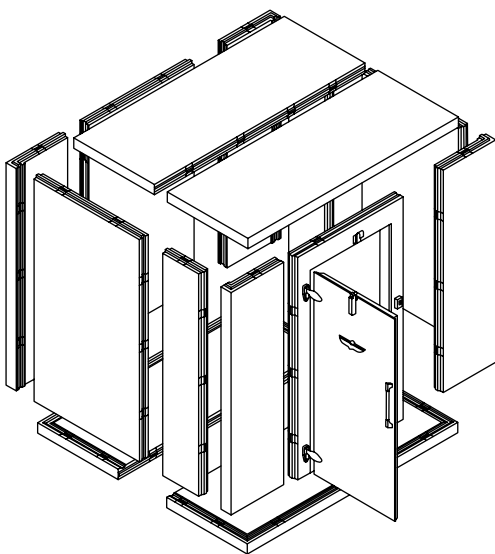




## Walk-In Cooler and Freezer Manual



Installation Instructions

Troubleshooting

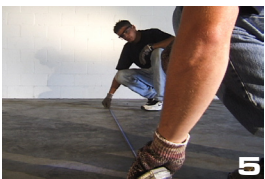
Warranty

Drawings

U.S. Cooler  
401 Delaware St. Quincy, Illinois 62301  
Phone: 800.521.2665 | Fax: 217.228.2424  
[www.uscooler.com](http://www.uscooler.com)



# Installation Instructions



## GENERAL:

- Check bill of lading for correct number of boxes.
- In the event of damage, be sure to notate 'damaged' on the freight bill. It is imperative to take pictures of any damage and send to our Customer Service Department.
- Remove packing list attached to the end of the skid and installation pack attached to door.
- Locate the installation pack (clear plastic bag containing the packing list, installation drawing, cam plugs, and cam wrench).

## TOOLS REQUIRED:

- Cam-lock wrench (provided)
- Gloves for handling panels
- Caulk gun and NSF silicone caulk
- Power drill with Phillips driver and 1/8" drill bit
- 1/2" metal drill bit (for side mount refrigeration units)
- 4 ft. carpenter level

## INTRODUCTION:

Once you have located the clear installation pack attached to the door, pull out the installation drawing for reference. Each panel is labeled with a C (Ceiling), W (Wall), or F (Floor) and a number. Separate the panels by grouping the C panels together, the W panels together, etc. Prior to installation, ensure there is proper clearance where box will be located. There should be a minimum 2" clearance around exterior of panels for airflow. Before setting panels, make sure there is proper clearance for door swing and Heated Pressure Relief.

## FLOOR INSTALLATION (FLOORED UNITS):

Locate panels that are labeled letter F. These are floor panels. Using chalk line, measure out and mark floor for location of box. Lay the F1 floor panel in the location designated on the floor plan drawing (**see figure 2**). Take the F2 floor panel and fit male side of F1 panel into female side of F2 panel. Align both ends until they are even (**see figure 3**). Insert cam wrench into center hole on F1 panel. If hook is showing, back cam counter clockwise until you reach a stop, but do not force cam. Turn cam wrench clockwise until a solid stop is reached (**see figure 4**). Again, do not force past stop. Check to see if F1 and F2 floor panels are firmly attached together. If not, repeat this step. Otherwise, lock remaining cams and go to next panels until all floor panels are assembled.

U.S. Cooler floors are not designed for the use of forklifts, pallet jacks, or hard wheeled carts. Damage caused by this usage will void the panel warranty.

## THRESHOLD BAR INSTALLATION:

The door threshold bar must be installed in the floor panel before the door is set in place where the door is to be located. With the hooks pointing in the same direction as the pins on the cam-locks in the floor, place the hooks of the threshold bar into the slots of the cams. Push the bar in the direction of the pin of the cam-lock until they contact. Gently tap the locking bar until it locks into the cams or quits moving. This movement is about 1 1/2". The locking bar is now installed. When the door is installed, screw the threshold down to the locking bar with the self-tapping screws provided in the install pack (**see drawing page 8**).

## SCREEDING INSTALLATION (FLOORLESS UNITS):

Using chalk line, mark location of box walls according to enclosed plans (**see figure 5**). Lay two beads of silicon caulk within the 4" wall location (**see figure 6**). Gray screeding can optionally be shot down with nails placed directly in the center of screeding (**see figure 7**). Put one bead of caulk on each inside edge of screeding.

## WALL PANELS INSTALLATION:

Start with corner wall consisting of W1 and the adjacent wall panel that forms the corner (**see figure 8**). On floorless walk-ins, work panels into pre-installed screeding. On floored units, place male bottom of wall panel in female groove of floor panel. Make sure the floor arrow on the wall panel is pointing down. Once panel is inserted correctly, install W2 wall panel with W1 panel, male edge will be inserted into female edge of W2 panel. **Special care should be given to ensure that top edges and sides of wall panels are flush (see figure 9)**. Take cam wrench and insert it into center hole of W1 panel. Be sure cam lock is set by first turning wrench in a counterclockwise direction until stop is felt. Do not force cam. After checking set of cam, turn wrench in a clockwise direction until stop is felt (**see figure 10**). Again, do not force cam. Check to see if panels are firmly locked together. If not, repeat this step. If they are, finish panel installation by locking all wall cams. Do not lock the panels to the floor until all wall and ceiling panels have been locked together. Continue installing wall panels by alternating from the lowest wall number to the highest wall number. On combination units, install center wall before continuing into cooler section. If the floor is uneven, adjustments must be made to ensure wall panels are flush at the top. When installing door panel, remove door by lifting door in an upward direction on panel and set aside until the frame is installed.

## DOOR INSTALLATION:

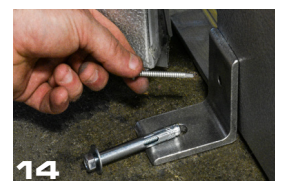
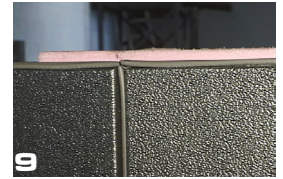
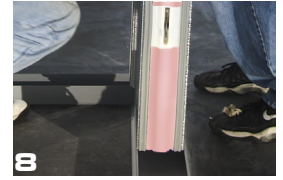
Doors on standard nominal units can be installed in any of the standard, full size wall panel locations, while custom built order units have fixed door locations. A door threshold hold down bar must be installed in the floor panel where the door is going to be installed. Place the hooks of the door threshold hold down bar, with the hooks going in the same direction of the cams, in to the slots on the cams. The hook on the bar should contact the pins in the cams. Gently tap the hold down bar in the direction of the cams and hooks until it quits moving, locking it in place with the cam hooks (approx. 1 1/2"). Gap on handle side between the door & frame should be the same from top to bottom, and the gap across the top of the door, left to right should be equal. Continue installation of wall panels.

## CUSTOM UNIT WITH FLOOR:

Check your drawing to locate where the door will be installed. 3 screws are provided to screw threshold to floor.

## COOLER WITHOUT FLOOR:

Angle brackets should be installed on exterior door legs using angle brackets and screws provided.



**WARNING: Risk of fire or electrical shock. Connect only to a grounded circuit protected by a ground fault circuit interrupter (GFCI). Failure to do so can result in death or serious injury.**

## **HEATER WIRE INSTRUCTIONS**

Connect to incoming power source, via junction box, per local wiring codes. **(See drawing on page 13)**

## **HEATED PRESSURE RELIEF INSTRUCTIONS**

Connect to incoming power source, via junction box, per local wiring codes. **(See drawing on page 13)**

## **LIGHT SWITCH INSTALLATION:**

1. Read all labels on unit and understand all risks.
2. Disconnect power at breaker.
3. Route all high voltage power (Line, Switched, Neutral, Indicator, and Three Way) through separate conduit than the temperature probe(s) and battery cable conduit. **NOTE:** Junction boxes must be rated for "Wet/Outdoor Location" if used in outdoor application. Use Teflon/PTFE tape to wrap all thread conduit connections.
4. Connect power wires to terminal block. If wires fray while installing, it is required to tin (solder) the wire leads in order to press into terminal block. Do not allow stray wires to exit the terminal block.
5. Connect battery cable and temperature probe(s) on back of unit. Select Temperature Units with black jumper.
6. Push all wire into junction box. Secure to junction box with screw/washer. Must fully seat screw/washer and gasket.

**SPECIAL NOTE: Seal all conduit wire openings with a silicone sealant. This will keep moisture out of junction boxes. (See Electrical Drawing Diagram on page 13)**

## **CEILING PANELS INSTALLATION:**

Once wall panels are installed, proceed with C1 ceiling panel by placing it in location according to drawing **(see figure 11)**. Align it so it is even on all edges. Many times uneven floors may cause ceiling to either be slightly bigger or smaller than wall panels. If this is the case, split the difference. All panels are made to allow adjustments due to varying installation conditions. Lock all cams according to previous instruction. After locking C1 panel, lift C2 panel into location so male side of C1 fits into female side of C2. Line up both ends and lock all cams **(see figure 12)**. Continue installing ceiling panels from smallest number to largest number.

## **CEILING SUPPORT INSTALLATION:**

Drill and rivet ceiling support bracket to male or female cam **(see drawing page 10)**. After brackets are riveted to female ceiling cams and ceiling is locked into place, bring male ceiling into place by lining the slot of the bracket up with the female slot and male lock. Wire cable must be hung straight up from the attached bracket to support beam. Bolts, washers, clamps and wire cable are supplied by others.

## **DRIP CAP INSTALLATION:**

Stainless steel drip caps are supplied with outdoor walk-ins to reduce the amount of precipitation that would otherwise collect across the top and down the edges of the door. The drip cap is installed just above the door closer hook on the door frame. The 90 degree fold will be against the walk-in facing up. To install the drip cap, drill (3) 1/8" holes across the 90 degree fold and using the 1/2" long, pan head screws provided, attach the drip cap to the walk-in. To insure the drip cap is sealed tight against the walk-in, place a bead of silicone caulk either behind the fold when attached to the walk-in, or a bead of caulk along the top of the drip cap after attached **(see drawing page 15)**.

## **DOOR ADJUSTMENTS:**

After all panels have been installed, close walk-in door. If the door does not shut correctly, verify that the reveal between the door and frame is even around the perimeter of the door (**see figure 13**). A reveal that increases or decreases across the top of the door, indicates one leg of the door frame is lower than the other and will need to be shimmed to correct the condition. The door and frame should be flush around the perimeter. If one corner of the door protrudes from the frame, it indicates that the bottom of one door leg is not aligned with the other leg and the frame has a slight twist. Unlock the cams around the perimeter of the frame and move the door leg in or out to correct the condition, then relock the cams. Once box is completely installed and door alignment is verified, screw the threshold down to the threshold bar on floored boxes and to the floor on floorless boxes with the stainless steel screws provided. On floorless units, attach L-shaped hold-down bracket to door legs and floor. Locate bracket on edge of door frame, small hole against the door leg, large hole to the floor. Install included Phillips self-tapping screw through small hole of bracket and into door leg. Install included concrete anchor through bracket and into floor. (**see figure 14**).

## **ADJUSTABLE HINGE ADJUSTMENT INSTRUCTIONS:**

(See drawing on page 9)

## **CAULKING INSTRUCTIONS:**

It is advisable, but not absolutely necessary, to caulk all joints inside walk-in. This will provide for an even better sealed unit. Use NSF approved silicone caulking.

## **RAIN ROOF INSTALLATION:**

Install evaporator coil prior to rain roof installation and silicone caulking around the carriage bolt heads to avoid perforating the rain roof. (**See drawing on page 15**)

## **SLOPED FOAM INSTALLATION:**

Install evaporator coil prior to rain roof installation and silicone caulking around the carriage bolt heads to avoid perforating the rain roof. (**See drawing on page 16**)

## **TYPICAL SLOPE FOAM INSTALLATION:**

Slope foam installation for a walk-in consists of the tapered foam and the vapor barrier material. The slope foam taper typically starts at 1/4" and goes up to about 4". The foam is typically marked A,B,C,D, etc. depending how many rows of foam are needed to cover the walk-in. Starting at a corner of the roof panel, place a row of panels down, depending on which direction the taper is made to run across the top of the walk-in. After each row is placed down, it's always best to run a strip of furnace tape across the foam panel, just to keep them temporarily in place until the rain roof membrane has been installed. After installing all the tapered foam panels, we have provided a roll of 4 mil vapor barrier, that needs to be placed over the tapered foam panels. This protects the membrane from any gasses that may escape from the foam, which will reduce the life span of the membrane. With the foam and vapor barrier now in place, the roof membrane can now be installed.

## **REFRIGERATION INSTALLATION:**

For saddle mount and side mount units, set refrigeration system over notched wall panel with compressor mounted on outside of walk-in. Drill through wall with 1/2" drill bit and bolt unit on with provided bolts. If unit has top mount self-contained refrigeration system to be installed, place unit in prefabricated hole in top of walk-in with air flow marker pointing away from wall. Caulk around perimeter of refrigeration unit. All wall penetrations are required to have an airtight seal. All refrigeration components must be installed by a certified refrigeration contractor, who must be present at startup. Failure to do so may affect your warranty.

## **TROUBLESHOOTING:**

### Ceiling overhangs walls:

If walls are racked at the top, loosen wall cams and adjust walls so the tops of the walls line up. If walls are level at the top, loosen corner wall panel and bump out wall panel to line up with outer edge of ceiling. Lock ceiling to wall and re-lock corner seam.

### Door doesn't shut:

Check to make sure door closer is working properly and it is catching the hook. Check to make sure walls aren't racked. See installation instructions for further door alignment information.

### Door sags:

Check to make sure the floor is level. If not, shim as needed under correct door leg.

### Ceiling panels won't pull down to lock into walls:

If walls have been locked to walk-in floor, unlock walls from the floor, lock ceiling panels down to walls and re-lock walls to floor.

### Cam wrench is binding in cam hole:

Only insert the wrench far enough to catch the mechanism. Make sure you are inserting the tapered end of the wrench in the hole.

### Cam lock not engaging (locking):

Make sure adjoining wall panels are flush on sides and top, so cams are lined up properly. Before locking, be sure to reset cam by turning it counterclockwise until it resets. Do not over-reset cam. Then relock cam.

### Door thermometer reads incorrect temperature:

Door thermometer doesn't register proper temperature. Make sure that the temperature probe is toward the center of the walk-in.



**U.S. COOLER TEN YEAR LIMITED WARRANTY**

U. S. Cooler Company, Inc. warrants to the original purchaser that the walk-in panels manufactured by the company are free from any defect in material or workmanship under conditions of normal use and service. The obligation of the manufacturer under this warranty shall be limited to repairing or replacing at their option FOB factory, panels of said walk-in which proves defective within ten years from the date of purchase. All hardware carries a standard one year warranty.

Refrigeration equipment carries a standard one-year factory warranty for compressor and accessories. The obligation of the manufacturer under this warranty shall be limited to repairing or replacing at their option FOB factory, any part of said refrigeration system which proves defective within one year from the date of purchase. An extended four-year compressor warranty and a 1st day through 5th year labor warranty are also available as an option.

This warranty is in lieu of all other warranties expressed or implied and does not apply to equipment, which has been subject to any accident, alteration, abuse, misuse or improper installation. U.S. Cooler Company, Inc. expressly disclaims all other warranties expressed or implied. The standard warranty does not include any labor charges for replacement or repair of defective parts. In no event shall U.S. Cooler Company, Inc. be liable for any special, direct or indirect, incidental or consequential damages or for any lost product, lost profits or revenues or other losses or damages caused by lost product or lost profits or revenues, whether for breach of warranty or otherwise.

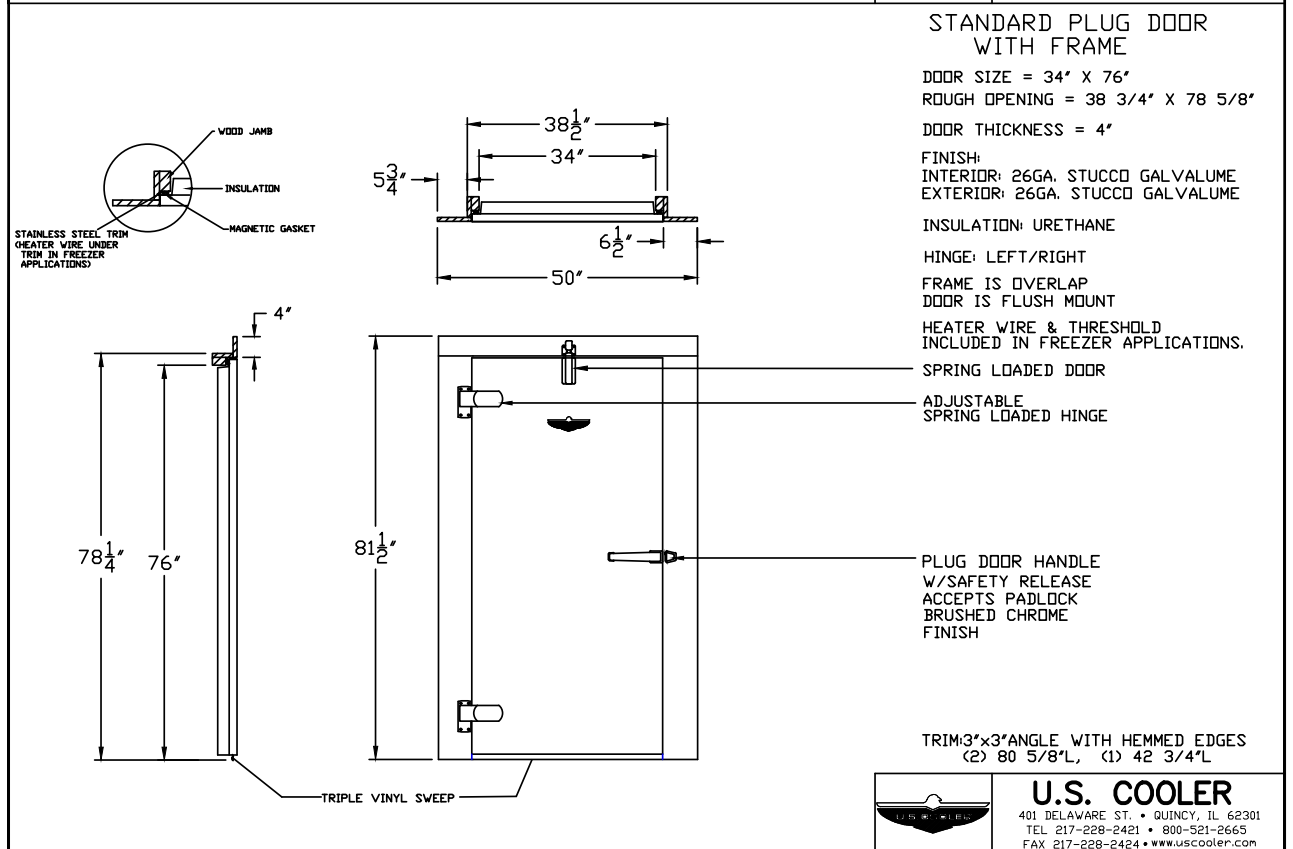
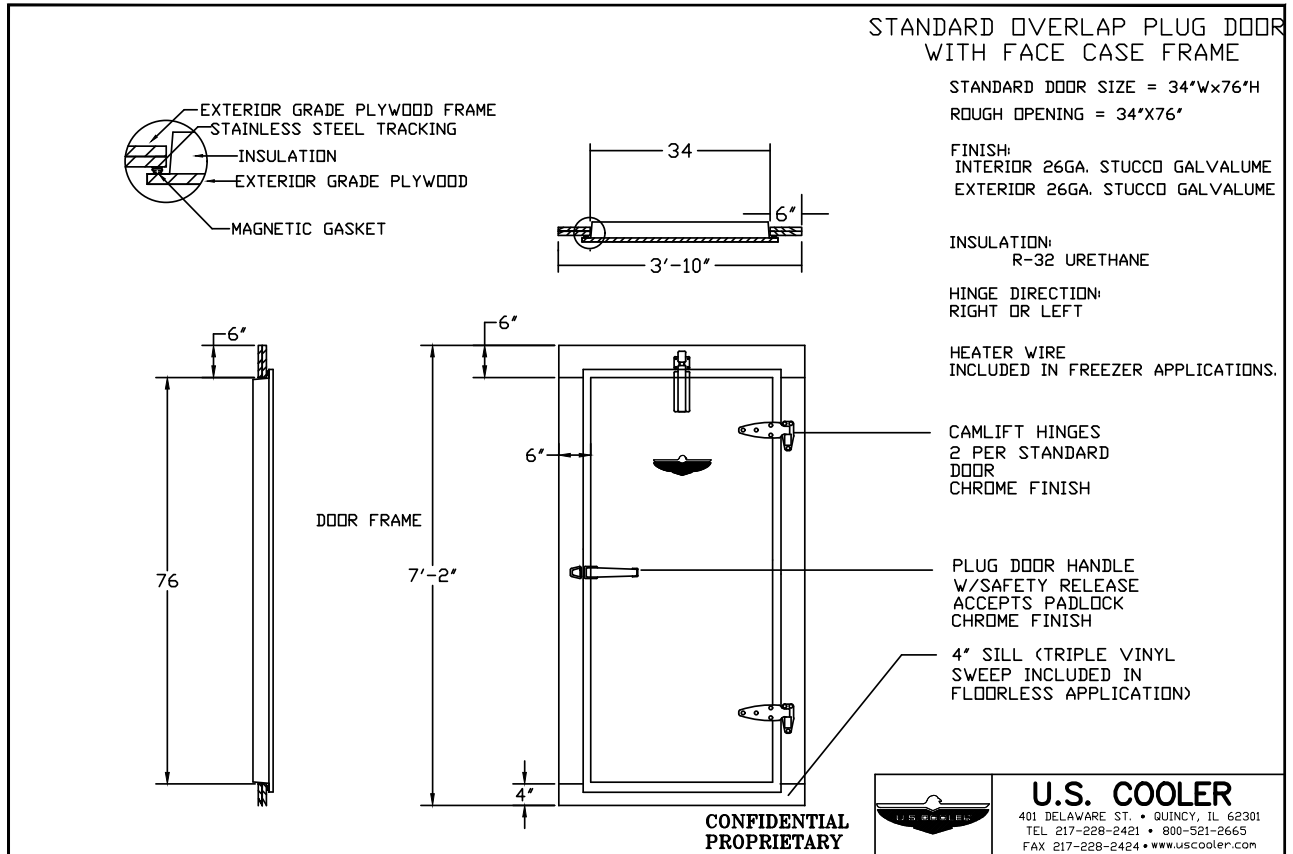
For warranty work on your U. S. Cooler walk-in cooler or freezer, call our Customer Service Department immediately. You will then be advised of the proper procedure to follow. NO warranty work is to be performed without an authorization number, which will be provided by the Customer Service Manager. U.S. Cooler assumes no responsibility for work performed without an authorization number.

**CUSTOMER SERVICE CONTACT INFORMATION:**

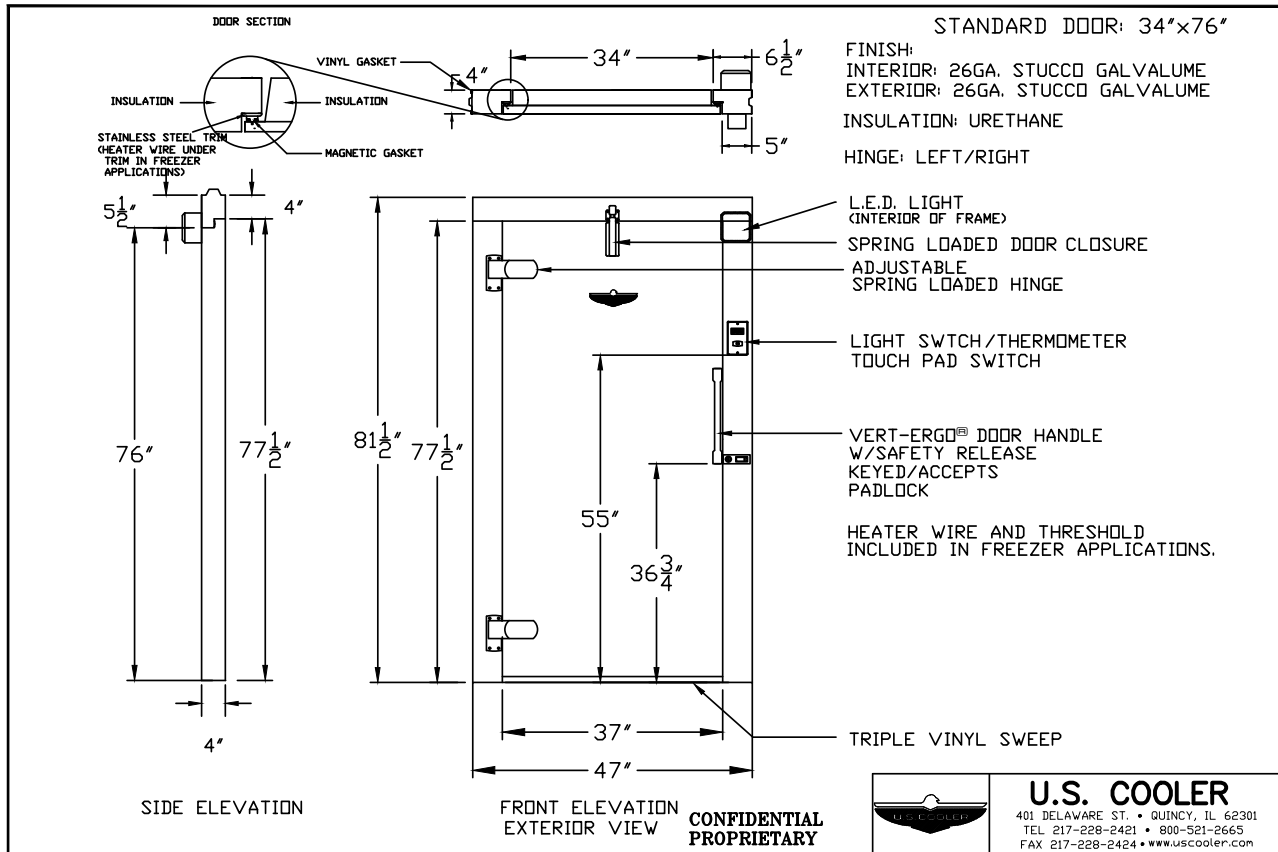
U.S. Cooler Company  
401 Delaware St.  
Quincy, IL 62301

Toll Free: 800.521.2665  
Phone: 217.228.2421  
Fax: 217.228.2424

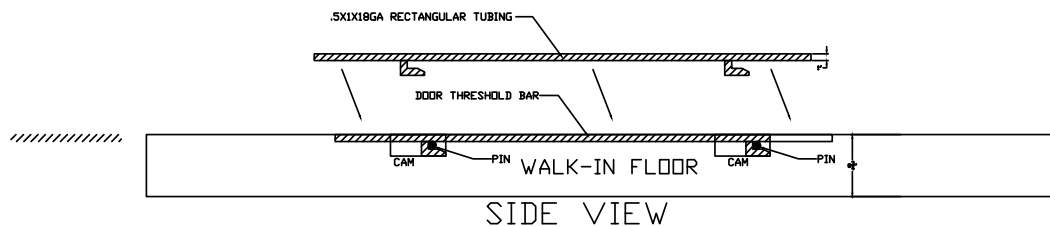
Email: [customerservice@uscooler.com](mailto:customerservice@uscooler.com)  
Company Website: [www.uscooler.com](http://www.uscooler.com)  
Parts Website: [www.walkincoolerparts.com](http://www.walkincoolerparts.com)







## DOOR THRESHOLD BAR INSTALLATION INSTRUCTIONS



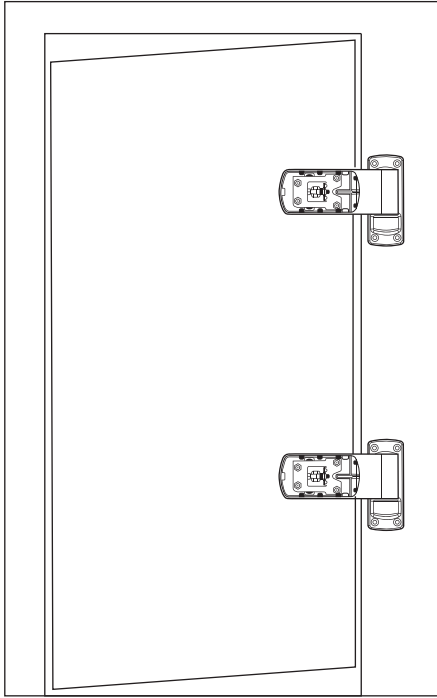
The door threshold bar must be installed in the floor panel before the door is set in place where the door is to be located. With the hooks pointing in the same direction as the pins on the cam-locks in the floor, place the hooks of the threshold bar into the slots of the cams. Push the bar in the direction of the pin of the cam-lock until they contact. Gently tap the locking bar until it locks into the cams or quits moving. This movement is about 1 1/8". The locking bar is now installed.

When the door is installed, screw the threshold down to the locking bar with the self-tapping screws provided in the install pack.

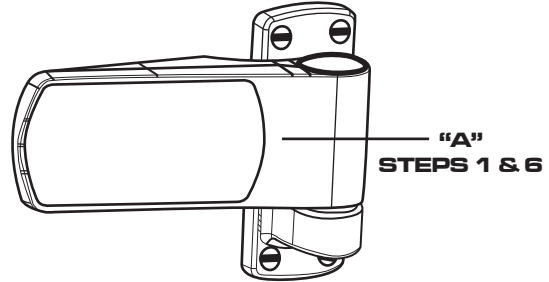


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# Adjustable Hinge Adjustment Instructions

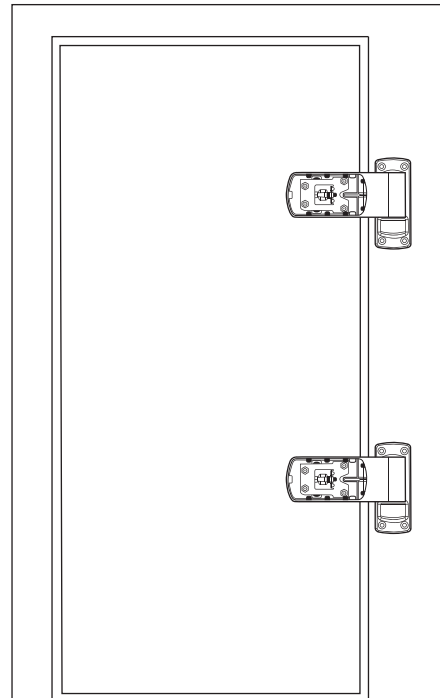
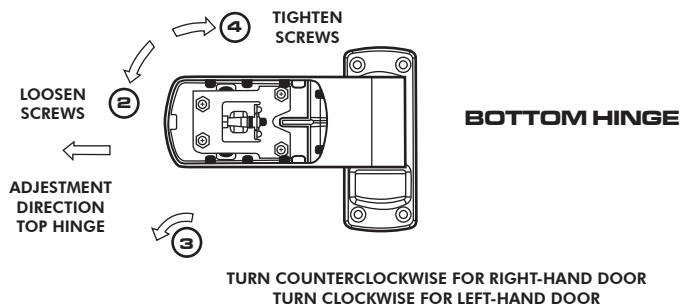
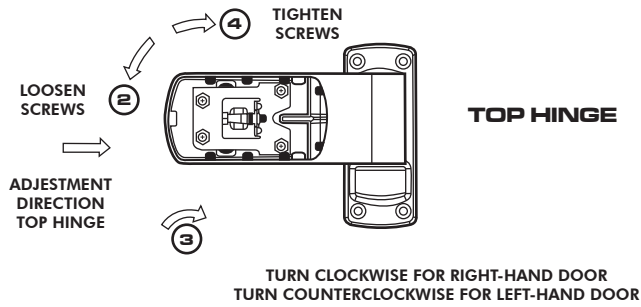


1. Remove access cover by depressing point "A" and pulling it outward.

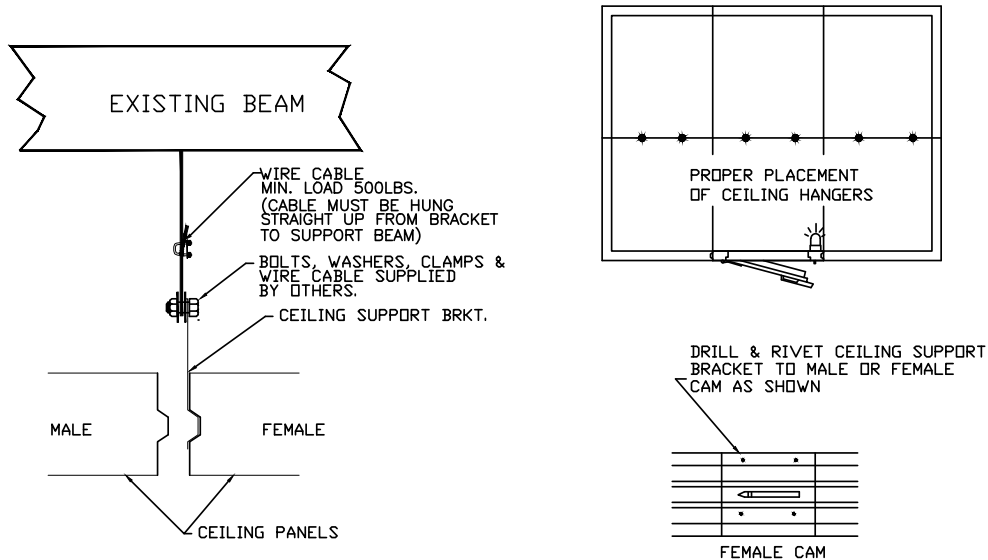


2. Loosen 4 mounting screws on each strap, but do not remove screw.
3. Open door to break seal with magnetic gasket.
4. Adjust tip of door up by turning top hinge adjustment screw clockwise (opposite for left hand door) and the bottom hinge adjustment screw counter-clockwise (opposite for left hand door) so door spacing is even.
5. Tighten 4 mounting screws on each hinge.
6. Replace cover by inserting point "A" first.

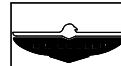
## TO ADJUST DOOR SAG



## CEILING SUPPORT DETAIL



AFTER BRACKETS ARE RIVETED TO FEMALE CEILING CAMS AND CEILING IS LOCK IN PLACE AS INDICATED BY APPROVAL DRAWING, BRING MALE CEILING INTO PLACE (PER DRAWING) LINING THE SLOT OF THE BRACKET UP WITH THE FEMALE SLOT AND THE MALE LOCK.

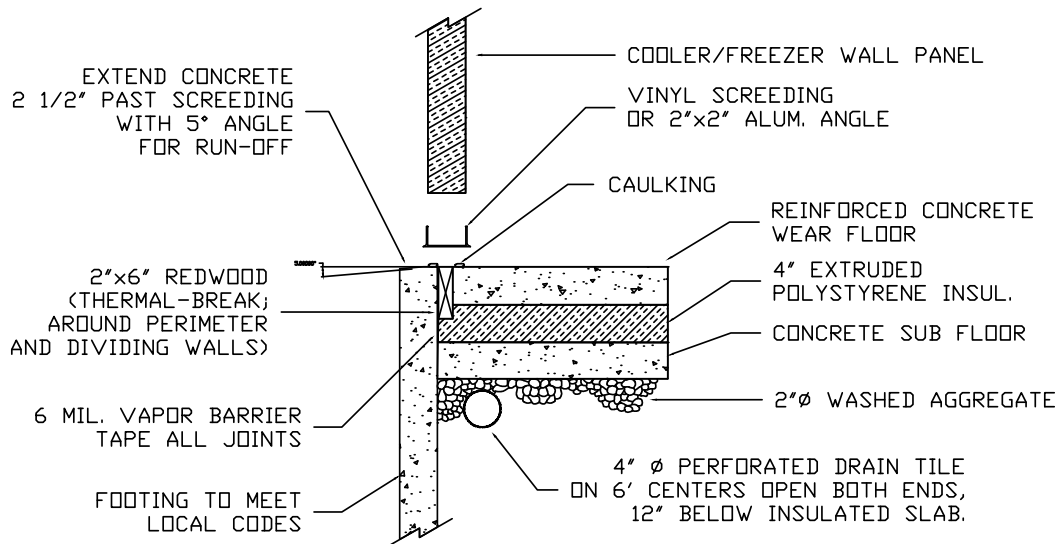


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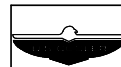
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## FOOTING DETAIL

(FLOORLESS APPLICATION)



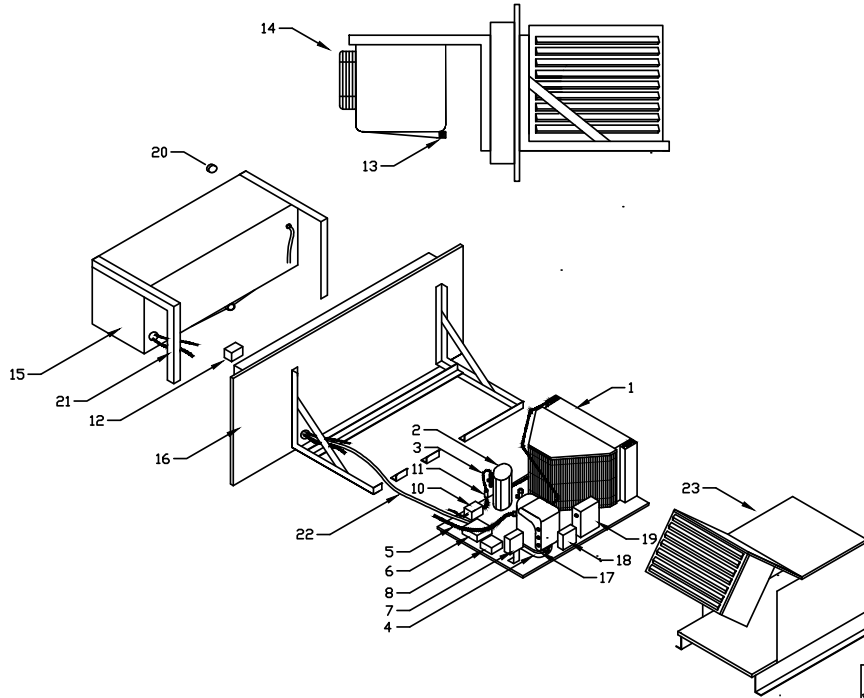
Design used for Conceptual purposes Consult local Engineer for requirements.  
Craig Industries is not responsible for foundation design. This is an example.



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## GENERAL ASSEMBLY FOR SIDE MOUNT SELF-CONTAINED



PARTS LIST	
#	PART
1	CONDENSOR
2	RECEIVER
3	LIQUID LINE
4	COMPRESSOR
5	SUCTION LINE
6	POWER INLET
7	PRESSURE CONTROL
8	TIMER - FRZ. ONLY
9	TEMPERATURE CONTROL
10	DRIER
11	SITE GLASS
12	SOLENOID VALVE
13	DRAIN OUTLET
14	FAN
15	EVAPORATOR/UNIT COOLER
16	PLUG
17	CRANK CASE HEATER-OPTIONAL
18	FAN CYCLE CONTROL-OPTIONAL
19	START RELAY & CAPACITOR
20	THERMOSTAT
21	REFRIGERATION BRACKET
22	WIRING HARNESS
23	COMPRESSOR COVER-OPTIONAL

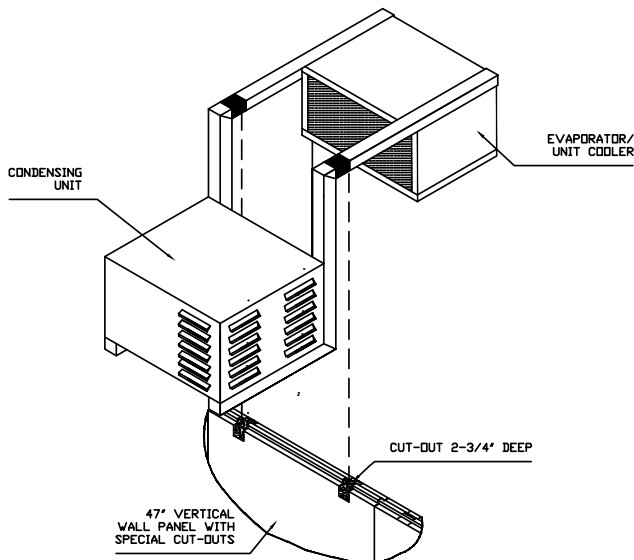
NOTE: PARTS AND LOCATIONS MAY VARY  
DEPENDING ON UNIT



### U.S. COOLER

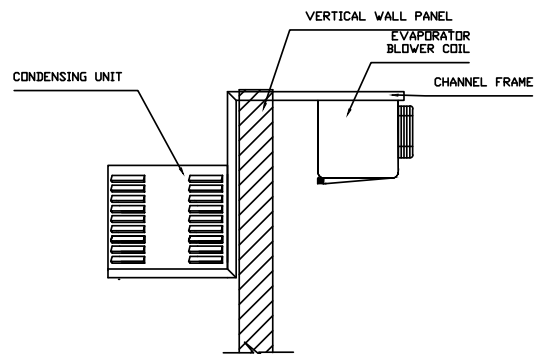
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## SADDLE MOUNT SELF-CONTAINED INSTALL DRAWING



### PERSPECTIVE VIEW

NOTE: 24" OF CLEARANCE FROM EXISTING WALL IS REQUIRED FOR ACCESS  
ELECTRICAL JUNCTION BOX AND COMPRESSOR CONTROLS.



### SECTION VIEW

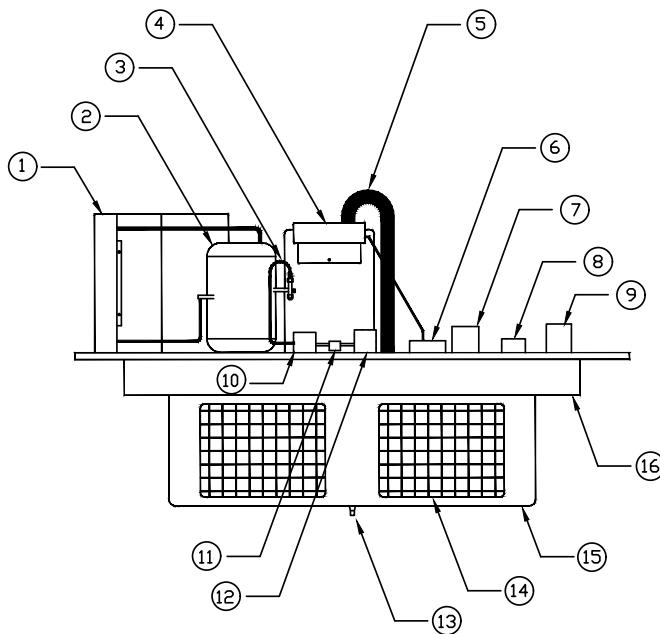
FIG. 1 INSTALLING SADDLE MOUNTED SYSTEMS



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## GENERAL ASSEMBLY FOR TOP MOUNT SELF-CONTAINED COOLER



PARTS LIST	
#	PART
1	CONDENSER
2	RECEIVER
3	LIQUID LINE
4	COMPRESSOR
5	SUCTION LINE
6	POWER INLET
7	PRESSURE CONTROL
8	TIMER - FRZ. ONLY
9	TEMPERATURE CONTROL
10	DRIER
11	SIGHT GLASS
12	SOLENOID VALVE-FRZ. ONLY
13	DRAIN OUTLET
14	FAN
15	EVAPORATOR/UNIT COOLER
16	PLUG

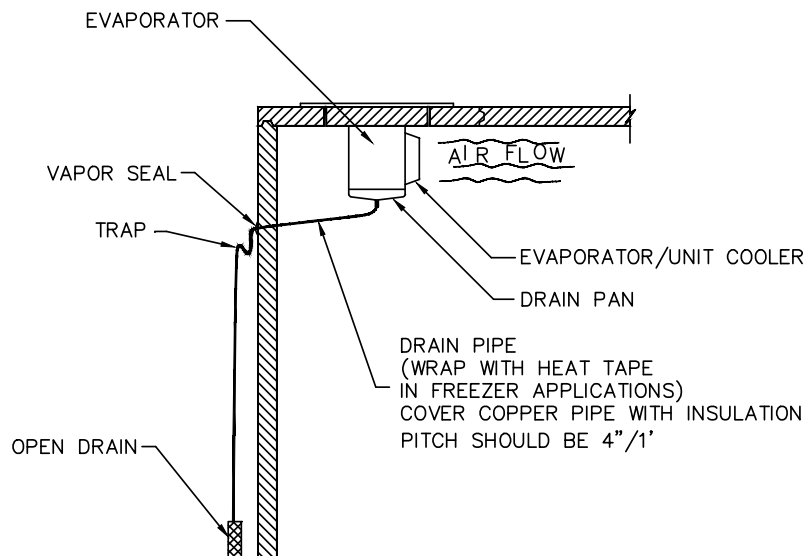
NOTE: PARTS AND LOCATIONS MAY VARY  
DEPENDING ON UNIT



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## INSTALL INSTRUCTIONS FOR EVAPORATOR DRAIN LINE (INSTRUCTIONS APPLY TO REMOTE AND SELF CONTAIN UNITS)

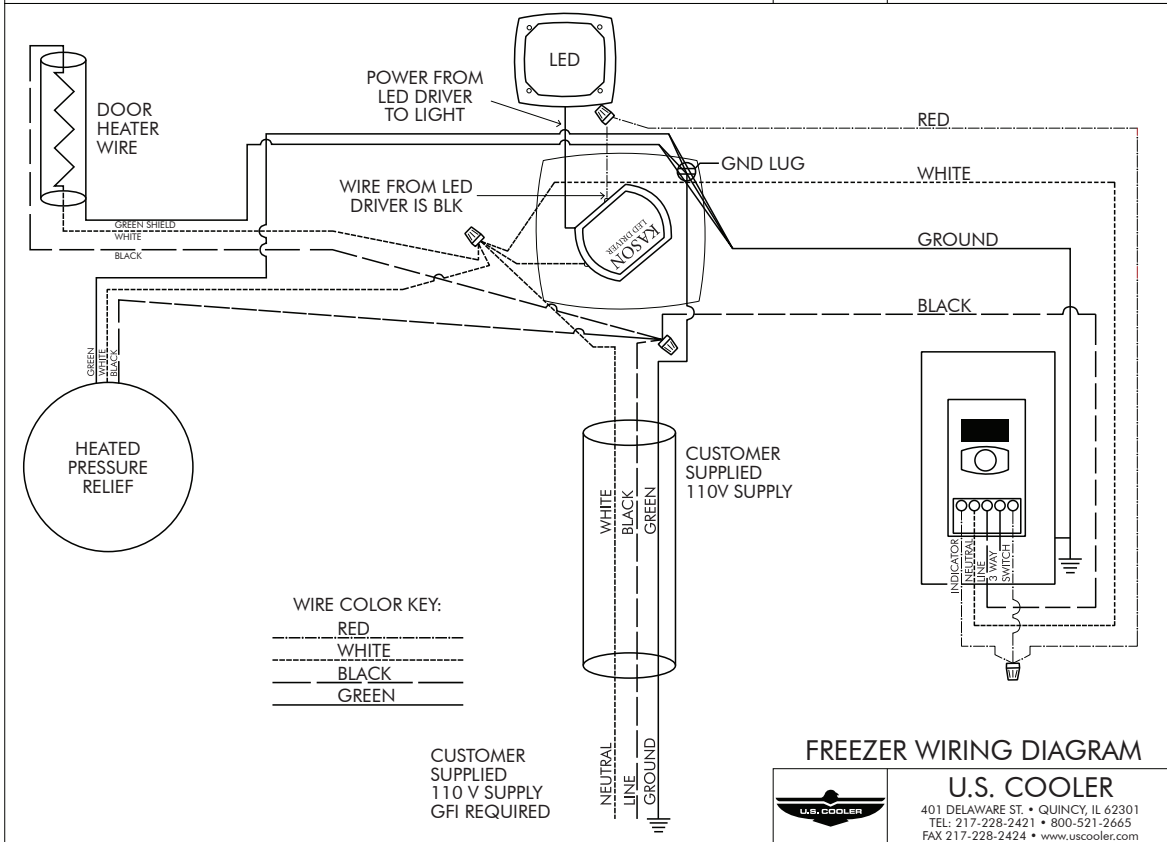
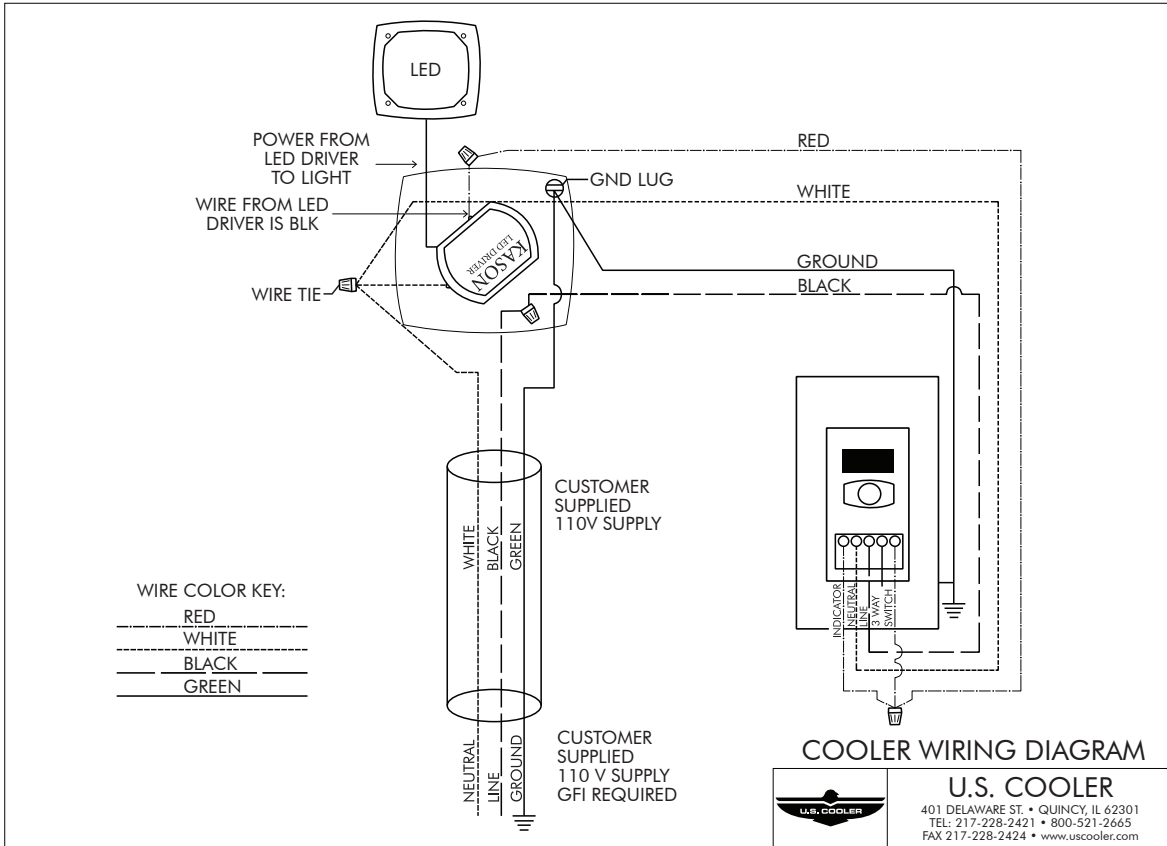


NOTE: DRAIN PIPE SIZES VARY  
SEE FACTORY SPECIFICATIONS



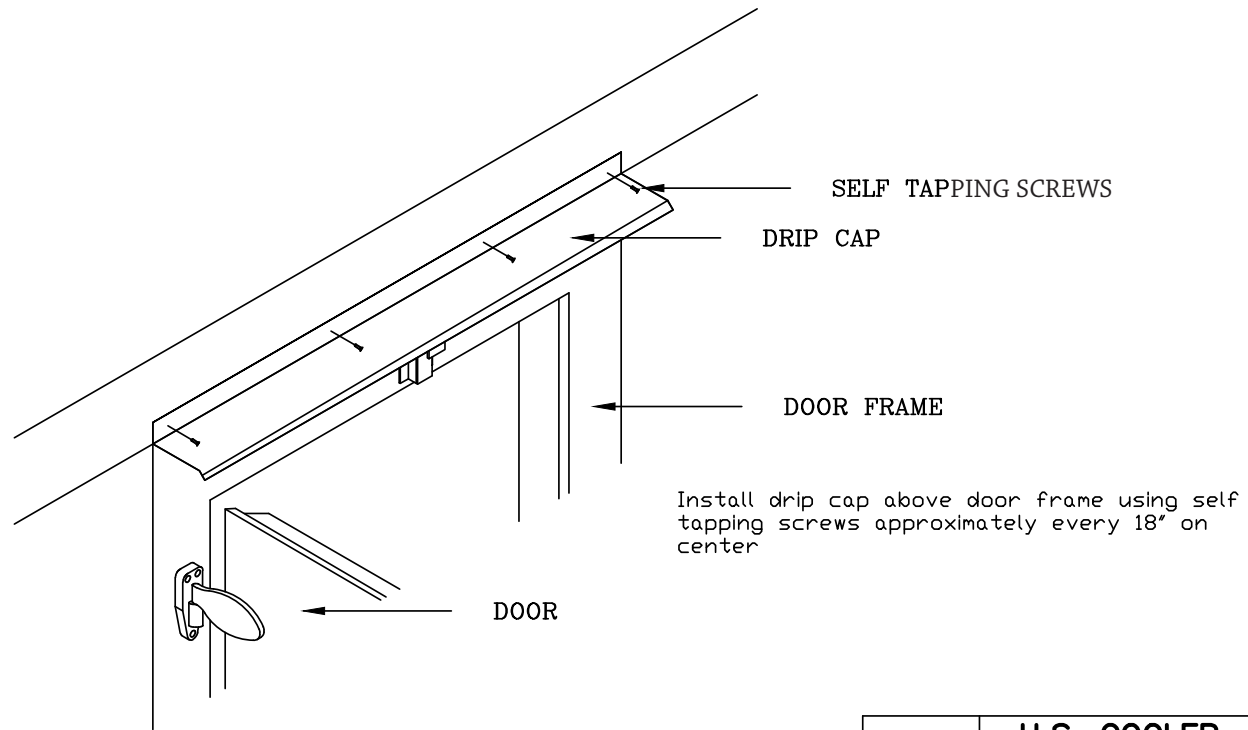
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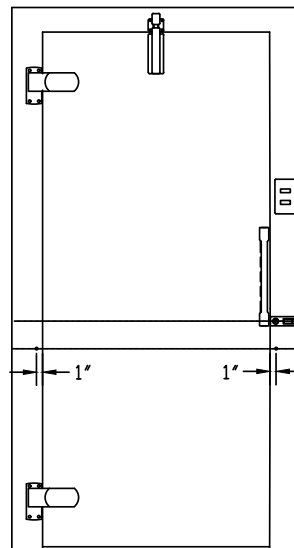
# Locking Bar & Drip Cap Drawings

## DRIP CAP INSTALLATION INSTRUCTIONS



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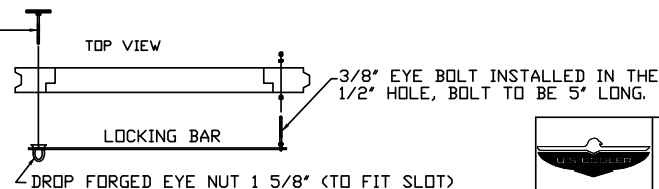
3/8" Diameter Hole Centered in Slot of Locking Bar  
 4 1/2" Below Centerline of Door Handle  
 Drilled After Hinge Side Hole Has Been Positioned

3/8" Diameter Hole 1" From Edge of Door Frame  
 4 1/2" Below Centerline of Door Handle  
 On Hinge Side of Door

### Locking bar installation:

Drill 3/8" hole on hinge side of door 4 1/2" below centerline of door handle 1" away from inside edge of door frame. Install turnbuckle end of locking bar through hole and secure with 3/8" nut and washer. Holding bar level mark location of center of locking bar slot. Drill 3/8" hole at center of locking bar slot and secure threaded loop side of locking bar with emergency release handle from the inside.

SAFTY RELEASE 4 1/4" LONG

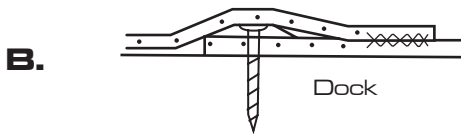
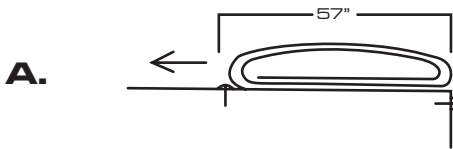


**U.S. COOLER**

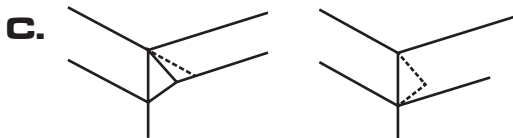
401 DELAWARE ST. • QUINCY, IL 62301  
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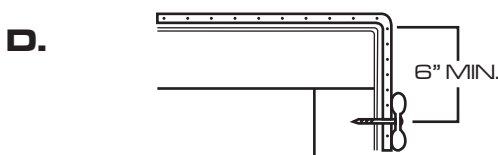
## FREE STANDING BUILDING INSTALLATION



FOLD CORNERS SO MEMBRANE IS TUCKED UNDER.



TERMINATION BAR FASTENED 6" ON CENTER.



### **STEP #1:**

Before installation, check the overall width & length of the membrane roof cap. It should be approximately one foot wider and longer than the walk-in. Ensure tabs are down when unrolling vinyl membrane.

### **STEP #2:**

Check the rooftop of the walk-in and remove any foreign matter. Seal all protruding rough edges such as screw heads, rivets, etc. with Duro-Last approved caulk. This will prevent any chance of penetrating or wearing a hole in the membrane roof cap.

### **STEP #3:**

Snap a chalk line approximately 54" from edge of walk-in (figure "A"). Fasten 3" tab using a 1 1/2" screw and a Duro-Last Poly Plate (figure "B"). Start securement 6" from edge and continue fastening 12" on center until the 3" tab is secured along entire tab.

### **STEP #4:**

Unroll roof cap membrane to next tab and fasten. When fastening remaining tabs, check often to make sure all slack in roof cap is pulled taut.

### **STEP #5:**

On completion of roof cap tabs, fold corners as shown (figure "C") and install flashing trim around perimeter of walk-in (figure "D"). Use 1 1/2" screws 6" spaced on center. Seal top edge of termination bar with Duro-Last approved caulk.

## INSTALLATION AGAINST A BUILDING

### **STEP #1:**

Repeat steps #1 and #2 as described above.

### **STEP #2:**

Snap chalk line approximately 60" from building wall (figure "E"). Fasten tab as described (figure "B"). upon completion of fastening the first tab, secure the reverse tab along base of wall checking often to make sure all slack in roof cap is pulled taut.

### **STEP #3:**

Fasten reverse minimum 8" high on wall using termination bar. Termination bar is to be secured to the building wall using 1 1/2" screws fastened 6" on center.

### **STEP #4:**

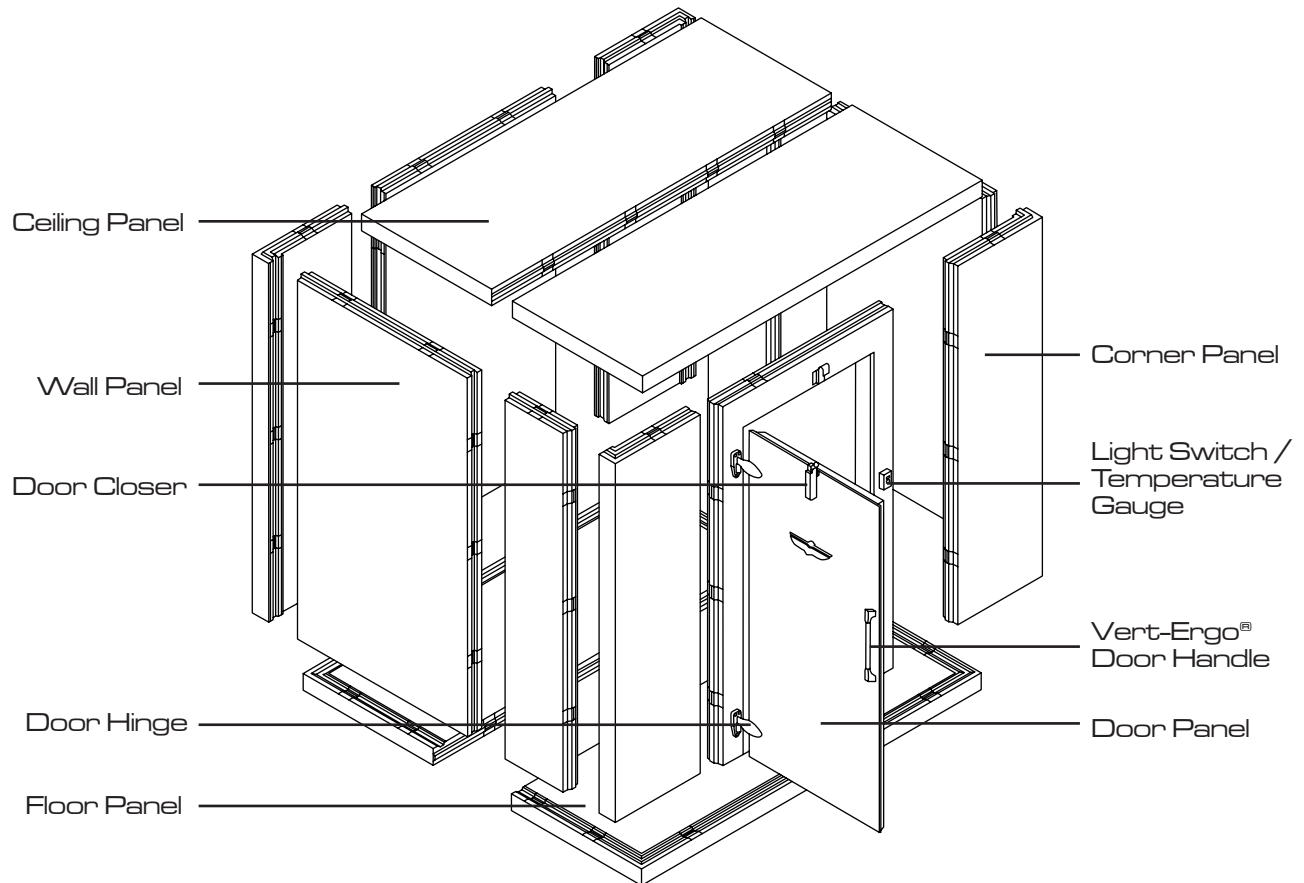
Repeat steps #4 and #5 as described above until roof cap is installed.







# Walk-in Cooler / Freezer Exploded View



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