

***MINI CEILING MOUNT
VERSION 2***

TECHNICIAN'S MANUAL

24V Thermostat Conversion Kit Option

Conforms to ANSI/UL Std 427

Certified to CAN/CSA Std C22.2 No. 120

We manufacture, test and certify 100% of our wine cooling units in the USA. By sourcing the best components and closely controlling our manufacturing processes, we can assure the highest-quality, lowest defect manufacturing rates in the industry.

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WARNING



The evaporator unit (fan coil unit) must be insulated using the insulation blanket provided in accordance with this manual. Refer to the insulation blanket installation instructions.

Failure to follow the instructions provided will result in a poor vapor barrier, water damage, rust, and system corrosion which will void the warranty on your unit.

The evaporator unit (fan coil unit) must be insulated using fiberglass insulation (R19 or higher) in addition to the provided insulation blanket. This includes the cavity between the ceiling joists. A warm attic environment will reduce the capacity of the cooling system, as the system will absorb heat from the attic in addition to the heat load from the wine cellar. This, in effect, will significantly reduce the cooling system's ability to cool the wine cellar.

Failure to properly insulate the evaporator unit may cause condensation to form on the surface of the housing and water damage to the surrounding structure, the cooling unit, and possibly the wine cellar.

To avoid these issues, install the insulation kit and insulate the surface of the evaporator unit that is located outside of the wine cellar using fiberglass insulation.

***Additional insulation is required!**

INTRODUCTION

Customer Service

Thank you for purchasing a WhisperKOOL cooling system. We strive to provide the highest-quality products and the best possible customer service. If you have any questions about your system, please call us at 1-800-343-9463 or visit WhisperKOOL.com.

Using the Manual

This manual is intended to assist in the proper maintenance of the cooling system. In order to ensure the longevity of your cooling unit, the equipment should be installed as outlined in the technician's manual. It is also vital to establish a proper care and maintenance schedule. Please read and review this manual carefully and keep it for future reference.

What is the WhisperKOOL Cooling System?

The WhisperKOOL cooling system is a specialized refrigeration system designed for one purpose only: to maintain the optimal temperature and humidity levels conducive to the proper storage and aging of fine wines. This system produces minimal in-cellar noise and has the most lenient exhaust requirements. An exterior housing is required for outdoor condensing unit installations.

How Does the Cooling System Work?

Similar to the air conditioning systems used for homes, the evaporator unit and condensing units are installed in separate locations and are connected by a refrigerant line set. The evaporator portion is commonly installed in the wine cellar, with the condensing unit is located either outside or in a remote indoor location that is ventilated. An exterior housing is required for outdoor condensing unit installations.

Temperature Setting

The system is designed to maintain a cellar temperature of 55°F as long as the ambient temperature does not exceed 110°F.

WARRANTY REGISTRATION

In order to activate the warranty of your system, the verification and operational documentation must be completed by the certified refrigeration technician installing your system and submitted via mail, fax, or e-mail.

Mail to:
WhisperKOOL
ATTN: Warranty Registration
1738 E. Alpine Avenue
Stockton, CA 95205-2505
USA

Fax to:
209-466-4606

Scan and email to:
warranty@whisperkool.com

QUICK START GUIDE*

Pump Down Cycle

WhisperKOOL's split systems operate on a pump down cycle different from traditional air conditioners. As such, there is no wiring between the condensing unit and evaporator unit. (However, if the system is equipped with a Cold Weather Start Kit, it will require two 24-volt wires running from the evaporator unit to the condensing unit.)

WhisperKOOL units utilize a solenoid valve on the liquid line and a low-pressure switch on the suction line. When the thermostat calls for cooling, the solenoid valve opens, permitting the flow of refrigerant. The low-pressure switch then signals the compressor to cycle on.

When the cellar reaches the desired temperature and the thermostat is satisfied, the solenoid will close, stopping the liquid refrigerant flow to the TXV valve. The compressor will continue to operate until most of the refrigerant on the low side boils off and is pumped through the compressor into the condenser coil and receiver. As the suction pressure falls below the pressure control setting, the low-pressure switch will signal the compressor to cycle off. Most of the refrigerant is now stored between the condensing unit and receiver.

Cold Weather Start Kit

If you are installing a unit equipped with the optional cold weather start kit, run two low-voltage wires from the evaporator unit to the condensing unit.



WARNING: Do not utilize a ground fault interrupter, as it will prevent the unit from drawing the necessary amperage to start the unit.



TXV Adjustments

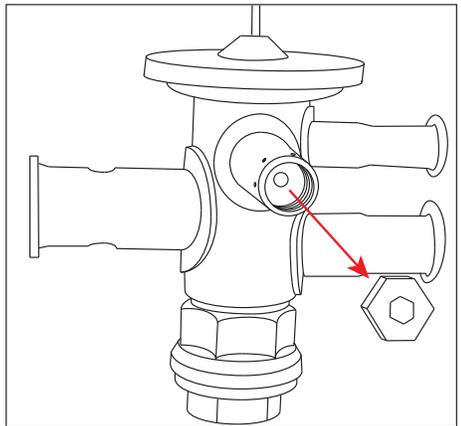
- A TXV adjustment may be necessary based on ambient temperatures in the cellar and at the condensing unit.
- Adjust the TXV until the superheat measured at the outlet of the evaporator coil is 8-12°F. (Total superheat should be 20-30°F.)
- Under normal operation, with the wine cellar at 55°F and the ambient temperature at 85°F, the low side pressure should be between 28-32 PSI and the high side should be between 170-180 PSI.

TXV

The TXV is preadjusted at the factory. If the superheat is not within 8-12°F, the TXV will need to be adjusted.

ADJUSTING THE TXV

Use a 5/32" hex key to remove the cap from the TXV superheat adjustment port. With the cap removed, insert the hex key into the superheat adjustment port. Increase superheat by turning the hex key clockwise. Decrease superheat by turning the hex key counterclockwise.



Liquid Line King Valve

This location is used to charge the system with liquid refrigerant and identify the high side pressure of the system.

Calculating Subcooling

To determine the subcooling of the system, calculate the difference between the **high side pressure of the system (converted to temperature)** and the **temperature of the liquid line**. The temperature of the liquid line will be taken at the outlet of the receiver.

*Saturation temp — liquid line temp

5-9°F SUBCOOLING REQUIRED FOR WARRANTY APPROVAL

*Further system operation information is available on page 30.

BEFORE YOU START

1-800-343-9463

1. **Inspect all components prior to installation.** If damage is found, please contact your distributor or WhisperKOOL Customer Service at 1-800-343-9463.
2. The evaporator unit and condensing unit **each require a dedicated 115V, 20-amp circuit.** Use a surge protector with the unit. **Do not use a GFI** (ground fault interrupter) line.
3. The evaporator unit and condensing unit require no communication lines unless the system is equipped with a Cold Weather Start Kit. If the system is equipped with a Cold Weather Start Kit, a low-voltage 18-2 thermostat wire will need to be run between the evaporator unit and the condensing unit.
4. A standard 18-5 thermostat wire must be run from the evaporator unit to the thermostat.
5. You are **REQUIRED** to **install a drain line** to remove condensation from the evaporator unit.
6. ***The warranty is not active until a warranty checklist has been received, reviewed, and approved.***
7. The system is intended **for use in properly designed and constructed wine cellars.** Hire a professional wine storage consultant with a valid contractor's license to build your wine cellar.
8. WhisperKOOL requires that all split systems be installed by a certified HVAC-R technician only. NATE or equivalent is recommended.

If you encounter a problem with your WhisperKOOL system, please refer to the Troubleshooting Guide. If you have any further questions or concerns, or need assistance, please contact WhisperKOOL's Customer Service at 1-800-343-9463. Please be sure all testing has been completed prior to contacting Customer Service. Please have your results ready for your representative.

RECEIVING & INSPECTING THE SYSTEM

- Use caution when lifting and check package for damage.
- Lift only at the designated hand-hold locations on the shipping container, or fully support the unit from underneath. A shipment may include one or more boxes containing accessories.
- Before opening the container, inspect the packaging for any obvious signs of damage or mishandling.
- Write any discrepancy or visual damage on the bill of lading before signing.
- Allow the condensing unit to sit for 24 hours prior to start-up. The condensing unit can be placed in the installation location, piped and evacuated during this time.

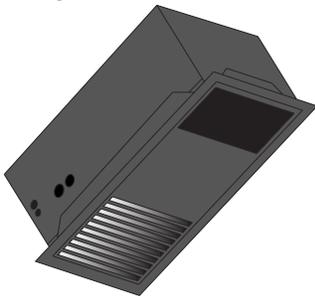
Note: WhisperKOOL units are manufactured in the USA and tested prior to shipment.

- Review the packing slip to verify contents.
- Check the model number to ensure it is correct.
- Check that all factory options ordered are listed.

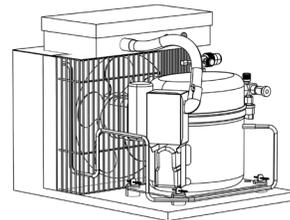
If any items listed on the packing slip do not match your order information, contact WhisperKOOL Customer Service immediately.

Check all shipped boxes for the following contents:

Evaporator Unit Box



Condensing Unit Box



(1) Mini Ceiling Mount evaporator unit

(1) Mini Ceiling Mount condensing unit

Documentation bag:

- Mini Ceiling Mount Version 2 owner's manual
- Mini Ceiling Mount Version 2 technician's manual
- R-134a split system warranty checklist

Accessory kit bag:

- Evaporator installation hardware bag

Evaporator installation hardware bag:

- (12) 2½" Phillips wood screws
- (12) #8 ⅜" Phillips pan-head screws
- (1) Bypass plug
- (1) ¼" barbed coupling
- (2) 3" strip of cork tape

Mini Ceiling Mount insulation blanket bag:

- Mini Ceiling Mount insulation blanket

Condensing unit accessory kit:

- (1) Filter drier
- (1) Sight glass

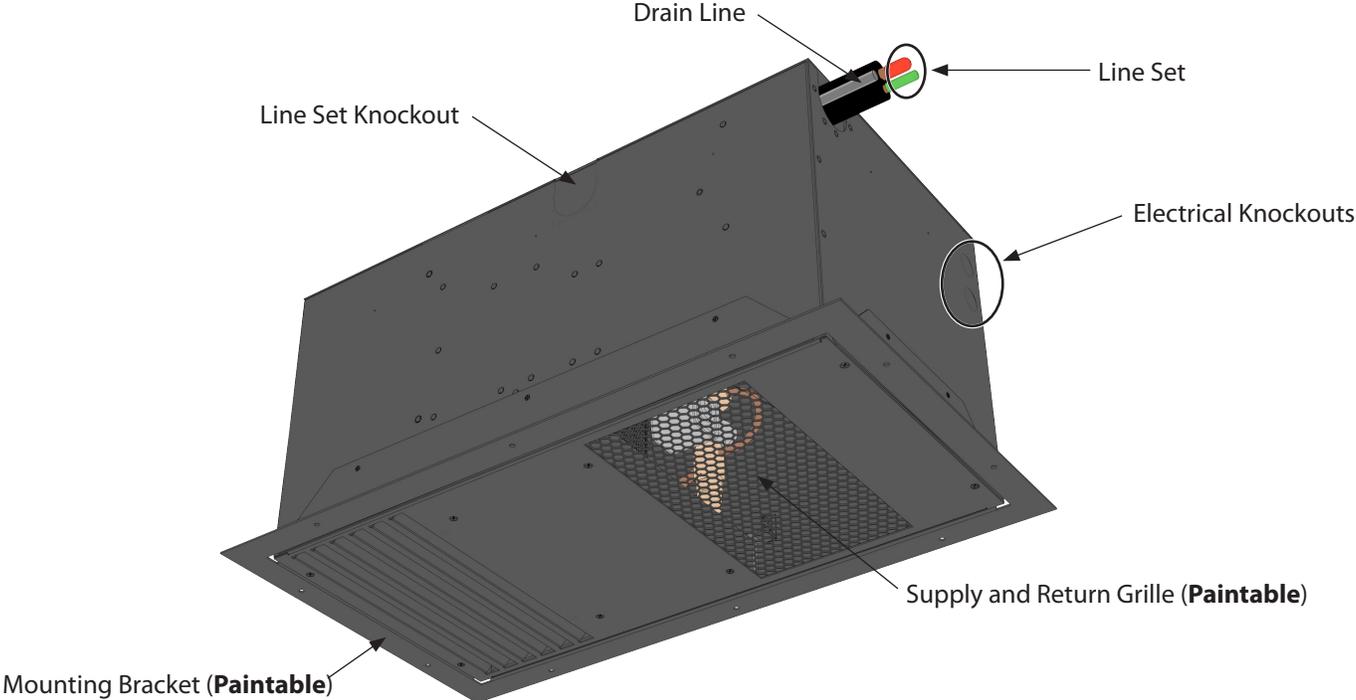
Single-piece mounting bracket

Please leave the unit in its original box until you are ready for installation. This will allow you to move the product safely without damaging it. When you are ready to remove the product from the box, refer to the installation instructions.

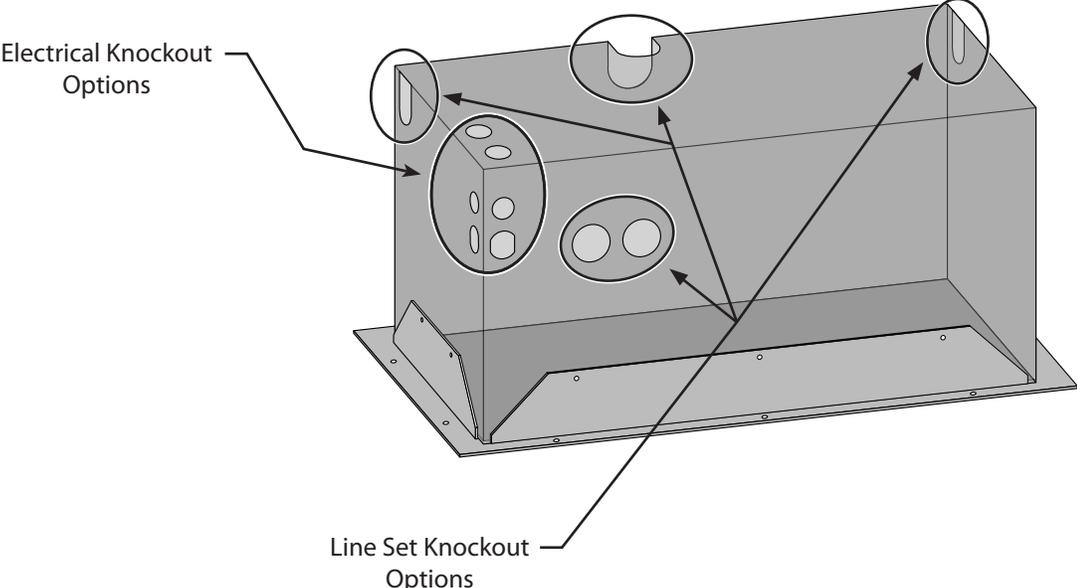
TIP: Save your box and all packaging materials. They provide the only safe means of transporting/shipping the unit.

QUICK REFERENCE GUIDE

Bottom View

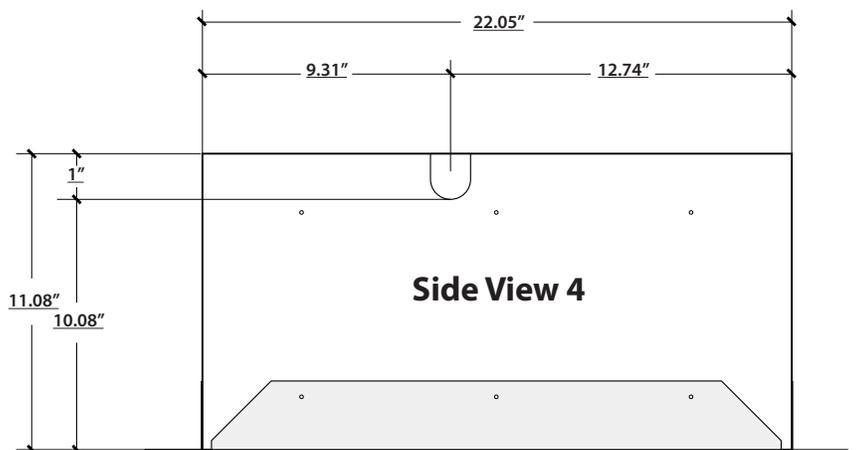
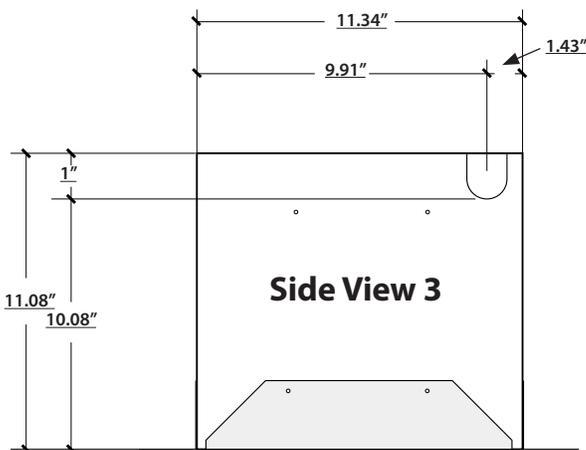
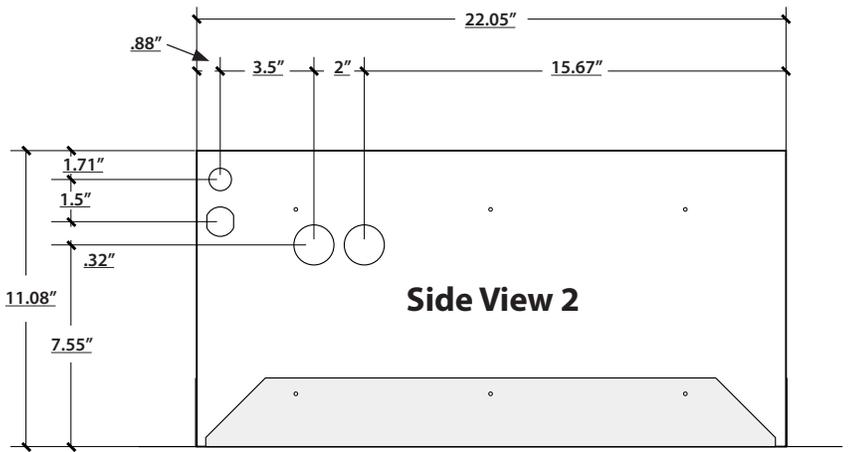
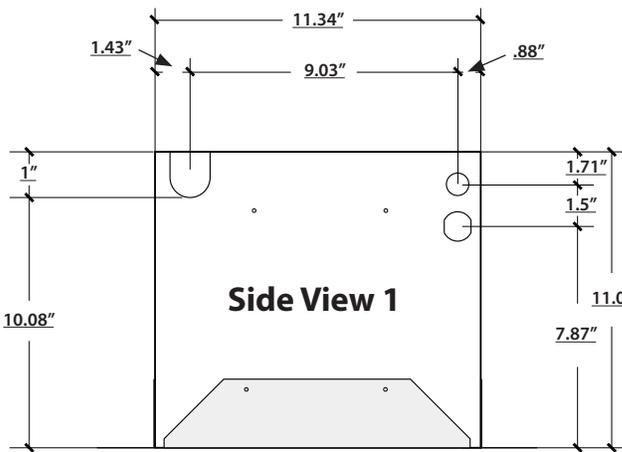
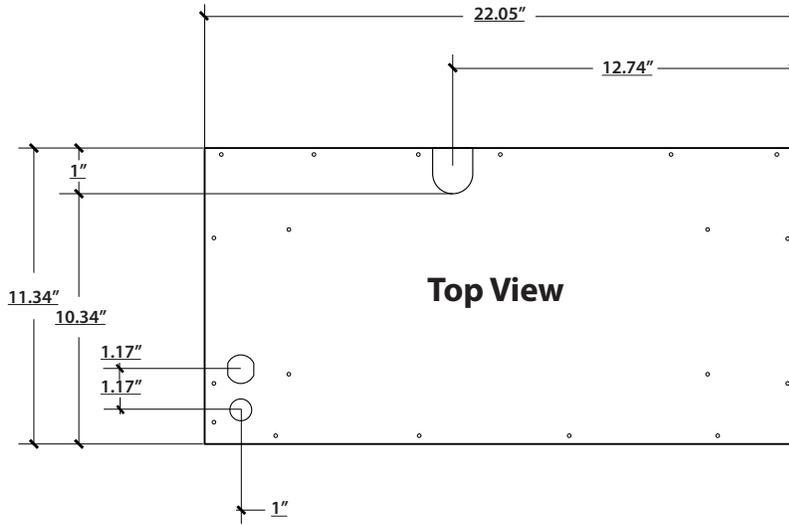


Top View

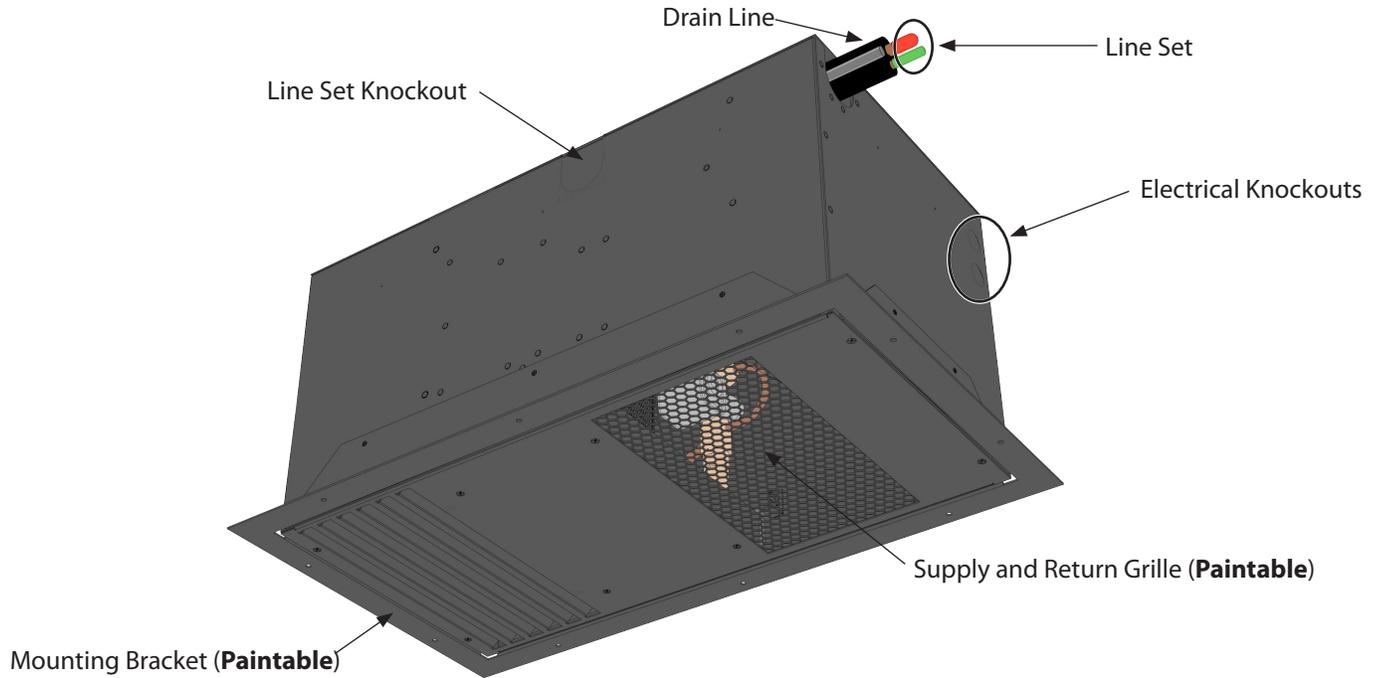


Note: The unit comes in black. The mounting bracket and front grille are paintable, enabling you to match your desired color.

*Whisper***KOOL™**
KNOCKOUT LOCATIONS



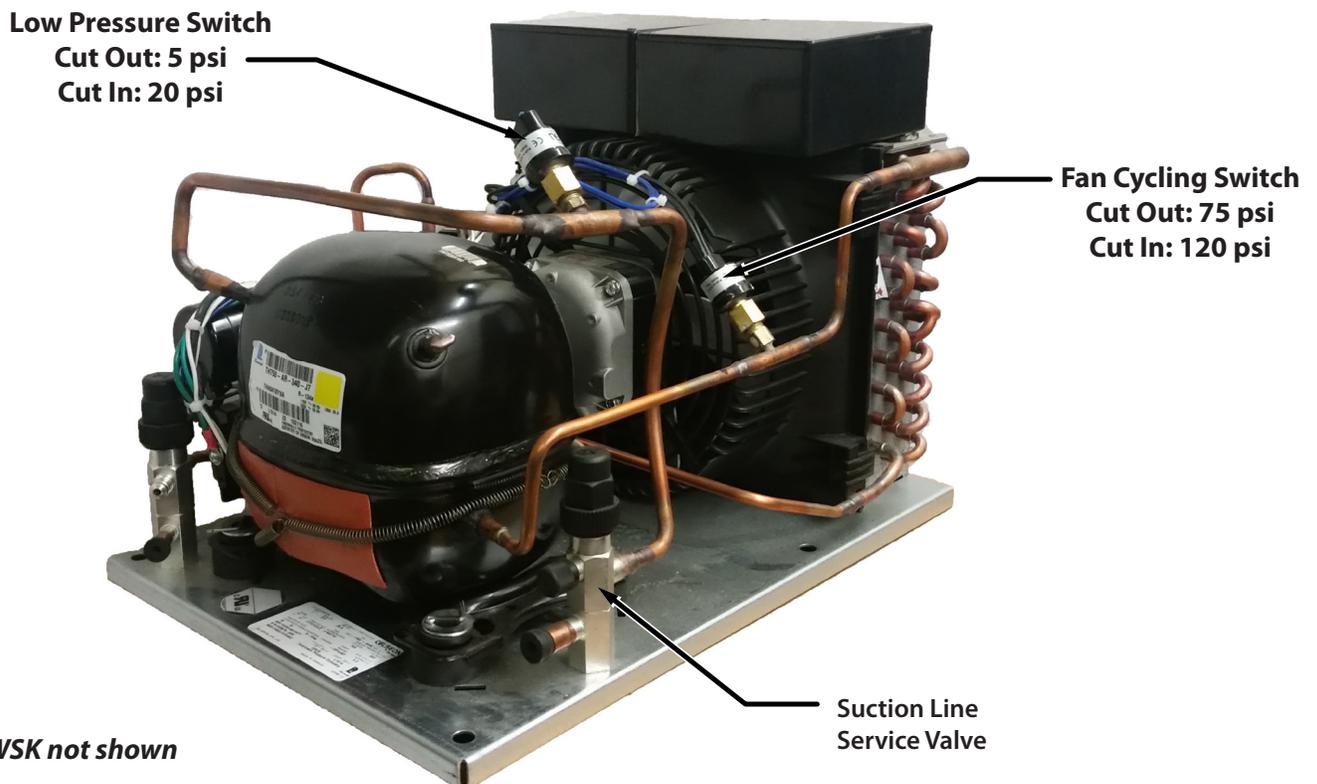
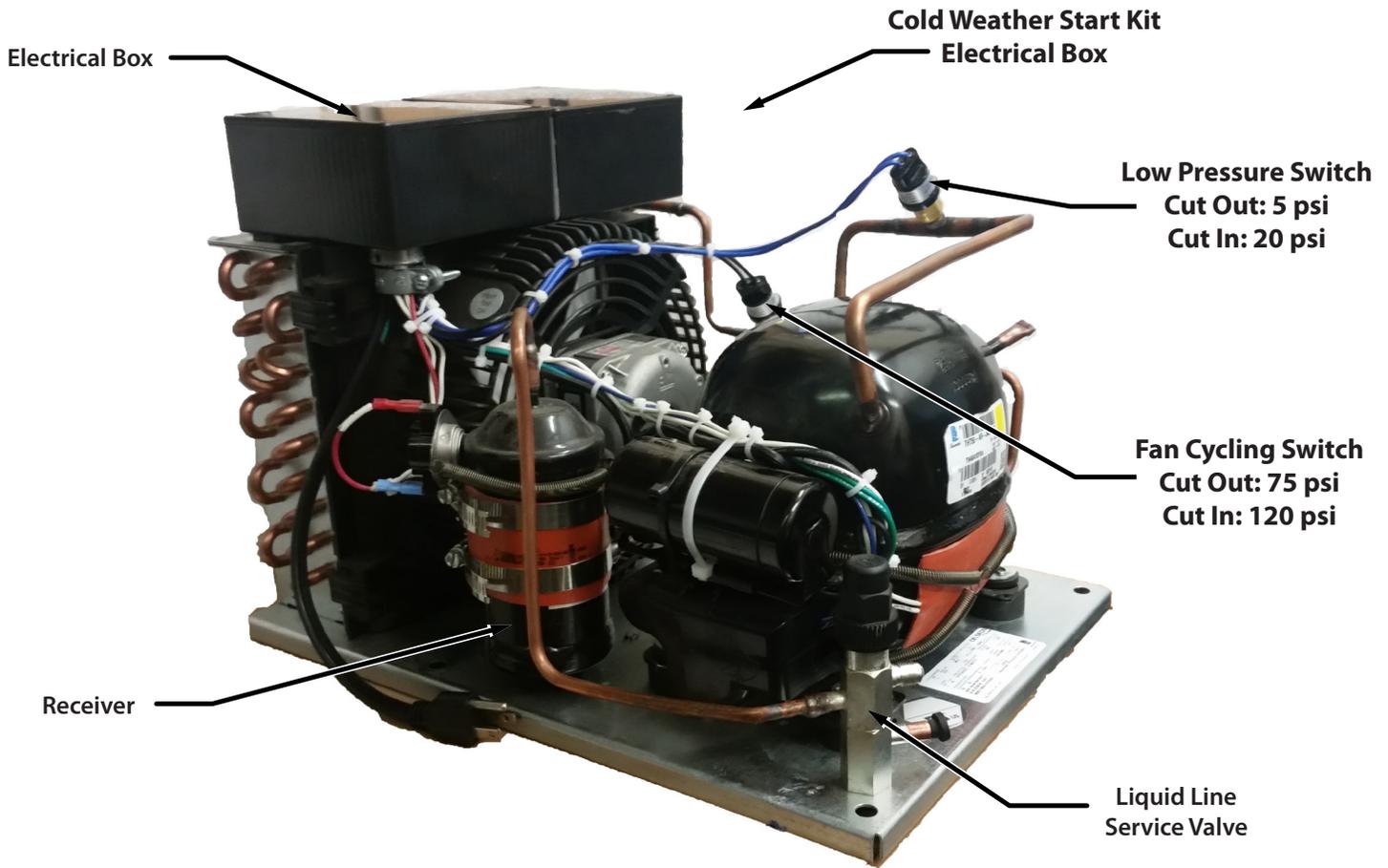
QUICK REFERENCE GUIDE



MINI CEILING MOUNT SPECIFICATIONS

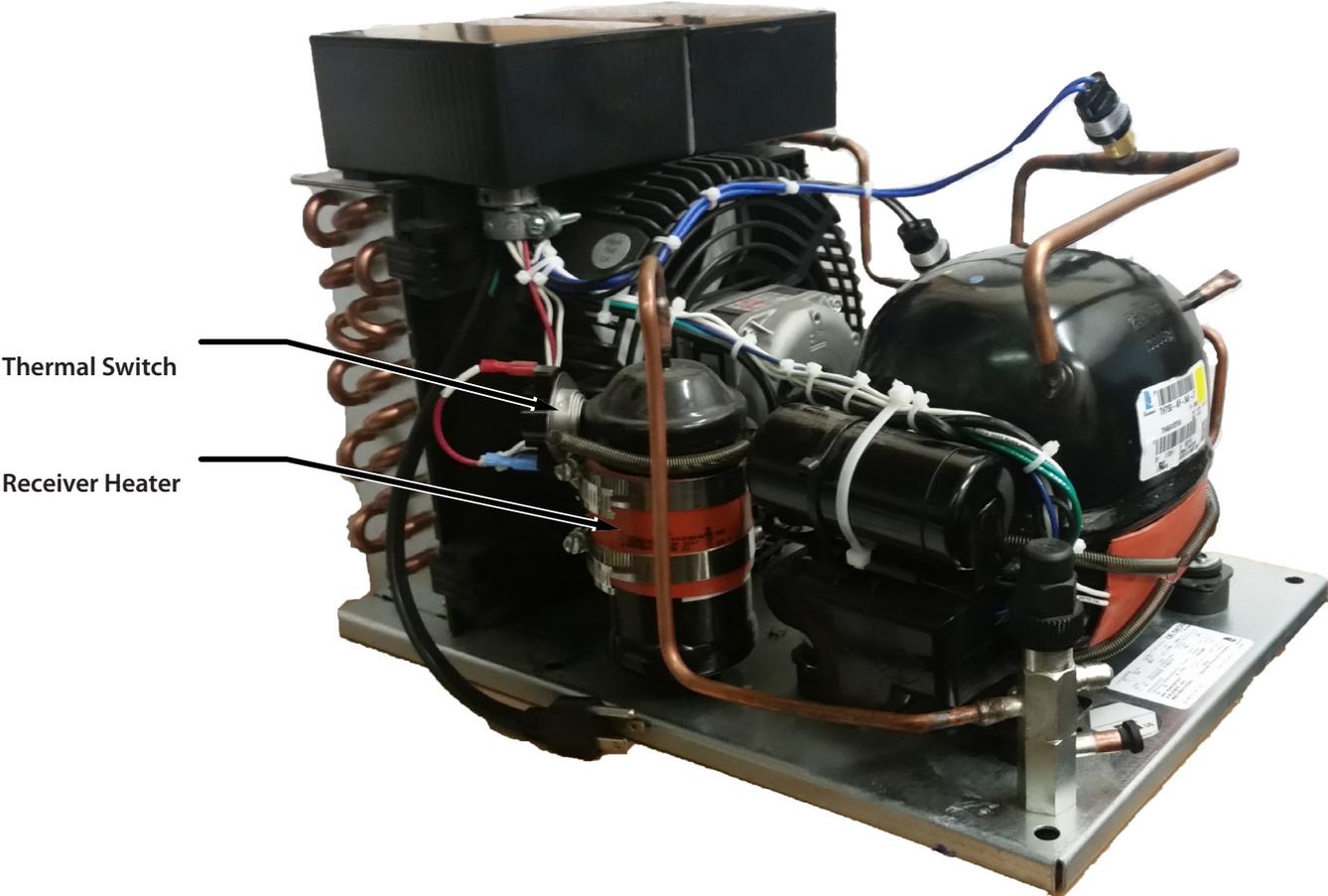
Model	Mini Evaporator (Fan Coil Unit)	Mini Condenser (Air-Cooled Condensing Unit)
Cellar Size (cu. ft.)	500	
Dimensions	11.08"H x 11.34"W x 22.05"D (13.84"H x 24.55"D w/mounting bracket)	10"H x 11.5"W x 16.0"D
BTUh with 90° air entering the condenser coil	1730	
CFM	107	190
Refrigerant	R-134a	
Condensing Unit HP	1/6	
Voltage Rating	115V (15-amp dedicated circuit required)	
Weight (lbs)	40.6	38.8
AMPS (Starting/Running)	2/1	13.8/3.44
dBa	52	65
Line Set	Suction line: 3/8" OD; liquid line: 1/4" OD	
Drain Line	1/4" ID clear plastic tubing	
Installation	Evaporator unit is installed through the cellar ceiling. Condensing unit is installed up to 100 line ft. from the evaporator unit.	
Thermostat	Aftermarket (24V thermostat not included)	
Temp. Delta	55°F max temperature differential between the cellar and condensing unit intake temperature	
Warranty	Two-year limited warranty (parts and labor)	

MINI CEILING MOUNT CONDENSING UNIT QUICK VIEW*

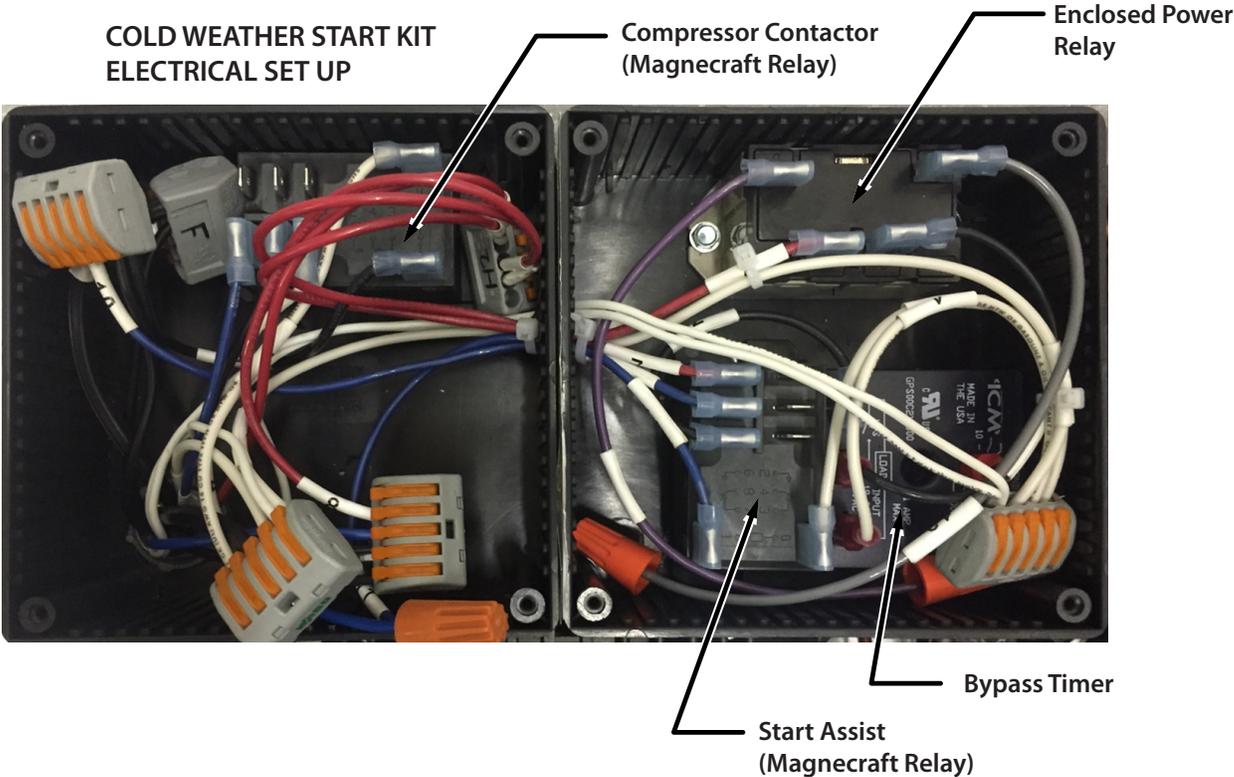


*CWSK not shown

COLD WEATHER START KIT CONDENSING UNIT QUICK VIEW



COLD WEATHER START KIT ELECTRICAL SET UP



SPLIT SYSTEM CHECKLIST

In order to activate the warranty for this product, the information here must be complete and accurate. Any incorrect or omitted information will result in a return trip by the installing technician at their cost.

DATA RECORDINGS

Note: All readings need to be taken while the compressor is running.

Line Set Information

- A. Line set length:
- B. Suction line OD:
- C. Liquid Line OD:

Charging the System

- A. Fill system until bubbles dissipate from sight glass.
NOTE: Be careful not to overcharge the system.

Temperature Differential at the Evaporator

- A. Measure return air and supply air temperatures at the evaporator to ensure adequate cooling of air in cellar.

Sub Cooling

- A. Measure head pressure at liquid line king valve. Convert pressure to temp using conversion chart.
- B. Temp of liquid line at king valve:
- C. Complete sub cooling calculation: $A - B =$

Superheat

- A. Measure suction pressure at the suction line service valve, convert to temp.
- B. Measure the temperature of the suction line at the outlet of the evaporator.
- C. Complete superheat calculation: $A - B =$
NOTE: There may be a need to adjust the TXV to get the correct superheat levels.

Compressor Temperature

- A. Measure temperature at bottom of compressor.
NOTE: Cool temp may indicate liquid in the compressor.

Voltage and Amp Draw

- A. Measure voltage to compressor and amp draw.

Condensation Drain Test

- A. Pour water into the drain pan to assure it drains properly.

24V WIRING CONNECTIONS (EVAPORATOR UNIT)

The 24V Thermostat Conversion Kit requires a standard 18-5 thermostat wire to be run from the evaporator unit to the thermostat. The white wire will not be used, as there is no heating function. (Some thermostats need a common wire and some do not; the unit is equipped with a common wire if needed.)

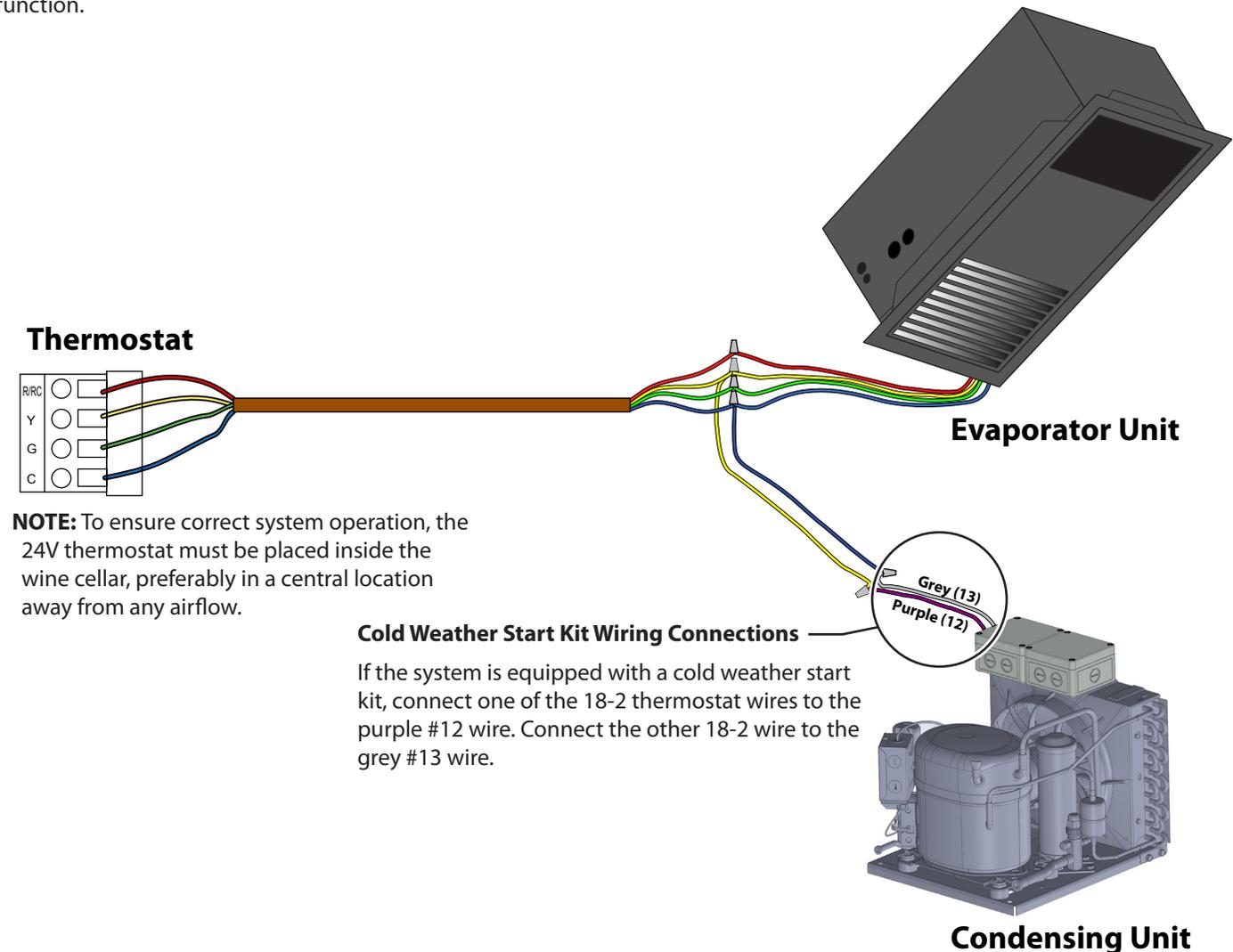
If the system is equipped with the Cold Weather Start Kit a standard 18-2 thermostat wire must be run between the evaporator unit and the condensing unit.

24V Wiring Connections (Evaporator)

1. Route a standard 18-5 thermostat wire into the evaporator unit.
2. Locate the wire thermostat connection cable inside of the evaporator unit.
3. Connect the wires according to color (yellow to yellow, red to red, green to green, and blue to blue).
4. If the system is equipped with a Cold Weather Start Kit, connect one wire from the 18-2 thermostat wire to the low-voltage yellow wires (2). Then connect the other 18-2 wire to the blue low-voltage wires (2).

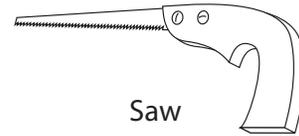
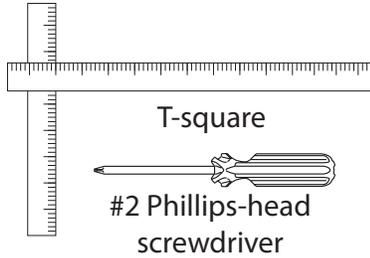
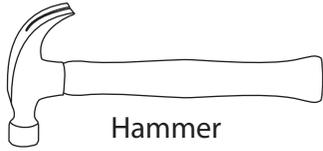
Thermostat Wiring Connections

Follow the thermostat installation instructions. **NOTE:** The white wire will not be used, as there is no heating function.

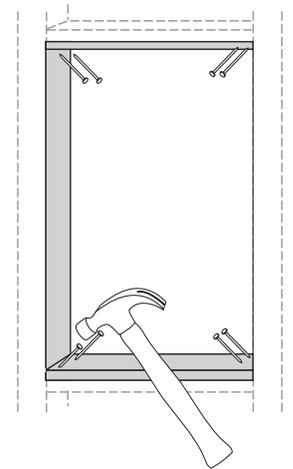
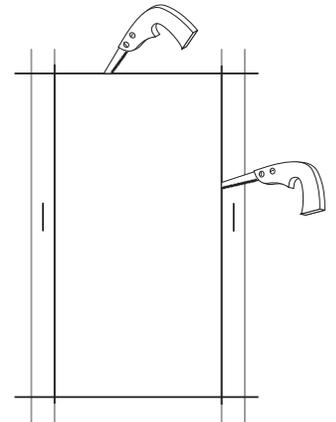
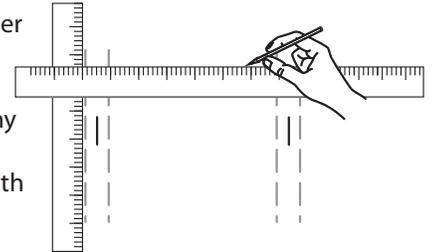


SELECTING MOUNTING OPTION

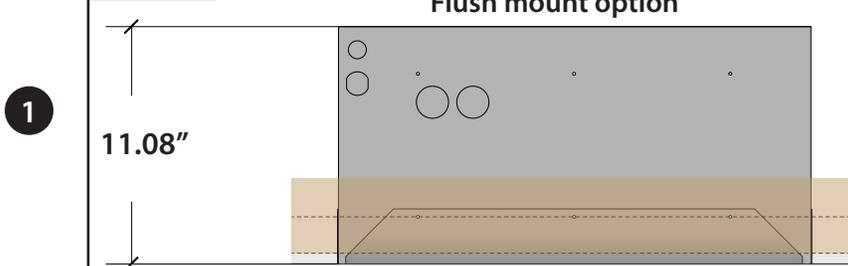
Minimum Tools Needed:



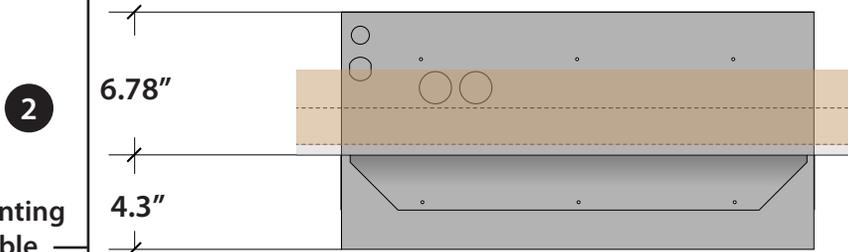
1. Locate the desired installation location. Using a stud finder, locate the ceiling joists on either side of the center point. Cut and frame an opening in the ceiling measuring 12" x 22.75". Make sure the framing is sufficient to support the weight of the cooling unit. Use only the mounting locations provided. These locations ensure that the installer will not drill into any vital components within the system.
2. Determine which orientation the evaporator unit will be installed in (inside the cellar or with attic access). Mounting options are listed below:



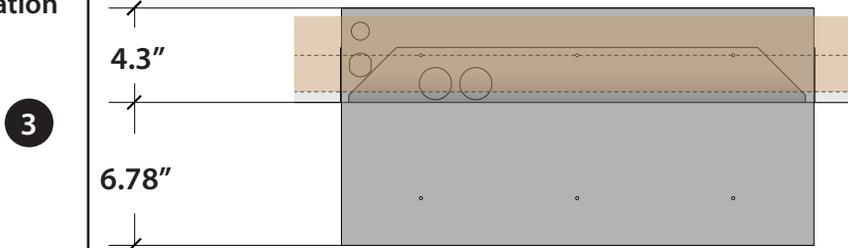
Flush mount option



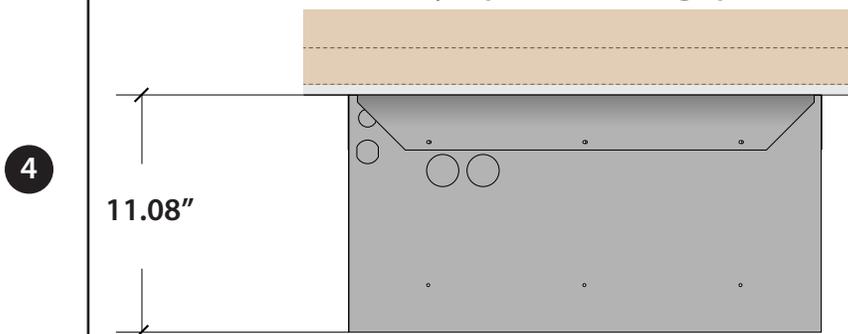
Partially recessed mounting option



Choose a mounting option suitable for the installation location.



Fully exposed mounting option

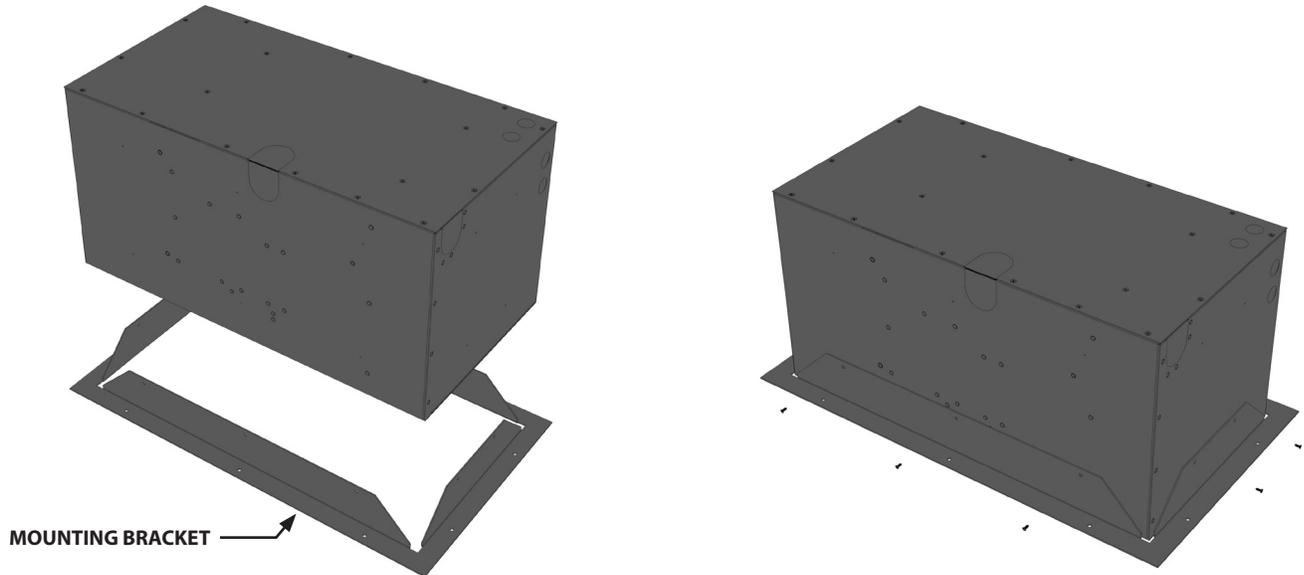


MOUNTING THE EVAPORATOR UNIT

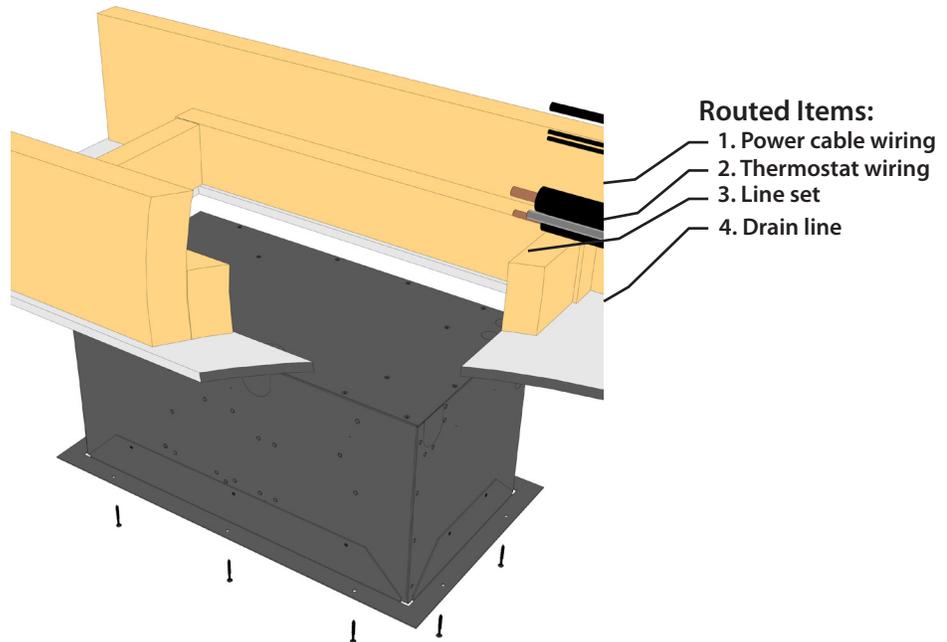
NOTE: If installing the unit without attic access, perform steps 5-21 prior to steps 3-4.

- Secure the mounting bracket to the unit using the twelve (12) supplied $\frac{3}{8}$ " Phillips pan-head screws.

NOTE: You are **REQUIRED** to use only the mounting locations provided. These locations ensure that the installer will not drill into any copper or electrical wiring within the system.

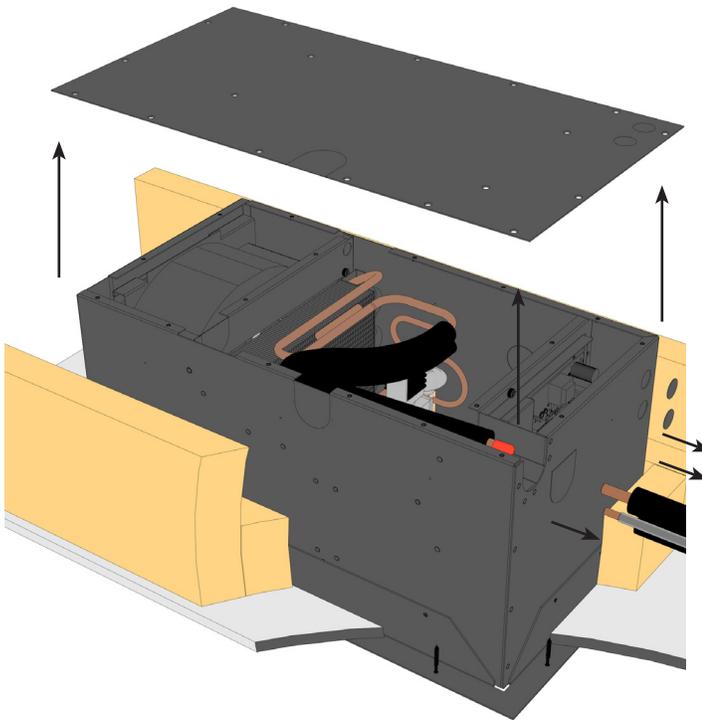
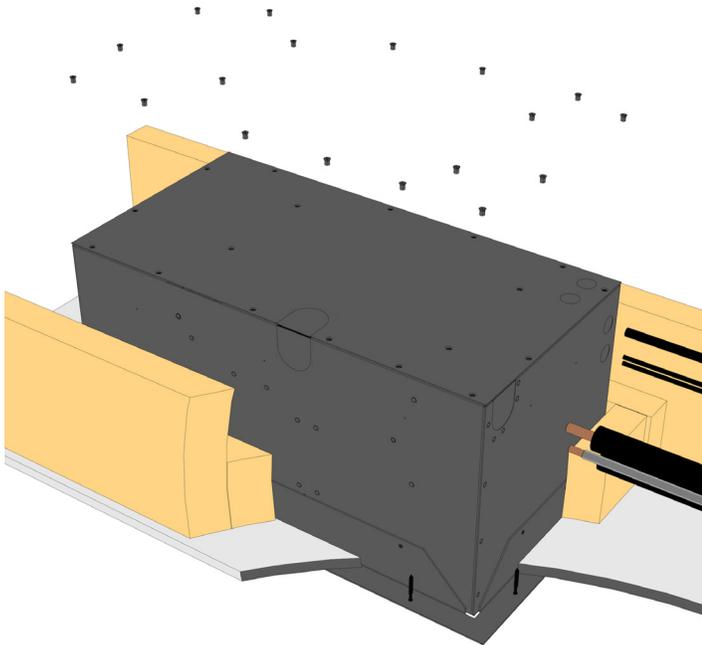


- Secure the unit's mounting bracket to the opening using the twelve (12) supplied 2½" Phillips-head screws.

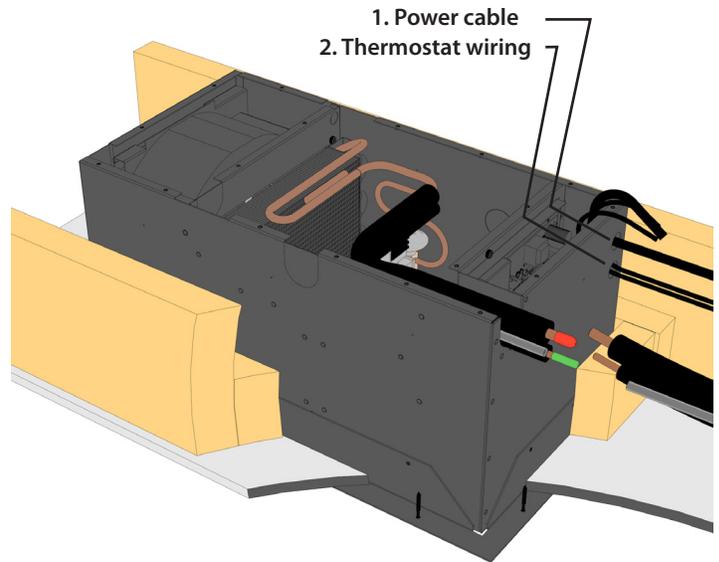


EVAPORATOR UNIT PREPARATION

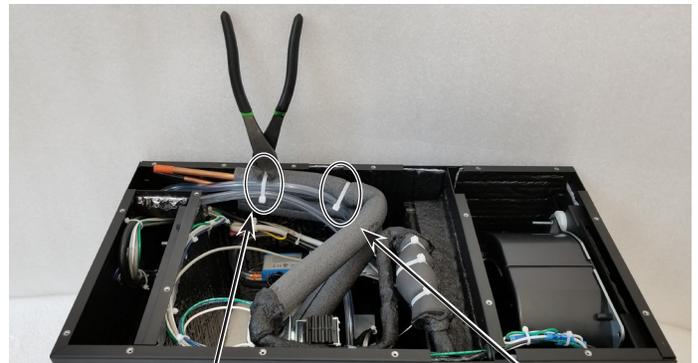
5. Unscrew the sixteen (16) screws and remove the top access panel.



6. Remove the knockout(s) that you will be using to route the line set, power wires, and drain line.



7. Locate the white zip tie securing the drain line tube to the suction line and cut it. Direct the end of the drain line away from refrigerant lines.



CUT THIS ZIP TIE

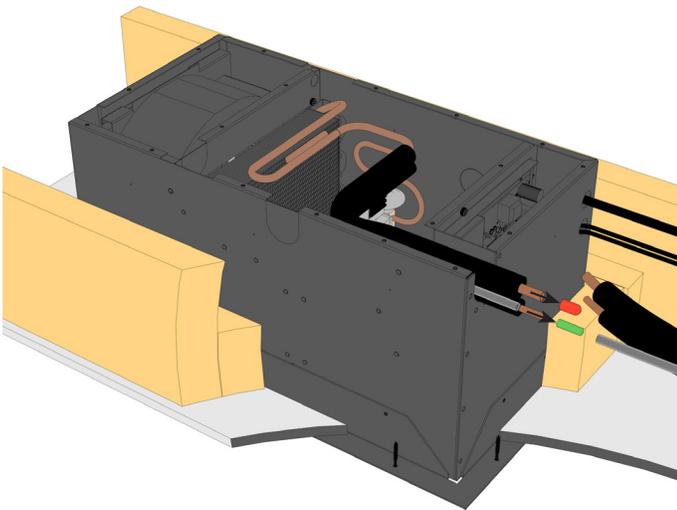
DO NOT CUT

8. Pull tubing out of housing to allow room for brazing. Make sure tubing protrudes out of the housing and the drain is moved out of the way as shown.

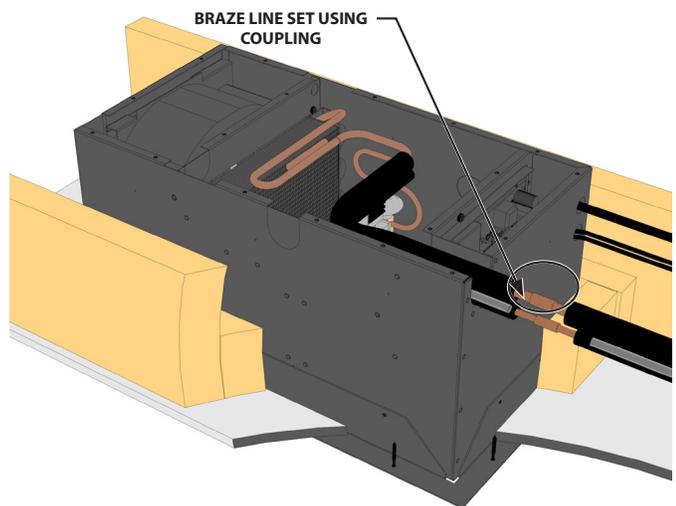


NOTE: If installing the unit with attic access, perform steps 5-8 after the unit has been mounted.

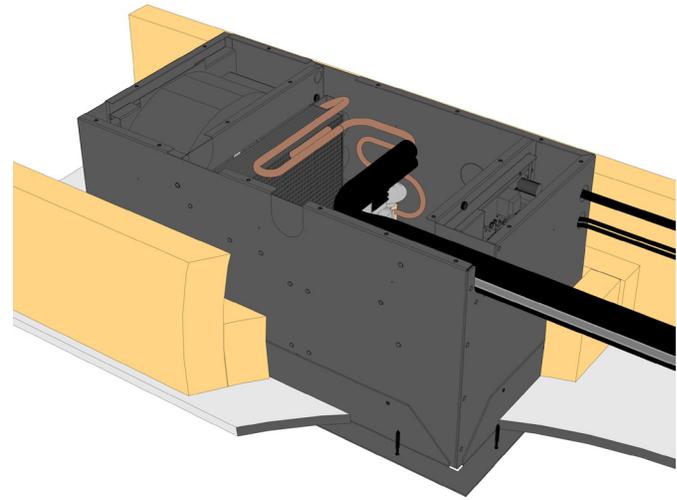
INSTALLING THE EVAPORATOR UNIT



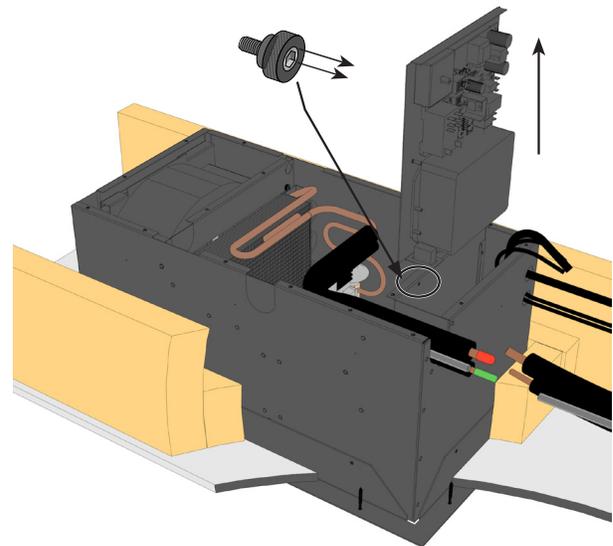
9. Remove the protective caps from the liquid and suction line connection tubes (as shown above).
10. Using copper tubing per line set sizing chart, route the liquid and suction lines to the tubing coming from the unit.
11. Place a wet rag around the suction and liquid lines approximately 4" from the braze joints. This will prevent excess heat from damaging components.
12. To prevent oxidation, purge the system with nitrogen.



13. Braze the copper tubing to the connections on the evaporator unit.



14. Insulate the suction line using Armaflex or similar insulation.
15. Route the drain line out of the evaporator unit with the line set. Connect using the supplied 1/4" barb coupling.
16. Route the power wire into the unit.



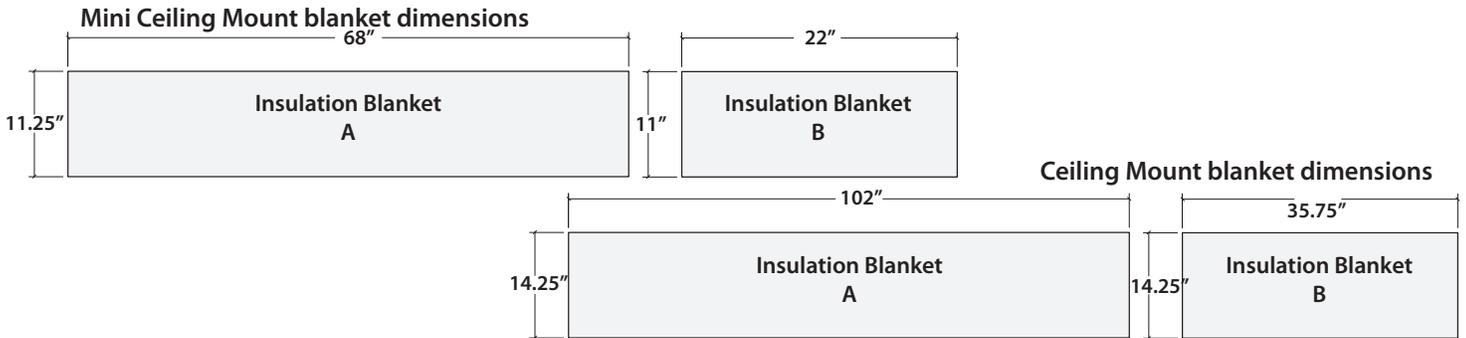
17. Slide the electrical panel up and out of the unit.

18. Connect the green wire to the green wire, the black wire to the black wire, and the white wire to the white wire.
19. Slide the electrical panel back down into the unit.
20. Reinstall the top access panel and fasten the sixteen (16) screws into place.
21. Install the supplied three-inch pieces of cork tape around the power wires.

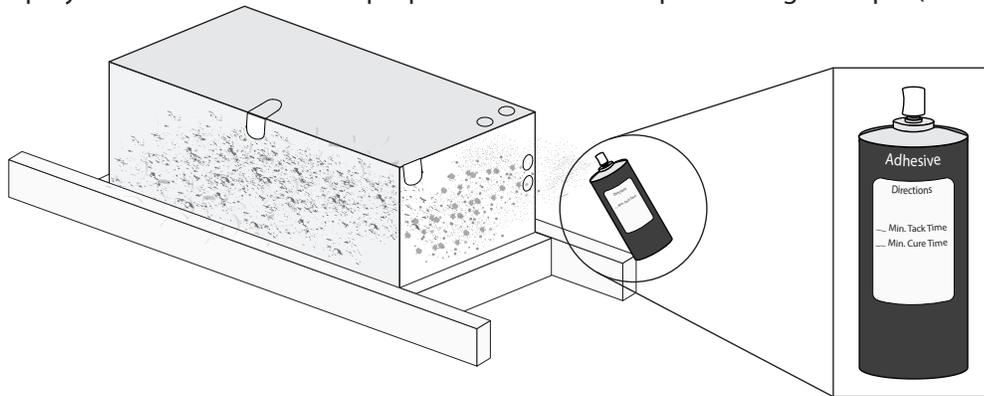
NOTE: The unit comes in black. The mounting bracket and front grille are paintable, enabling you to match your desired color.

INSULATION BLANKET INSTALLATION

*Tools required: spray adhesive, utility knife, cork tape, foil tape

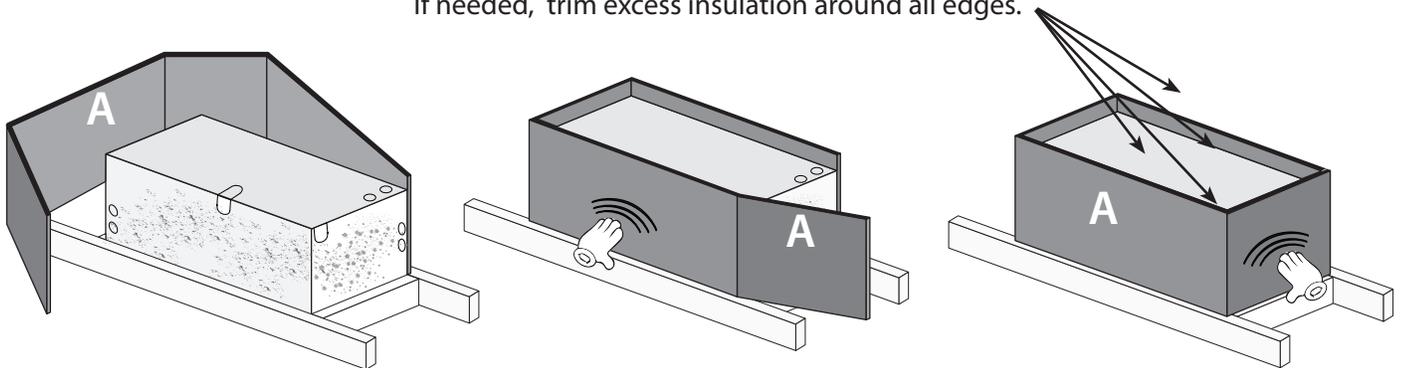


1. Once mounting bracket location has been selected and installed, proceed to the insulation blanket installation.
2. Spray adhesive onto the sides of the portions of the evaporator unit and mounting bracket which protrude into the attic. See spray adhesive directions for proper tack time before proceeding to step 3 (see illustration).

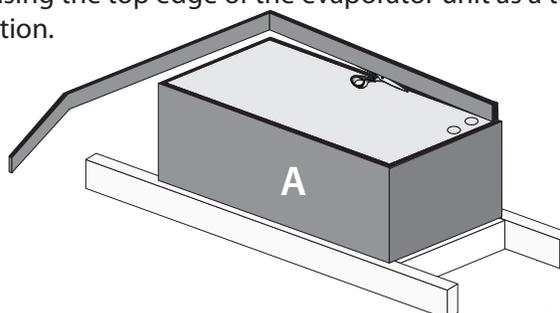


3. Wrap insulation piece (A) around the sides of the evaporator unit. Make sure the bottom edge of the insulation is flush with the top edge of the mounting bracket (see illustration).

If needed, trim excess insulation around all edges.

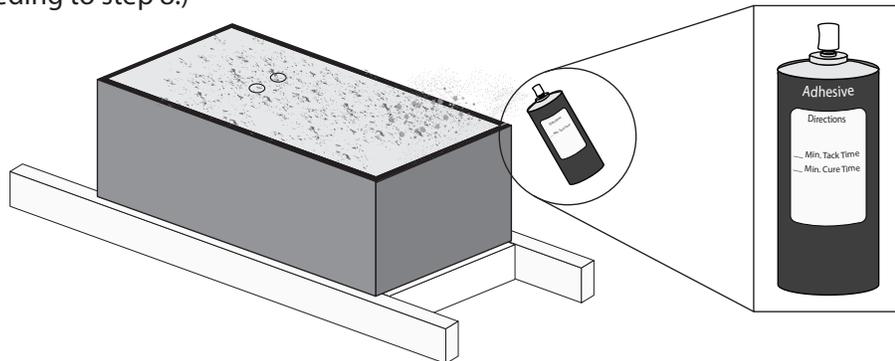


4. Set insulation in place by pressing firmly on all surfaces of the insulation that come in contact with the sides of the evaporator unit (see illustration).
5. Using a utility knife, cut holes in the insulation for the line set, wiring, and drain line if needed.
6. If necessary, cut the insulation to size using the top edge of the evaporator unit as a template. Remove excess insulation. Proceed to piece (B) installation.

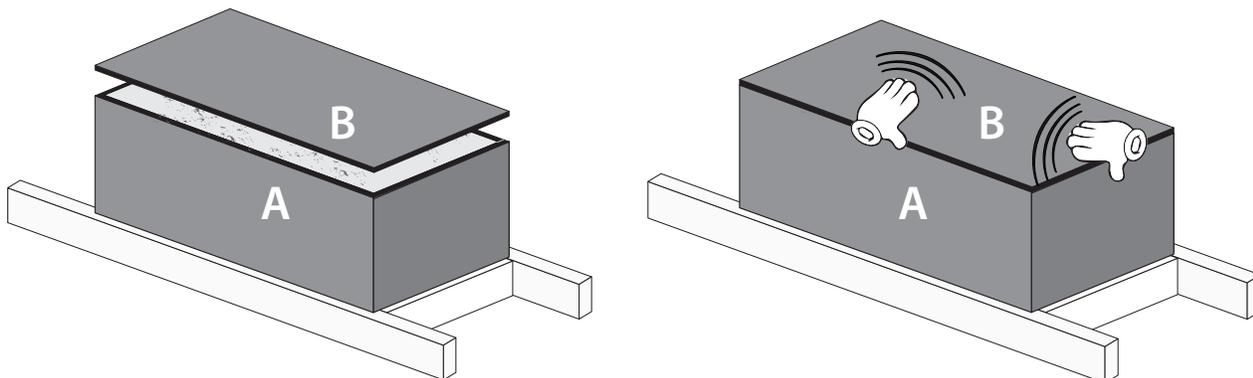


INSULATION BLANKET INSTALLATION, CONTINUED

1. Spray the top of the evaporator unit with spray adhesive. (See spray adhesive directions for proper tack time before proceeding to step 8.)

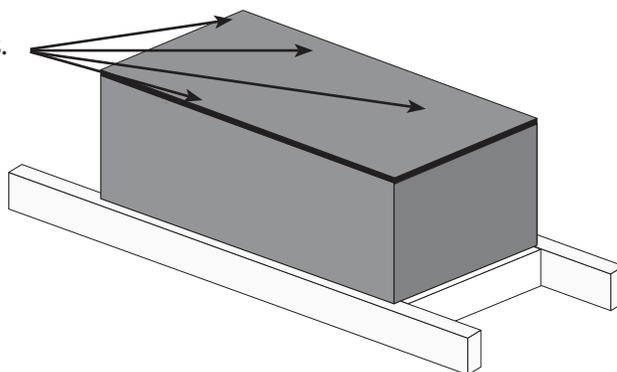


2. Set piece (B) in place by pressing firmly on all surfaces of the insulation that come in contact with the top of the evaporator unit (see illustration).



3. Using a utility knife, cut holes in the insulation for line set, wiring, and drain line if needed.

If needed, trim excess insulation around all edges.



4. Once insulation is installed, apply foil tape to all seams, covering them completely.
5. Inspect insulation for damage/defects. If damaged, repair with foil tape.
6. Apply cork tape or equivalent to areas where the line set, wiring, and drain line enter the unit.

DRAIN LINE

Condensation Drain Line

The condensation drain line tube is used to remove excess condensation from the unit to a proper discharge location. It is important that the drain line tube is properly connected.

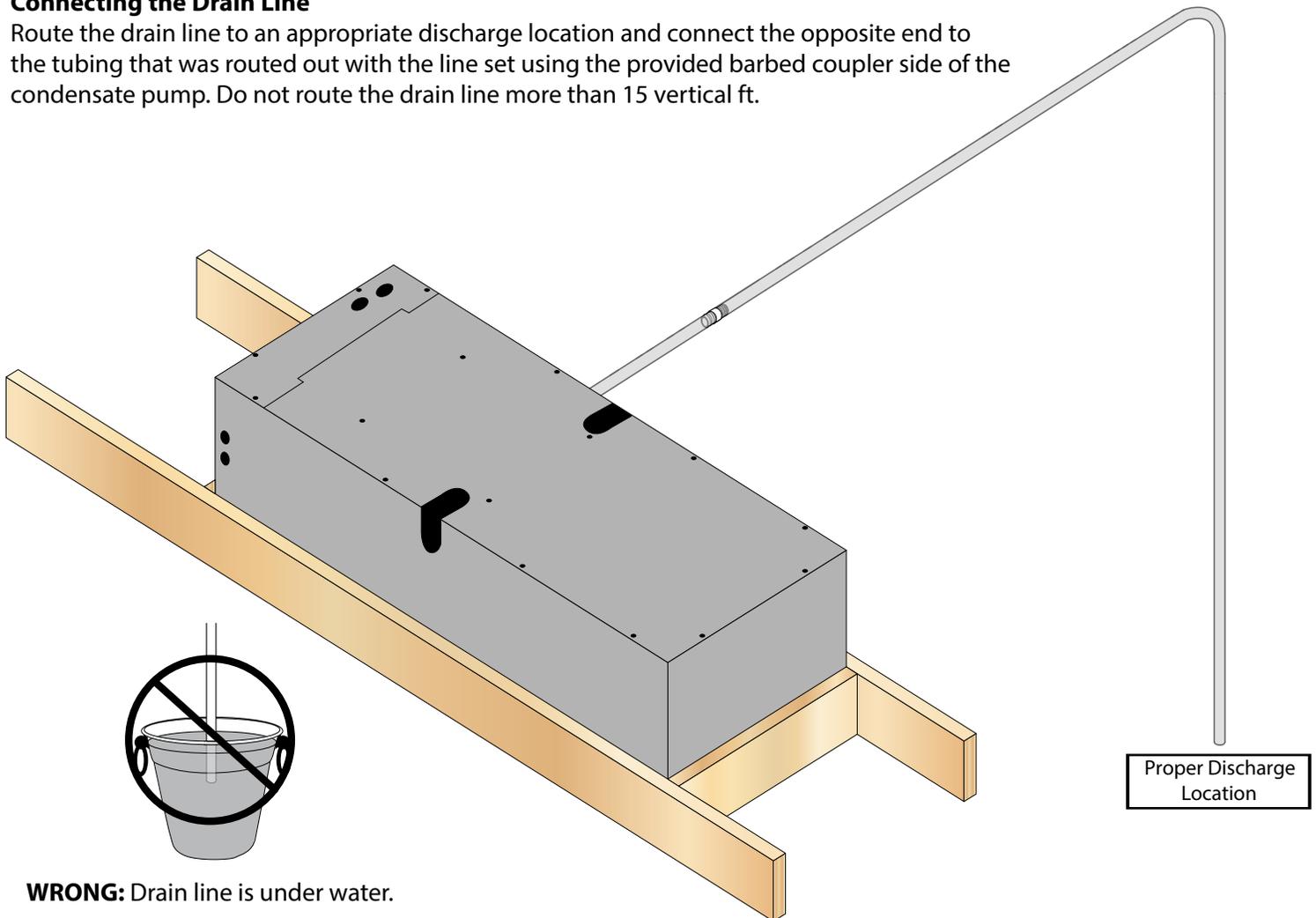
Failure to use the condensation drain line tube will void the warranty on the unit.

Drain Line

The Mini Ceiling Mount evaporator unit features a drain line pump system that removes excessive condensate build up in the drain pan. During operation, the drain pan collects water that drips from the coil. The drain line pump system will prevent overflow and leaking by allowing for discharge of the additional condensate.

Connecting the Drain Line

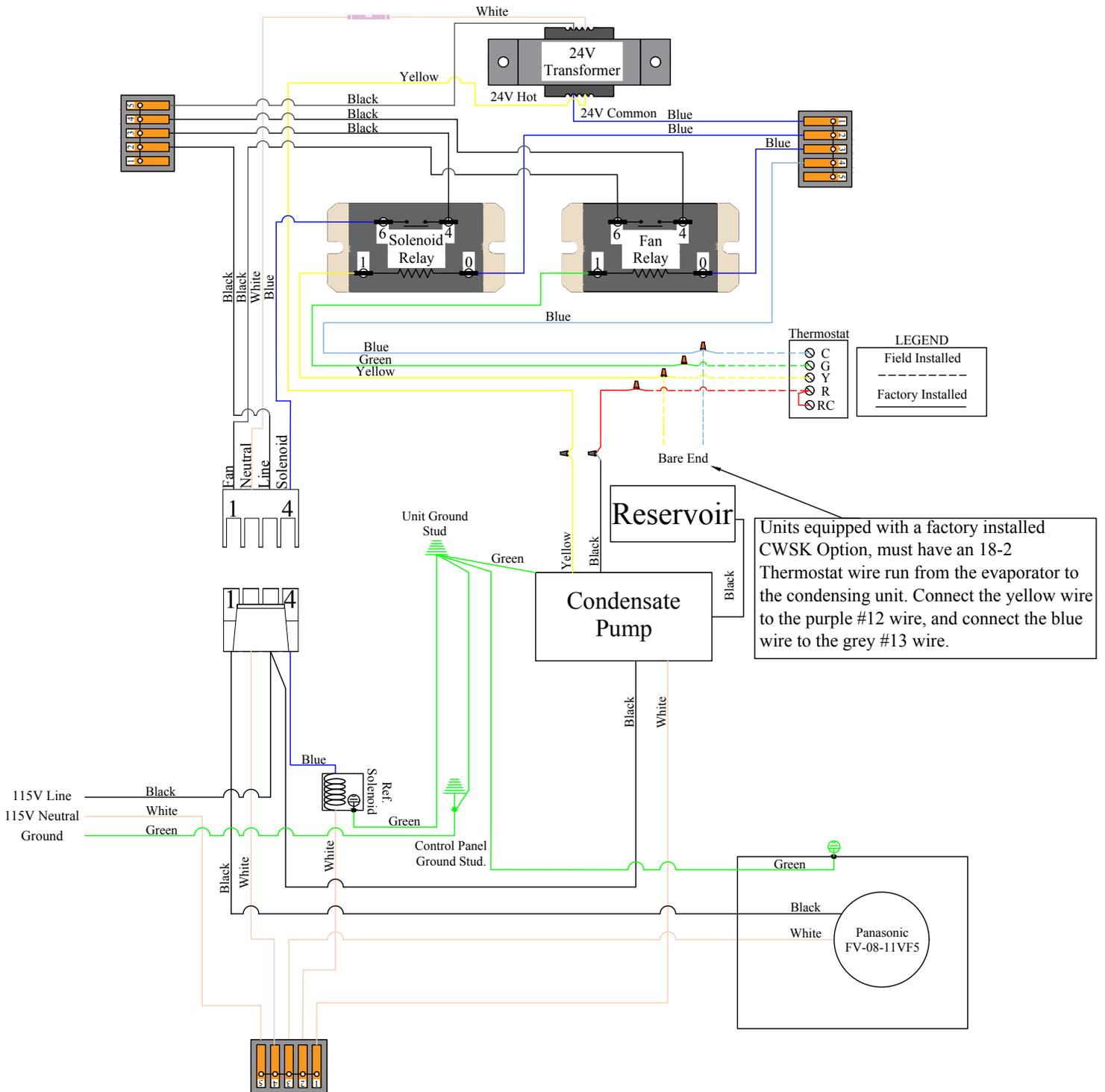
Route the drain line to an appropriate discharge location and connect the opposite end to the tubing that was routed out with the line set using the provided barbed coupler side of the condensate pump. Do not route the drain line more than 15 vertical ft.



WRONG: Drain line is under water.

To prevent mold from growing, allow the drain line to hang above the water line.

MINI CEILING MOUNT WIRING DIAGRAM WITH 24V CONVERSION KIT



PREPARING THE CONDENSING UNIT

Electrical Needs

The condensing unit requires a dedicated 115V, 15-amp circuit. The unit draws a large inrush current for about 1 second the instant the compressor starts. With a dedicated circuit and circuit breaker, the condensing unit will have sufficient power for effective operation. (The compressor is controlled by a low-pressure switch mounted on the condensing unit. This feature eliminates the need for wiring between the evaporator unit/fan coil unit and the condensing unit.)

- Ensure the voltage supplied matches the rating specified on the unit spec label.
- Provide a non-GFI dedicated circuit and an appropriate outlet for the evaporator unit.
- Provide a dedicated circuit and circuit breaker for the condensing unit.
- Provide a weatherproof disconnect for the condensing unit if it is located outside.

Power surges and spikes can damage sensitive electrical equipment. WhisperKOOL recommends plugging the unit into a surge protector or power conditioner in order to protect your system. As outlined in our terms and conditions, power surges and spikes are not covered under warranty.

WE RECOMMEND THAT YOU DO NOT USE A GROUND FAULT INTERRUPTER (GFI) WITH THIS PRODUCT.

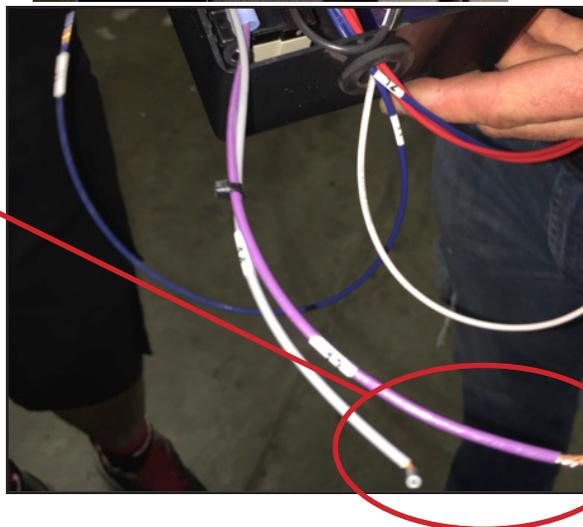
In case the system should lose power, check the home/main circuit breaker. If the system does not respond properly, refer to the Troubleshooting Guide on page 32.

When connecting Cold Weather Start Kit:

Evaporator: Connect one end of the low-voltage 18-2 thermostat wire to the blue and yellow wires.



Condensing Unit: Connect the other end of the 18-2 low-voltage thermostat wire to the grey and purple wires located in the grey electrical box on the condenser skid.



PREPARING THE CONDENSING UNIT (continued)

Installing the Condensing Unit

The condensing unit can be installed inside a well-ventilated area of the home, but it is typically installed outside. Exterior applications will require the use of a protective housing, and the amount of sun exposure should be considered when selecting the placement of the condensing unit. The unit requires a dedicated 15-amp circuit, non-GFI. **Make sure there is a minimum of three (3) feet of horizontal clearance in every direction around the unit (five feet is ideal).** The unit should be plugged in.

Set the condensing unit level and make sure it has the proper amount of clearance in accordance with the instructions. Verify that the name plate power is supplied, the unit has the proper electric disconnect, that the fuse protection is connected but not turned on, and that the unit is ready for piping connections.

Indoor condensing unit installations:

Inside installations require special consideration, as there must be adequate ventilation to remove the heat created during normal operations. An exhaust port with fan may need to be installed to ensure that heat is effectively removed from the utility room. A return grille or provision for 500-600 CFM of cool air to enter the room to replace the exhausted air will accomplish this. Unobstructed airflow to and from the unit is a critical factor in the units overall performance. **Make sure there is a minimum of three (3) feet of horizontal clearance in every direction around the unit (five feet is ideal).** This will ensure that the unit can move the air around the room in an efficient manner.

Outdoor condensing unit installations:

You must utilize the exterior condensing unit housing for outdoor installations. Place the condensing unit on a solid foundation in a location with adequate ventilation. **Make sure there is a minimum of three (3) feet of horizontal clearance in every direction around the unit (five feet is ideal).** The unit should be elevated 18" in order to avoid any possible flooding or damage by animals and should be clear of leaves, dirt, and other debris.

Fan Cycling Switch:

These switches are used to cycle the condenser fan at low ambient temperatures.

Refrigeration Lines:

A ¼" OD copper liquid line is required.

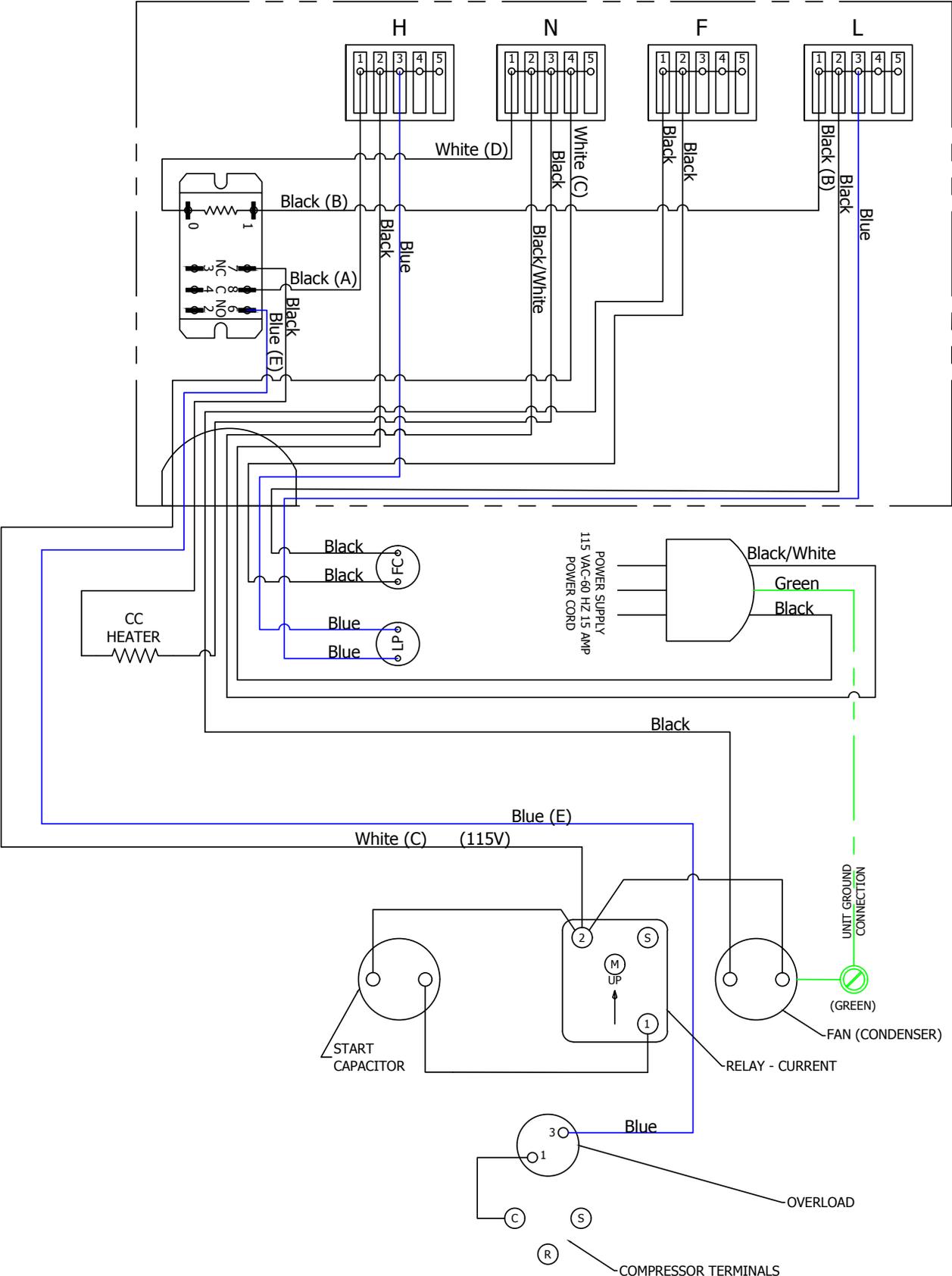
Suction Line Size Chart

Model	Line Set Length	<25ft			26-50ft			50-100ft		
	Vertical Rise	<3ft	3-10ft	>10ft	<3ft	3-10ft	>10ft	<3ft	3-10ft	>10ft
Mini Ceiling Mount Split	Horizontal Tubing	¾"								
	Vertical Rise	¾"								

The refrigerant drier and the sight glass shall be installed (in that order) in the direction of the refrigerant flow in the liquid line between the condensing unit and evaporator unit. Enclose the suction line in cellular insulation with ½" wall thickness, such as Armaflex or a similar brand, in order to reduce heat transfer and prevent the suction line from sweating.

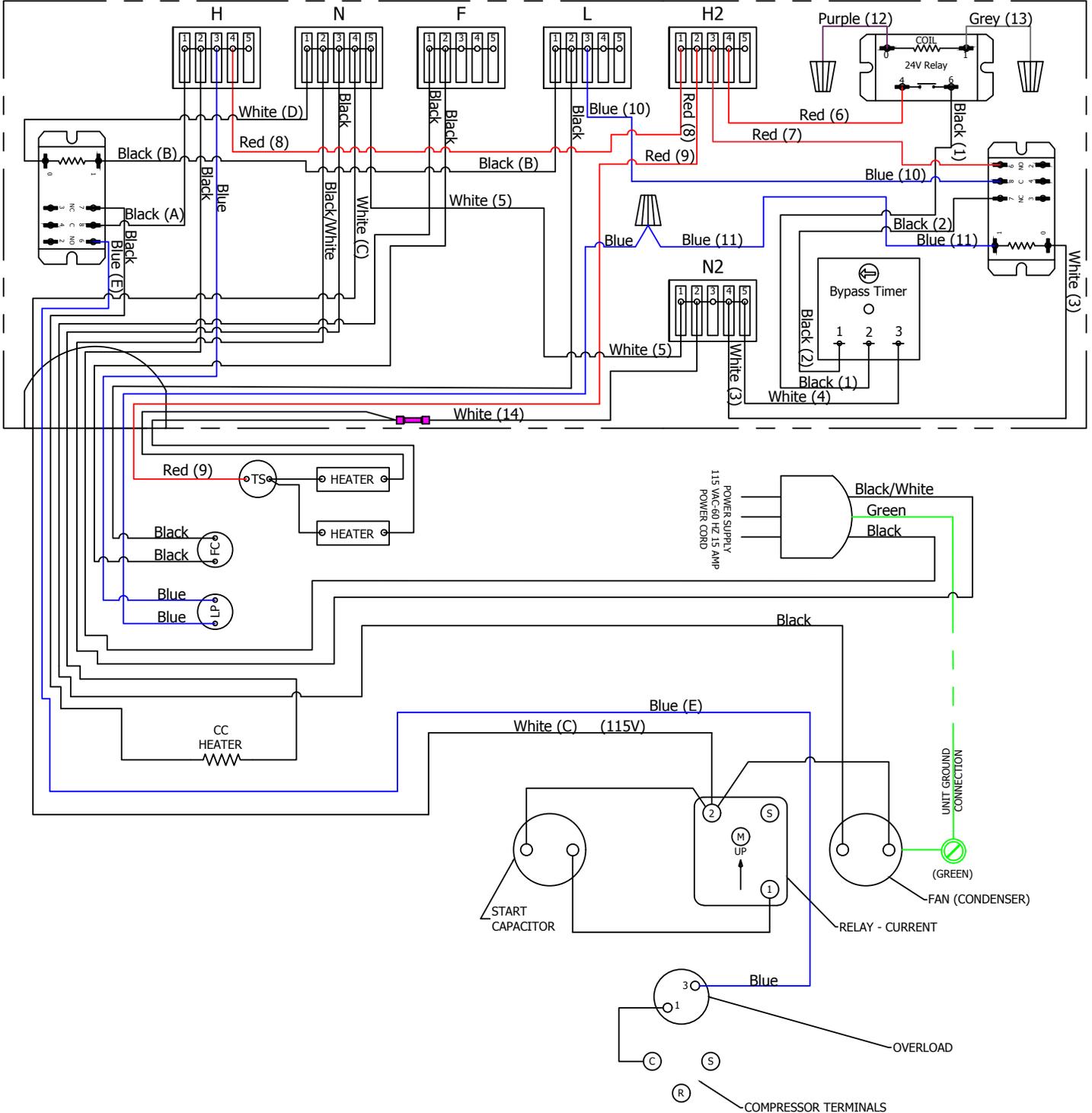
MINI CEILING MOUNT CONDENSING UNIT WIRING DIAGRAM

For systems manufactured 01-22-16 or later



CONDENSING UNIT WITH COLD WEATHER START KIT WIRING DIAGRAM

For systems manufactured 01-22-16 or later

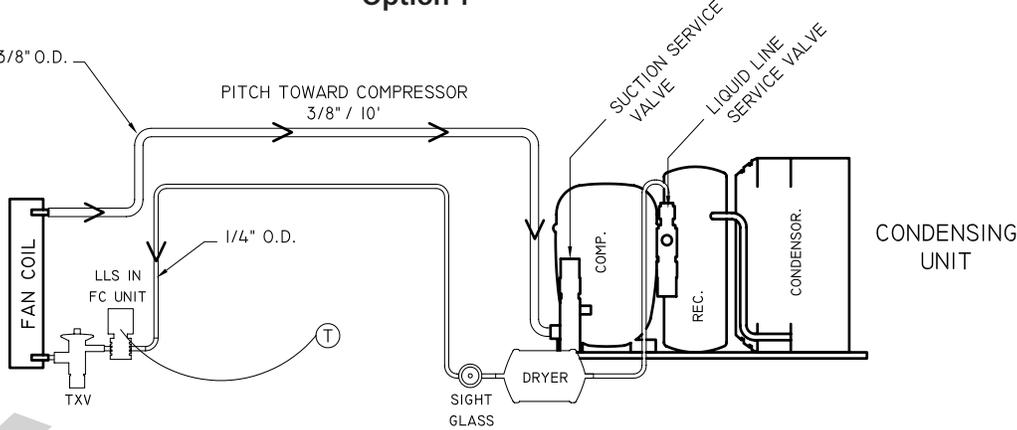


LINE SET PIPING DIAGRAMS

These are two options for running the line set from the coil to the condensing unit. Option 1 applies when the system is installed with the condensing unit below or leveled to the coil. Option 2 applies when the system is installed with the condensing unit at a higher elevation than the coil.

SINGLE FAN COIL PIPING SYSTEM
 CONDITION: CONDENSING UNIT BELOW OR CLOSE TO SAME ELEVATION AS FAN COIL UNITS

Option 1

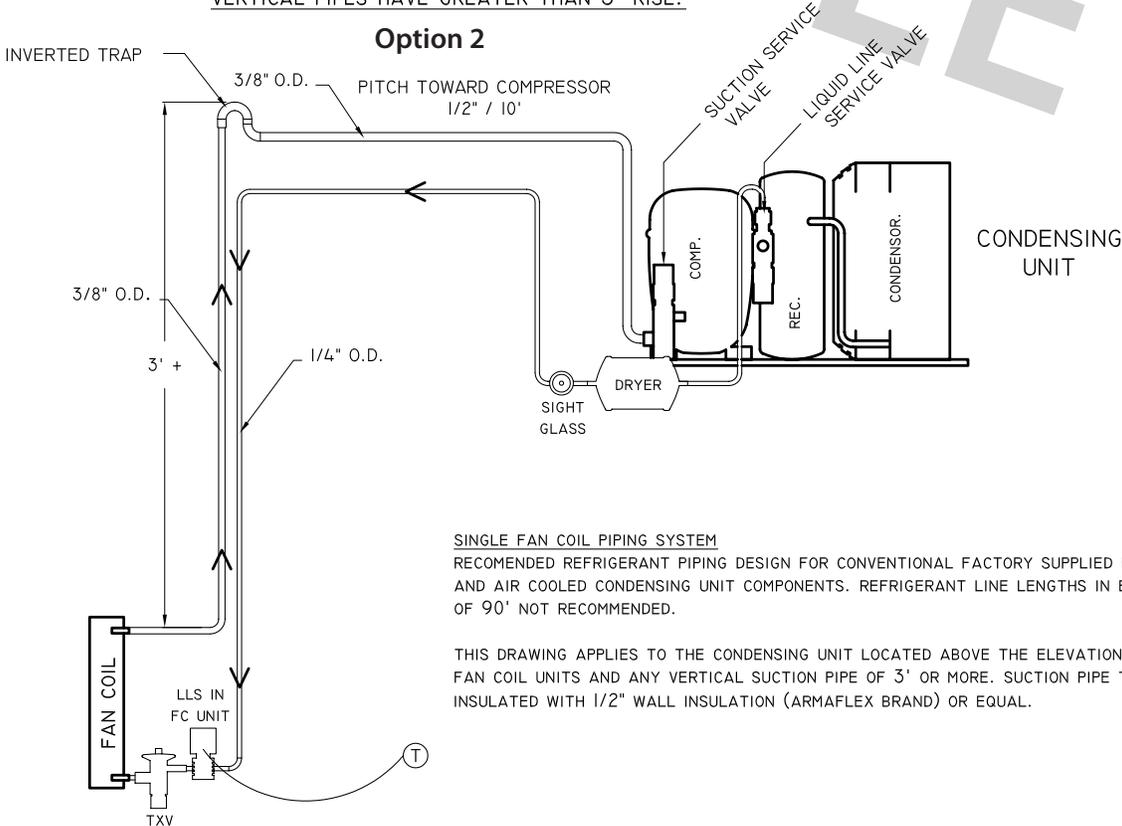


SINGLE FAN COIL PIPING SYSTEM
 RECOMMENDED REFRIGERANT PIPING DESIGN FOR CONVENTIONAL FACTORY SUPPLIED FAN COIL AND AIR COOLED CONDENSING UNIT COMPONENTS. REFRIGERANT LINE LENGTHS IN EXCESS OF 90' NOT RECOMMENDED.

THIS DRAWING APPLIES TO CONDENSING UNIT LOCATION AT OR BELOW THE ELEVATION OF THE FAN COIL UNIT. SUCTION PIPE TO BE INSULATED WITH 1/2" WALL INSULATION (ARMAFLEX BRAND) OR EQUAL.

SINGLE FAN COIL PIPING SYSTEM
 CONDITION: CONDENSING UNIT ABOVE FAN COILS AND VERTICAL PIPES HAVE GREATER THAN 3' RISE.

Option 2



SINGLE FAN COIL PIPING SYSTEM
 RECOMMENDED REFRIGERANT PIPING DESIGN FOR CONVENTIONAL FACTORY SUPPLIED FAN COIL AND AIR COOLED CONDENSING UNIT COMPONENTS. REFRIGERANT LINE LENGTHS IN EXCESS OF 90' NOT RECOMMENDED.

THIS DRAWING APPLIES TO THE CONDENSING UNIT LOCATED ABOVE THE ELEVATION OF THE FAN COIL UNITS AND ANY VERTICAL SUCTION PIPE OF 3' OR MORE. SUCTION PIPE TO BE INSULATED WITH 1/2" WALL INSULATION (ARMAFLEX BRAND) OR EQUAL.

INSTALLING THE CONDENSING UNIT

DO NOT BLOCK airflow through the exterior housing. This will restrict airflow and void the warranty.

Refrigerant Piping Procedure

When installing/routing the line set, cap both ends of each tube to prevent material or debris from entering the tubing.

Prior to connecting the piping, loosely connect the refrigerant gauges to the service ports of the suction and liquid line service valves. Purge the charging hoses with dry nitrogen and tighten the hose connections. Remove the service valve caps and turn the valve stem clockwise (half of a complete turn) in order to unseat the valve and open the service port. The valve comes in a back seated position from the factory. Keep the piping port sealed until ready to connect to the vacuum pump.

Cleanliness is of the utmost importance. All horizontal suction piping should be pitched toward the condensing unit $\frac{1}{2}$ " for every 10 feet of pipe. During any brazing procedure, purge the fitting with dry nitrogen at a slow rate to prevent formation of highly abrasive copper oxide. Make sure there are no obstructions to the flow which would cause pressure to build up and the brazed fittings to leak. After confirming that there are no leaks, insulate suction line with Armaflex ($\frac{1}{2}$ " wall thickness) or comparable insulation. Seal all seams using Armaflex 520 foam insulation adhesive or equivalent. Wrap each seam using line set tape.

Liquid Line Piping Procedure

Use of a $\frac{1}{4}$ " OD copper tube liquid line is required. When making connections, keep the ends sealed until ready to fit the tube. First connect the supplied refrigerant drier close to the liquid service valve (king valve) on the receiver. Downstream, connect the moisture-indicating sight glass in an easily visible location. Run the tubing to the evaporator unit location and fit to the liquid line stub from the evaporator unit. Energize the evaporator unit and set the thermostat to call for cooling. This will activate the liquid line solenoid valve. Uncap the suction pipe to prevent obstructed nitrogen flow. Open the nitrogen to allow a slow flow and braze the liquid line fitting. Do not shut off the nitrogen and power until the suction line is brazed.

Suction Piping Procedure

Slide Armaflex insulation over the tubing for the entire length of the tube and keep the end of the tube sealed during this procedure. Keep the tubing sealed while running the connection points and fit the suction tube to the evaporator unit outlet connection. Install a Schrader access valve at the outlet of the evaporator unit to allow for superheat checking. If there are brazed fittings along the length of the tube, apply the insulation after leak testing.

After Piping is Run (Ready for the Brazing Process)

Energize the evaporator unit and set the thermostat to call for cooling. Open the liquid line service valve and bleed the nitrogen through both the liquid and suction line. Loosen the suction gauge hose to relieve pressure during the brazing process. Braze the connections and cool them off quickly.

Leak Testing

Using dry nitrogen, pressurize the system to 200 psi. Check to see if there is a noticeable pressure drop. If so, locate and fix leak. With pressure at 200 psi, check for leaks with a refrigerant leak detector and/or soap bubbles. Confirm the pressure holds at 200 psi for 30 minutes. If not, check again for leaks and repair, then perform another leak test. When it is confirmed that there are no leaks, release the nitrogen pressure and leave the solenoid valve energized.

INSTALLING THE CONDENSING UNIT (continued)

Evacuation

Connect a four-valve manifold to the high- and low-pressure service valve ports on the condensing unit. The valve stems should be mid-seated (as when leak testing). Install service caps on the valves and tighten them. Energize the liquid line solenoid valve (make sure there is fresh oil in the vacuum pump). Connect a micron gauge directly to the pump, blank off, and start the pump to verify that it is capable of 200-micron vacuum and the gauge is capable of reading that vacuum. Connect the micron gauge to the access valve installed in the suction line at the evaporator unit. Remove the Schrader valve depressors from the gauge hoses to reduce restriction and connect gauges to the suction and liquid line service valve service ports on the condensing unit. Connect the pump to the 3/8" hose on the manifold set. Start the pump and run it until the micron gauge reads 200 microns.

When a 200-micron-level evacuation is achieved, break the vacuum with R-134a and add enough refrigerant to pressurize the system with a few psi of positive pressure.

Charging

Remove the vacuum pump and the micron gauge. Install a spare low-pressure gauge on the access valve at the evaporator unit. With the power off to the condensing unit, place the cylinder of R-134a on a digital scale. Admit liquid refrigerant to the system through the high-pressure side (liquid line service valve) until about 1½ lbs have been added. Shut off refrigerant flow to system.

Verify that the setpoint on the thermostat is low enough to allow the system to run continuously for 30 minutes or more. Turn on power to the condensing unit. The compressor should start if suction pressure is above 6 psi. If the system pumps down and the compressor shuts off, set the five-minute time-delay relay time to the lowest setting to avoid having to wait. Add refrigerant as a vapor through the low-pressure side of the system (suction service valve port).

Observe the sight glass when the compressor starts. If bubbles are present, slowly add more refrigerant (in vapor form) to the low side. The suction pressure and head pressure should increase as the sight glass clears. Check the superheat during the charging process. If the superheat drops to 4-5°F and sight glass still has bubbles, let the unit run until the wine cellar temperature drops and approaches 55°F. Observe the sight glass. If bubbles are present, add additional refrigerant in small increments. Let the system stabilize for about 5 minutes and check the sight glass for bubbles before adding additional refrigerant. Once the sight glass is clear, check the superheat at the outlet of the evaporator unit (evaporator superheat should be between 8 and 12°F). If superheat is not between 8 and 12°F, make an adjustment to the expansion valve. Depending on the temperature, the high side should be approximately 175 lbs, and the low side should be 28 lbs or more to keep the evaporator unit from icing.

Measure Superheat

If superheat is high and bubbles are present, add more refrigerant until it is clear. If superheat is low (around 4 to 6°F) and bubbles are present in the sight glass, check for liquid refrigerant entering the compressor (as evidenced by a cool crankcase temperature of less than 100-110°F and low discharge superheat). Adjust TXV setting in small increments to increase superheat and stop liquid from going to the compressor. Check this before adding more refrigerant. If the temperature of the air entering the condenser is cold enough to cause the condenser fan to cycle, block about 60% of the coil to raise the head pressure and allow time for stabilization. Reduce blockage if the condensing temperature is above 115°F. Retain blockage if necessary to maintain stability for the performance test listed in the split system warranty checklist. If the air entering the condenser is cold (below 60°F) and the sight glass is clear, allow the system to run for a while until the cellar cools off, then measure and record data on the split system warranty checklist.

Confirm that the thermostat is displaying the correct temperature. Confirm that the suction line is completely insulated from TXV to compressor. Confirm that the sight glass has no bubbles and the ambient temperature around the condensing unit is not getting excessively hotter. Confirm that both king valves have been back-seated and the nuts have been installed back on the king service ports.

Insulate the 3/8" suction line with cork tape.

SYSTEM OPERATION

The cooling system is equipped with the hardware needed to support a 24-volt air conditioning thermostat (not included).

Initial Start-Up

Set the thermostat to COOL and fan switch to AUTO. Lower the setpoint to the desired cellar temperature. (A temperature of 55°F is the recommended setpoint.) See thermostat instructions for details.

Normal System Cycle

The thermostat should turn the cooling system on when it senses a temperature one (1) degree higher than the setpoint. See thermostat instructions for details.

Anti-Short Cycle

Most thermostats have a safety feature that will prevent the condensing unit from cycling on and off within a short period of time. During the anti-short cycle, the condensing unit will typically remain off for 5-7 minutes. See thermostat instructions for details.

Fan Operation

If the fan switch on the thermostat is in the AUTO position, it will run only during the cooling cycle. If the fan switch on the thermostat is in the ON position, the fan will continuously run until the switch is set back to the AUTO position.

Anti-Frost

Systems equipped with a 24V thermostat conversion kit do **NOT** have an anti-frost feature. To reduce the possibility of the evaporator coil icing up, avoid setting the thermostat lower than 55°F.

NOTE: To ensure correct system operation, the 24V thermostat must be placed inside the wine cellar, preferably in a central location away from any airflow.

NOTES

TROUBLESHOOTING GUIDE

Unit has ice forming on the evaporator unit

Possible cause	Solution
Evaporator filter or coil is dirty	Remove the filter and wash it, then clean the coil with a vacuum. If coil is very dirty, use a spray bottle with a small amount of liquid dish detergent or coil cleaner. Spray coil, let set for five minutes, then flush with fresh water.
There is something blocking the supply and/or return air	Remove blockage
The evaporator fan is not turning on	Call Customer Service for details on how to perform the bypass plug test. If all components run correctly, and the system cools during the bypass plug test, there is either an issue with the 24V thermostat conversion kit or the thermostat. Contact Customer Service for further action.
If evaporator unit continues to ice	Observe ice formation pattern. If only part way up the coil face, the system could be low on refrigerant. If all the way up, the coil may be dirty or airflow is blocked.
The set point is too low	Raise set point to recommended set point of 55°F

Unit does not run/power up

Possible cause	Solution
Evaporator unit is not plugged in	Make sure the unit is plugged into an outlet
Line voltage rating is incorrect for the system	Check line voltage to make sure there is 110V-120V
Thermostat not calling for cooling	Lower set point
Faulty thermostat or wiring	Call Customer Service

Cellar temperature is too warm

Possible Cause	Solution
The temperature of the room to which the condensing unit exhausts exceeds 110°F	Intake temperature needs to drop below 110°F
The system is undersized for the cellar	Order correct size system
There is something blocking the supply and/or return air on the evaporator unit or the condensing unit	Remove air flow obstruction
Evaporator unit is mounted too low in the cellar	Relocate unit so the distance from the ceiling and top of the unit is no more than 18"
One or more of the fans is not turning on	Please contact the installing technician to troubleshoot
Compressor is not turning on	Please contact the installing technician to troubleshoot
Compressor keeps cycling on overload	Make sure all fans are working and there is no airflow obstruction
Poor seal around door or other areas requiring a seal (around the unit, wall joints, etc.)	Make sure there are no air gaps around the door. If door seal is damaged, replace it.
Thermostat set too high	Adjust thermostat to lower temperature
Evaporator coil is frosted or iced up	Observe ice formation pattern. If only part way up the coil face, evaporator unit could be low on refrigerant. If so, contact your installing technician to assist with troubleshooting.

System runs constantly

Possible Cause	Solution
Leaky door seal or poorly insulated cellar	Fix leaky door seal and insulate cellar

Unit leaks water	
Possible cause	Solution
Evaporator unit is not level	Evaporator unit should be level on the wall to prevent leaking
Drain line clogged or kinked	Check drain line to make sure water can flow freely
Drain is clogged, preventing water from escaping	Disconnect drain and clear it out, open access door and check drain for blockage
Drain line does not have a downward slope	Fix drain line so there is a downward slope from the unit to the drain
Coil is iced, causing drain pan to freeze and water to overflow	Melt ice with blow drier. Soak up with a towel.
Unit runs but does not cool	
Possible cause	Solution
Lack of air flow	Make sure fan is unobstructed and that the evaporator filter, evaporator coil, and condenser coil are clean and free of debris
System undersized	Contact Customer Service
Compressor is overheating	Shut system off for 1 hour to allow compressor to cool. Turn back on and check for cooler air flow out. If compressor runs, check for and clean condenser coil as possible cause of compressor overheating. If problem repeats, contact you installing technician to assist with troubleshooting.
Evaporator fan runs but compressor does not	
Possible cause	Solution
Compressor and/or starting components faulty	Please contact the installing technician to troubleshoot
Compressor may have overheated	Shut system off for 1 hour to allow compressor to cool. Turn back on and check for cooler air flow out. If compressor runs, check for and clean condenser coil as possible cause of compressor overheating. If problem repeats, contact your installing technician to assist with troubleshooting.
Compressor runs but evaporator fan does not	
Possible cause	Solution
Faulty fan motor	Please contact the installing technician to troubleshoot
Faulty thermostat	Please contact the installing technician to troubleshoot
Fan switch on thermostat set to "on"	Set fan switch to the "auto" position
Fan relay in thermostat or 24V thermostat conversion kit stuck on	Call Customer Service for details on how to perform the bypass plug test
Compressor short cycles	
Possible cause	Solution
Evaporator unit thermostat location	Move thermostat out of airflow
System low on refrigerant charge	Please contact the installing technician to troubleshoot
Condenser fan motor/capacitor faulty	Please contact the installing technician to troubleshoot
Compressor and /or starting components faulty	Please contact the installing technician to troubleshoot
Humidity in cellar too low	
Possible cause	Solution
Not enough moisture	Purchase and place a humidifier (or a decorative fountain) in cellar

Units equipped with the 24V Thermostat Conversion Kit:

Does not power up or run	
Possible cause	Solution
Batteries on thermostat have lost their charge	Change batteries
Thermostat wired incorrectly	Check wiring on 24V thermostat and correct
Wiring issue at evaporator unit	Contact Customer Service for troubleshooting
Condensation levels are critical and prevent the unit from running	Contact Customer Service for troubleshooting
24V transformer in evaporator unit has failed	Contact Customer Service for troubleshooting
Evaporator fan runs continuously	
Possible cause	Solution
Fan switch on thermostat set to "on"	Set fan switch to the "auto" position
Fan relay in thermostat or 24V conversion kit stuck on	Call customer service for details on how to perform the bypass plug test

MAINTENANCE SCHEDULE

Monthly	<ol style="list-style-type: none">1. Check coils2. Check for unusual noise or vibration3. Check the drain line to see if it is above the waterline (if draining into a vessel)
Quarterly	<ol style="list-style-type: none">1. Use a vacuum with brush attachment to clean coils; be careful not to crush coil fins when cleaning2. Change duct filter if the system is ducted
Annually	<ol style="list-style-type: none">1. Inspect for corrosion2. Check wiring connections and integrity of cords3. Pour a 50/50 bleach solution into the drain line every spring

TECHNICAL ASSISTANCE

WhisperKOOL Customer Service is available Monday through Friday from 6:00 a.m. to 4:00 p.m. Pacific Standard Time.

The appointed customer service representative will be able to assist you with your questions and warranty information more effectively if you provide them with the following:

- The model and serial number of your WhisperKOOL system(s).
- Location of unit and installation details, such as ventilation, ducting, construction of your wine cellar, and room size.
- Photos of the cellar and installation location may be needed.

Contact WhisperKOOL Customer Service

1738 E. Alpine Ave
Stockton, CA, 95205
www.whisperkool.com

Email: support@whisperkool.com

Phone: 209-466-9463

US Toll Free: 1-800-343-9463

Fax: 209-466-4606

ACCESSORIES FOR COOLING UNITS

WhisperKOOL offers accessories to enhance and customize your wine cooling unit:

Condensate Pump Kit

The condensate pump kit automatically removes water that drips out of the evaporator unit's drain line. The pump is controlled by a float/switch mechanism that turns the pump on when approximately 2¼" of water collects in the tank, and automatically switches off when the tank drains to approximately 1¼". The condensate pump kit allows the excess condensate to be pumped up to 20 feet away from the unit.

Exterior Housing

If the cooling unit is installed outside, it will need protection from sun, wind, and rain. The exterior housing protects the condensing unit portion of the split system from the elements when installed outdoors.

Accessories can be purchased at www.whisperkool.com

WhisperKOOL Product Terms and Conditions
Including Product Limited Warranty And Product Installation Requirements
For WhisperKOOL Split System Series

ATTENTION: PLEASE READ THESE TERMS OF USE CAREFULLY BEFORE INSTALLING YOUR WHISPERKOOL COOLING SYSTEM. INSTALLING YOUR WHISPERKOOL COOLING SYSTEM INDICATES THAT YOU ACCEPT AND AGREE TO EACH OF THE TERMS AND CONDITIONS SET FORTH HEREIN ("TERMS OF USE"). IF YOU DO NOT ACCEPT THESE TERMS OF USE, YOU RISK VOIDING YOUR WARRANTY AND ASSUMING ADDITIONAL REPAIR AND REPLACEMENT COSTS.

1. Purchase of a WhisperKOOL Cooling System assumes that the Purchaser ("End User") fully accepts and agrees to the Terms and Conditions set forth in this document. The Terms and Conditions of Sale and Owner's Manual are shipped with each unit and, if another copy is needed, replacement copies can be downloaded from the company website (whisperkool.com) or by contacting WhisperKOOL directly for a new copy. WhisperKOOL reserves the right, in its sole discretion, to change its Terms and Conditions at any time, for any reason, without notice.

2. WhisperKOOL Product Installation and Limited Warranty

- A. Purchaser of the product must arrange for the product to be installed by a certified HVAC/R technician in accordance with procedures set forth by WhisperKOOL and described in the WhisperKOOL Owner's Manual.
- B. The HVAC/R technician installing the product must complete the designated portion of the Split Startup Checklist and provide licensing or certification identification number information to assist in the warranty registration process.
- C. Purchaser must return the completed Split Startup Checklist to WhisperKOOL within thirty (30) days of installation of Product. The Split Startup Checklist must be approved by WhisperKOOL to activate the Limited Warranty. If the Split Startup Checklist is approved, Purchaser will be sent activation approval documents and will start receiving the benefits of the Limited Warranty throughout the warranty period. If the Split Startup Checklist is incomplete, Purchaser will be informed they have five days to complete the Split Startup Checklist and re-submit to WhisperKOOL. The Split Startup Checklist will be reviewed again, and if denied, Purchaser will be informed that they have 10 business days for corrective action. Failure to register the Product may result in loss of warranty.
- D. Purchaser is responsible for the full costs of installation and any additional parts required for the proper and complete installation of the product.
- E. For Split Systems returned to WhisperKOOL in accordance with the terms and conditions of the Limited Warranty, WhisperKOOL warrants against defects in material and workmanship as follows:
 1. **LABOR** — For a period of two (2) years commencing on the date of purchase, WhisperKOOL will, at its option and discretion, reimburse up to \$250 to the End User for cost incurred for servicing, repairing, removing or installing warranty parts. Invoice for service must be forwarded to WhisperKOOL for assessment and processing. The Split System warranty is invalid if there is attempted repair by anyone other than an HVAC/R technician approved by WhisperKOOL to service the Product.
 2. **PARTS** — For a period of two (2) years commencing on the date of purchase, WhisperKOOL will supply, at no charge, new or rebuilt replacement parts in exchange for defective parts. Replacement parts are warranted only for the remainder of the original warranty period.
 3. **FREIGHT** — For a period of two (2) years commencing on the date of purchase, if after WhisperKOOL approved evaluation the original Product failure is determined to be the cause of a manufacturers defect, and not the cause of an installation error or other cause, WhisperKOOL will cover at its option, freight for the replacement parts or Product.

The following part or cause of failure is not the responsibility of WhisperKOOL:

- Improper voltage supply
- Line set with screw connectors (high end and low end)
- Leaks found at the braze points when performing pressure check
- Unit that has been charged incorrectly

- Incorrect tubing diameter used on line set
- A unit that has been wired incorrectly
- Valve stem on condenser side
- Improper installation of P-Trap
- Lack of P-Trap (if required)
- Condensers that are installed outdoors or in elements that would affect operation without proper cover or housing. (Housing is available from Manufacturer).

Product Warranty Limitations and Exclusions.

1. This limited warranty does not cover cosmetic damage caused during installation, damage due to acts of God, commercial use, accident, misuse, abuse, negligence, or modification to any part of the Product. Delivery and installation of the Product, any additional parts required, as well as removal of the Product if warranty work is required, are all at the sole cost, risk and obligation of the End User.
2. This limited warranty does not cover damage due to improper installation or operation or lack of proper maintenance of the Product, connection of the Product to improper voltage supply, or attempted repair of the Product by anyone other than a technician approved by WhisperKOOL to service the Product.
3. This limited warranty does not cover any Product sold "AS IS" or "WITH ALL FAULTS."
4. Product that has been replaced during warranty period does not extend the warranty period past the original date of purchase.
5. This limited warranty is valid only in the continental United States. Sales elsewhere are excluded from this warranty.
6. Proof of purchase of the Product in the form of a bill of sale, receipted invoice or serial number, which is evidence that the Product is within the Limited Warranty Period, must be presented by the End User to WhisperKOOL in order to obtain limited warranty service.
7. This limited warranty is void if the factory applied serial number has been altered or removed from the Product.
8. This limited warranty is voided if installed in an enclosure of insufficient design that does not follow the Product installation requirements stated herein and in the owner's manual.
9. Removing the rivets from the Product's unit housing without prior authorization from WhisperKOOL voids this limited warranty.
10. The End User must first contact WhisperKOOL Customer Service by telephone (at 1-800-343-9463) prior to attempting service on any Product still under the limited warranty; else the limited warranty is voided.
11. This limited warranty does not cover Product being concealed by, but not limited to, vegetation, fabric, shelving, mud, snow, or dirt. Product must not be painted or limited warranty will be void.
12. This limited warranty does not cover exposure to corroding environments such as, but not limited to, petroleum and gasoline products, cleaning solvents, caustic pool chemicals, and marine air.
13. This limited warranty does not cover any cause not relating to Product defect.
14. THE REPAIR OR REPLACEMENT OF THE PRODUCT AS PROVIDED UNDER THIS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF YOU, THE END USER, AS WELL AS ANYONE ELSE IN THE CHAIN OF TITLE OF THE PRODUCT, DOES NOT START A NEW LIMITED WARRANTY TIME PERIOD, AND IS IN LIEU OF ALL OTHER WARRANTIES (EXPRESS OR IMPLIED) WITH REGARD TO THE PRODUCT. IN NO EVENT SHALL WHISPERKOOL BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR CONTINGENT DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. THE IMPLIED WARRANTIES OF MERCHANTABILITY
15. AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXPRESSLY DISCLAIMED. Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This limited warranty gives you specific legal rights, and you may have other rights, which vary from state to state.
16. Failure of the End User to comply with all of the Product Installation Requirements, Maintenance Requirements and End User Requirements may, at WhisperKOOL's sole discretion, void this limited warranty.
17. No one has any authority to add to or vary the limited warranty on this Product.

3. Maintenance Requirements

The End User is responsible for checking the coils on the condenser unit and vacuuming them every three months to maintain them free of debris. It is the End User's responsibility to clean off any accumulated dust, lint, or other debris from the front and rear intake grills; failure to do this on a regular basis will restrict the airflow and may affect the Product's ability to function properly. Periodically cleaning the Product's vents will help assure maximum cooling efficiency. The drain tube must also be checked and kept clean and free of debris and mold to maintain proper performance.

Mold is a natural living organism in the environment. It exists in the air in the form of microscopic spores that move in and out of buildings through doors, windows, vents, HVAC systems and anywhere else that air enters. Once it is discovered, mold must be addressed quickly and appropriately. Delayed or improper treatment of mold issues can result in costly and reoccurring repairs. If the End User suspects a mold problem, it is always best to hire a qualified and experienced mold remediation specialist.

4. Additional End User Costs And Responsibilities

Terms and conditions for replacing the Product that is being evaluated for limited warranty.

1. After evaluation by a certified HVAC/R technician and the Product is found to be irreparable in the field, contact WhisperKOOL Customer Service to arrange for replacement under the warranty guidelines. When a claim for warranty is submitted for a condenser skid, the End User must purchase a new condenser skid from WhisperKOOL at retail price. Upon installation of the new condenser skid by a certified HVAC/R Technician, the HVAC/R Technician must complete the Installation Checklist and End User must submit the Installation Checklist to WhisperKOOL Customer Service for approval. The original condenser skid must be returned within 21 days to WhisperKOOL for failure analysis. If the Installation Checklist is approved and the failure is evaluated as defective and not installation error or other reason, the End User will be refunded for the cost of the replacement skid.
2. If the Product failure is evaluated and it is determined that it is an installation error or other reason, all costs, including shipping will be the responsibility of the End User.

The following items are not covered under any warranty and are the sole responsibility of the End User:

- A. End Users should satisfy themselves that the Product they are purchasing is suitable for their particular needs and requirements, and thus no responsibility will be placed with WhisperKOOL for the End User's decisions in this regard.
- B. End Users must assure that the product is installed by a certified HVAC/R technician. Failure to do so will result in Voiding the Limited Warranty.
- C. It is the End User's responsibility to secure safe haven/storage for ANY AND ALL items that are being kept and stored in the End User's wine cellar, including any Product. WhisperKOOL takes no responsibility for the safety and preservation of the aforementioned items in the event that the environment becomes unsuitable to maintain a proper storage environment.
- D. End User is responsible for initial installation costs, including, but not limited to, labor costs and the cost of any additional parts necessary to complete the installation.
- E. End User is responsible for all costs incurred for the installation and/or removal of the Product, or any part thereof, unless such cost has been agreed by WhisperKOOL to be a warranty repair prior to the work being performed.

5. Sales and Use Tax

WhisperKOOL only collects California sales tax for orders shipped within the State of California; WhisperKOOL does not collect sales tax for orders shipped to other states. However, the Purchaser and the End User may be liable to the taxing authority in their state for sales tax and/or use tax on the Product. The Purchaser and the End User should each check with their state's taxing authority for sales and use tax regulations.

6. Customer Service and Troubleshooting

WhisperKOOL's customer service department is available to answer any questions or inquiries for End Users regarding a WhisperKOOL Product, as well as to assist in performing basic troubleshooting, Monday through Friday, from 6:00 a.m. to 4:00 p.m. PST, at telephone number 1-800-343-9463. WhisperKOOL reserves the right to have a certified, WhisperKOOL-approved, HVAC/R technician go on site and inspect the product if the initial trouble shooting warrants further investigation. WhisperKOOL Corporation is located at 1738 East Alpine Avenue, Stockton, California 95205.

7. Request for Product Evaluation and Repair Under Warranty

SPLIT SYSTEM FIELD SERVICE WARRANTY POLICY: This Policy is to clarify what falls under Warranty Service and what becomes the responsibility of the Owner. WhisperKOOL (“manufacturer”) strives to provide our customers with a superior Product and we back our Product with a Two Year Limited Warranty. Please review the WhisperKOOL Product Terms and Conditions including Product Limited Warranty and Product Installation Requirements to ensure you have a complete understanding of our Policy and coverage of your Split System.

ARBITRATION: Any disputes arising out of or in connection with the installation and warranty of the Split System shall be referred to and finally resolved by a WhisperKOOL approved Independent Certified HVAC/R Technician. The evaluation of the Technician on all issues or matters of identifying the responsible party (WhisperKOOL or Installing Technician) shall be determined in a written report. This report will be made available to all concerned parties. If discovered under warranty, WhisperKOOL will assume the financial responsibility under their warranty guidelines. If the report finds the Owner’s Installer as the responsible party, WhisperKOOL will provide all documentation to the customer to substantiate the findings. This will include the Invoice from the Independent Certified HVAC/R Technician and the written report of the findings. The Owner will become responsible for payment directly to WhisperKOOL for all charges incurred for repairs (labor, parts and shipping costs) on the Split System.

8. Miscellaneous Terms and Conditions

- A. Return Policy. All return inquiries must be made within thirty (30) calendar days of the original purchase of a Product and are subject to a twenty five percent (25%) restocking fee. Shipping costs are not refundable and the Purchaser is responsible for all return shipping costs (including customs fees and duties, if applicable).
- B. Security Interest. WhisperKOOL retains a security interest in each Product until payment in full.
- C. Construction and Severability. Every provision of these Terms and Conditions shall be construed, to the extent possible, so as to be valid and enforceable. If any provision of these Terms and Conditions is held by a court of competent jurisdiction to be invalid, illegal or otherwise unenforceable, such provision will, to the extent so held, be deemed severed from the contract of sale between Purchaser and WhisperKOOL, and all of the other non-severed provisions will remain in full force and effect.
- D. Governing Law/Choice of Forum. The laws of the State of California (without regard for conflicts of law) shall govern the construction and enforcement of the these Terms and Conditions of Sale (Sections 1 through 9 inclusive, including Product Limited Warranty And Product Installation Requirements), and further these Terms and Conditions of Sale shall be interpreted as through drafted jointly by WhisperKOOL and Purchaser. Any dispute will be resolved by the courts in and for the County of San Joaquin, State of California, and all parties, WhisperKOOL, Purchaser and End User, hereby irrevocably submit to the personal jurisdiction of such courts for that purpose. No waiver by WhisperKOOL of any breach or default of the contract of sale (including these Terms and Conditions of Sale) concerning a Product will be deemed to be a waiver of any preceding or subsequent breach or default.
- E. Correction of Errors and Inaccuracies. These Terms and Conditions may contain typographical errors or other errors or inaccuracies. WhisperKOOL reserves the right to correct any errors, inaccuracies or omissions, and to change or update these Terms and Conditions, at any time without prior notice.

9. Questions, Additional Information And Technical Assistance

- A. Questions. If you have any questions regarding these Terms and Conditions or wish to obtain additional information, contact us via phone at 1-800-343-9463 or please send a letter via U.S. Mail to:

Customer Service
WhisperKOOL Corporation
1738 E Alpine Ave
Stockton, CA 95205

E-mail: support@whisperkool.com
Web: www.whisperkool.com

- B. Technical Assistance. WhisperKOOL Customer Service is available Monday through Friday from 6:00 a.m. to 4:00 p.m. PST. The Customer Service representative will be able to assist you with your questions and warranty information more effectively if you provide them with the following:
 - 1. The model and serial number of your WhisperKOOL UNIT.
 - 2. The location of the system and installation details, such as ventilation, construction of your wine cellar, and room size.

Model _____ **Serial Number** ____ _

Installed by _____ **Date** _____

*Whisper***KOOL™**

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Stockton, CA 95205
1-800-343-9463
www.whisperkool.com