IN MONITORING SYSTEM 100

FIGURE - 60A

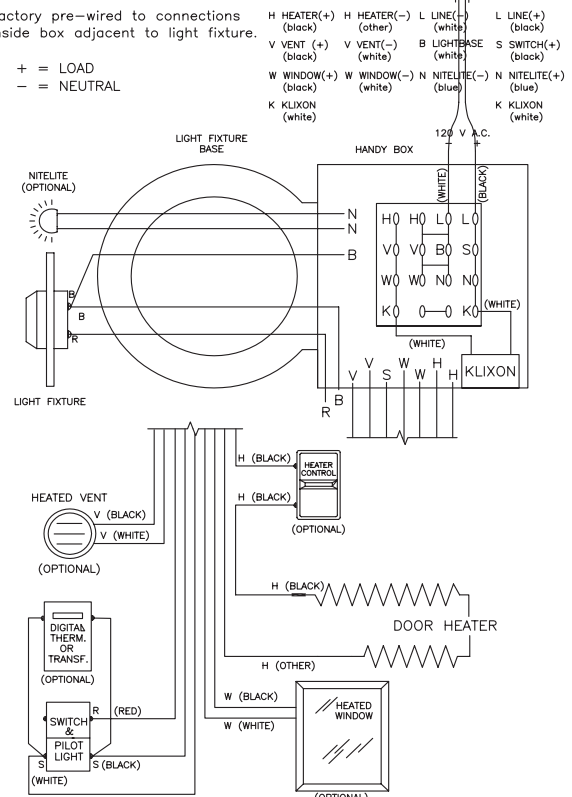
Electrician to make connections in handy box, including ground wire.

Electrician to provide seal-offs at every conduit entry on warmer side of panels. Seal inside and around all conduits where passing through panels

If lighting load exceeds 800 watts, provide relay.

Factory pre-wired to connections inside box adjacent to light fixture.

+ = LOAD
- = NEUTRAL



DOOR FRAME WIRING DIAGRAM
IF NO WALK-IN MONITORING SYSTEM 100

FIGURE - 60B

WALK-IN MAINTENANCE

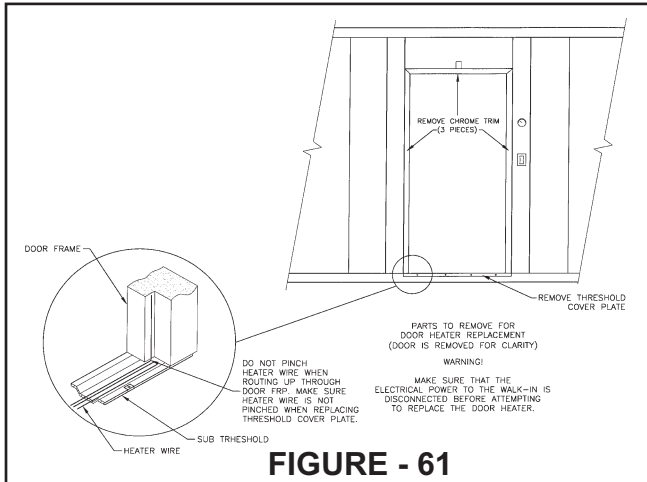


FIGURE - 61

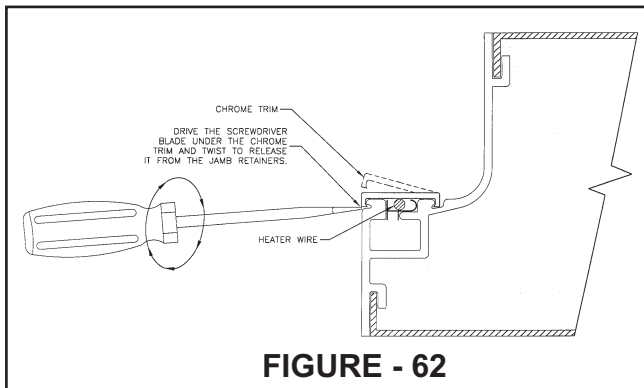


FIGURE - 62

top, and then the header of the frame. Use care to apply the minimum force necessary to snap off the cover so that deformation of the cover can be avoided.

7. Using a screwdriver remove the screws which fasten the threshold cover plate to the sub-threshold and remove the cover plate.
8. Remove the heat shrink tubing from the connections made at the edge of the door frame.
9. Note the pattern the heater wire follows, then disconnect and remove faulty heater wire from the frame.
10. Install the new heater wire in the track in the frame in the same pattern. Make sure the fiberglass sleeve is installed on the heater wire at each corner where the sub-threshold meets the frame legs and on the lead wires to the control box. Use the foil tape to hold the heater wire in place on the sub-threshold so that the attachment screws will not touch the heater wire. The heater wire should be high enough to touch the cover, but not such that it will pinch.

11. Reconnect the heater wire to the white and black lead wires at the terminal block and cover these connections with protective heat shrink tubing.

12. While the magnetic cover extrusions are off the frame and the heater wire is exposed, reconnect the power source to the frame section at the fuse box. If the heater works, disconnect the power and proceed.

13. Snap the magnetic cover on the header starting at one corner and working to the other corner. Then snap in the side covers starting at the top and working down to the bottom of the frame. Next, install the threshold cover plate, making sure that the screws do not make contact with the heater wire.

14. Reconnect the electrical service to the door frame section.

SECTION 9.1 - TEN YEAR PANEL WARRANTY

American Panel insulated panel products are warranted for a period of ten (10) years after date of installation, but not longer than ten (10) years and three (3) months from date of original shipment, to the original user should the panels be installed properly and be used under normal service conditions. This warranty does not include transportation or labor charges for making any in-warranty repairs and will not apply to equipment which has been subject to any accident, fire, negligence, alteration, abuse, misuse or damage in transit. After an inspection authorized by us, should any part of our product prove to be defective in material or workmanship, it will be repaired or replaced free of charge F.O.B. factory. This warranty does not apply to accessories or components sold or supplied by us but manufactured by other companies who furnish their own warranties. In no event shall the Company be liable for the loss of use, revenue or profit or for any other indirect, incidental, special or consequential damages including, but not limited to, losses involving food spoilage or product loss. There are no other warranties expressed or implied.

SECTION 9.2 - ONE YEAR PARTS WARRANTY

Component parts supplied by American Panel are warranted for a period of one (1) year after date of installation, but not longer than one (1) year and three (3) months, to the original user. This warranty does not include transportation or labor charges for making any in-warranty repairs and will not apply to parts which have been subject to any accident, fire, negligence, alteration, abuse, misuse or damage in transit. If under normal conditions and after an inspection authorized by us the original component proves to be defective in material or workmanship, this component will be repaired or

replaced free of charge F.O.B. factory. In no event shall the Company be liable for the loss of use, revenue or profit or for any other indirect, incidental, special or consequential damages including, but not limited to, losses involving food spoilage or product loss. There are no other warranties expressed or implied.

SECTION 9.3 - FIVE YEAR COMPRESSOR WARRANTY

Compressors supplied by American Panel are warranted for a period of five (5) years after date of installation, but not longer than five (5) years and three (3) months from date of original shipment, to the original user within the United States of America and Puerto Rico. External electrical components, refrigerant and any part of the equipment other than the compressor are not included. This warranty does not include transportation or labor charges for making any in-warranty repairs and will not apply to equipment which has been subject to any accident, fire, negligence, alteration, abuse, misuse or damage in transit. If under normal conditions and after an inspection authorized by us the original compressor proves to be defective in material or workmanship, this original compressor will be repaired or replaced free of charge F.O.B. factory. In no event shall the Company be liable for the loss of use, revenue or profit or for any other indirect, incidental, special or consequential damages including, but not limited to, losses involving food spoilage or product loss. The compressor replaced under this warranty shall be warranted for one (1) year from date of replacement. There are no other warranties expressed or implied.

SECTION 9.4 - 90 DAY LABOR/SERVICE WARRANTY ON PRE-CHARGED REFRIGERATION SYSTEMS (STANDARD)

American Panel warrants its pre-charged refrigeration systems installed in the United States of America and Puerto Rico to be free of defects in material and workmanship for a period of ninety (90) days after date of start-up, but not longer than one hundred twenty (120) days from date of original shipment, to the original user should the system be installed properly and be used under normal service conditions. The reasonable labor cost, on a straight line basis, will be covered to repair or replace the warranted product which proves defective upon an inspection authorized by us. This warranty will not apply to or cover damages to equipment, or parts thereof, which has been subject to any accident, fire, negligence, alteration, abuse, misuse, failure to properly service and maintain equipment, failure to install in accordance with instructions, tampering, damage in transit, or to equipment serviced by an unauthorized agency. The purchaser shall be responsible for all travel

and time expenses beyond the limit of thirty (30) miles from the installation site and for all shipping charges. Service calls for minor operational adjustments are excluded. Local authorized service agencies must be utilized wherever possible. This warranty does not apply to remote or pre-assembled remote refrigeration systems requiring electrical inter-wiring or refrigerant piping provided by others. In no event shall the Company be liable for the loss of use, revenue or profit or for any other indirect, incidental, special or consequential damages including, but not limited to, losses involving food spoilage or product loss. American Panel reserves the right to withdraw this warranty if it is determined that equipment is not being operated properly. There are no other warranties expressed or implied.

SECTION 9.5 - ONE YEAR LABOR/SERVICE WARRANTY ON PRE-CHARGED REFRIGERATION SYSTEMS (OPTIONAL)

American Panel warrants its pre-charged refrigeration systems installed in the United States of America and Puerto Rico to be free of defects in material and workmanship for a period of one (1) year after date of start-up, but not longer than one (1) year and three (3) months from date of original shipment, to the original user should the system be installed properly and be used under normal service conditions. The reasonable labor cost, on a straight line basis, will be covered to repair or replace the warranted product which proves defective upon an inspection authorized by us. This warranty will not apply to or cover damages to equipment, or parts thereof, which has been subject to any accident, fire, negligence, alteration, abuse, misuse, failure to properly service and maintain equipment, failure to install in accordance with instructions, tampering, damage in transit, or to equipment serviced by an unauthorized agency. The purchaser shall be responsible for all travel and time expenses beyond the limit of thirty (30) miles from the installation site and for all shipping charges. Service calls for minor operational adjustments are excluded. Local authorized service agencies must be utilized wherever possible. This warranty does not apply to remote or pre-assembled remote refrigeration systems requiring electrical inter-wiring or refrigerant piping provided by others. In no event shall the Company be liable for the loss of use, revenue or profit or for any other indirect, incidental, special or consequential damages including, but not limited to, losses involving food spoilage or product loss. American Panel reserves the right to withdraw this warranty if it is determined that equipment is not being operated properly. There are no other warranties expressed or implied.

NOTES



Cooler is **Better!**TM

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