WM SPLIT
110V Omni
OWNER'S MANUAL

WM Split PS3500
WM Split PS5000
Pump Down & Communication

NOTICE: To activate the split system warranty, the installing certified HVAC/R service tech must complete the split system warranty checklist and send back to CellarCool.

Split System Warranty Checklist

SCAN ME

CELLARCOOL

Conforms to ANSI/UL Std 427

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

CellarCool

"Engineered, Designed and Assembled in the USA"
CellarCool products are composed of parts and materials that were imported to the
United States and then assembled into the final products in Stockton, California.

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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 CellarCool cooling system. We strive to provide the highest-quality products and the best possible customer service. CellarCool Customer Service is available Monday through Friday from 6:00 a.m. to 4:30 p.m. PST. If you have any questions about your system, please email us at Support@CellarCool.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 CellarCool Cooling System?
The CellarCool 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.

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 120°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:
CellarCool
ATTN: Warranty Registration
1738 E. Alpine Avenue
Stockton, CA 95205-2505
USA

Fax to:
209-466-4606

Scan and email to:
warranty@CellarCool.com

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BEFORE YOU START   1-800-343-9463

1. **Inspect all components prior to installation.** If damage is found, please contact your distributor or CellarCool Customer Service at 1-800-343-9463.

2. The evaporator units **require a dedicated 110V, 10-amp circuit.** Use a surge protector with the system. **Do not use a GFI** (ground fault interrupter) line.

   - The 2500 Omni condensing unit requires a dedicated 110V, 15-amp circuit.
   - The 3500 Omni condensing unit requires a dedicated 110V, 15-amp circuit.
   - The 5000 Omni condensing unit requires a dedicated 110V, 20-amp circuit.

3. You are **REQUIRED** to **install a drain line** to remove condensation from the evaporator units.

4. No communication cables are required between the evaporator and condensing units.

5. *The warranty is not active until a warranty checklist has been received, reviewed, and approved.*

6. 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.

7. CellarCool requires that all split systems be installed by a certified HVAC-R technician only. NATE or equivalent is recommended.

8. *It is vital that the units be set apart and oriented so that the return air from one unit does not recirculate into the supply air of the other unit.*

If you encounter a problem with your CellarCool system, please refer to the Troubleshooting Guide. If you have any further questions or concerns, or need assistance, please contact CellarCool'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.

QUICK START GUIDE*

Pump-down Cycle

CellarCool'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.

CellarCool 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.

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

TXV Adjustments

A. A TXV adjustment may be necessary based on ambient temperatures in the cellar and at the condensing unit.
B. Adjust the TXV until the superheat measured at the suction line service valve is 16-30°F.
C. Under normal operation, with the wine cellar at 55°F and the ambient temperature at 85°F,.

TXV
The TXV is preadjusted at the factory. If the superheat is not within 16-30 at the service valve, Adjust as necessary.

ADJUSTING THE TXV
TXV is adjusted with a flat head driver. Increase superheat by turning the flat head clockwise. Decrease superheat by turning the flat head 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 liquid king valve.
*Saturation temp — liquid line temp

3-12°F SUBCOOLING REQUIRED FOR WARRANTY APPROVAL

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## 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.
- 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 CellarCool Customer Service immediately.**

Check all shipped boxes for the following contents:
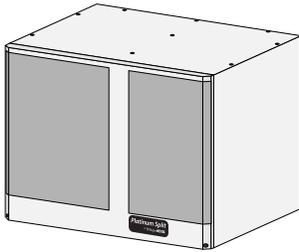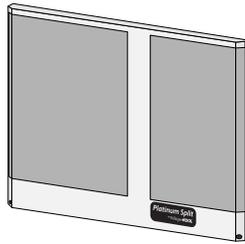
| **(1) Evaporator unit** | **(1) Filter Grille** | OR | **(1) Duct Plenum** | **(1) Omni Condenser** |
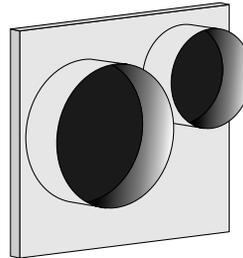
Documentation bag:
- WM Split owner's manual
- R-134a split system warranty checklist
- Evaporator unit installation template

Accessory kit bag:
- Evaporator installation hardware bag

  <u>KDT unit only</u>
- Stainless steel probe (50 feet)
- KDT Plus display cable (50 feet)
- KDT Plus wall mount bracket assembly
- KDT Plus flush mount bracket assembly
- KDT Plus display assembly
- Flush mount template
- KDT Plus hardware bag
- (18) Antimicrobial pan tabs

Evaporator installation hardware bag:
- (2) ½" x ½" nylon barbed fitting
- (1) ½" barbed tee
- (1) Double-D strain relief
- (4) ¼" adhesive cable tie mounts
- (2) Small cable ties
- (4) #8 x 1¾" hex-head screws

KDT Plus hardware bag:
- (1) ¹¹⁄₁₆" OD grommet
- (2) ½" nylon hole plug
- (4) #6 x 1" Phillips zinc Type A screw
- (4) 8-10 x ⅞" blue plastic screw anchor

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.

PREPARING THE WINE CELLAR

The performance and life of your system is contingent upon the steps you take in preparing the wine cellar. Improperly preparing your enclosure or incorrectly installing your unit may cause unit failure, leaking of condensation, and other negative side effects.

It is highly recommended that you obtain the assistance of a wine storage professional.

Wine storage professionals work with licensed contractors, refrigeration technicians, and racking companies to build well-insulated, beautiful, and protective wine cellars. CellarCool has put together some useful tips to assist in the installation process. Our recommendations are meant to act as a guide in the process of building a proper wine cellar. Your intended location may have specific needs which we do not address.

Wall & Ceiling Framing
Build wine cellar walls using standard 2x4 or 2x6 boards and ceiling joists without violating local or state codes in your area. As a general rule, the thicker the walls and the higher the insulation value, the more consistent your cellar temperature will be.

Insulation
Insulation is REQUIRED in order to properly use CellarCool products. It is vital that all walls and ceilings be insulated to keep the cellar temperature as consistent as possible during the summer and winter months. Standard fiberglass or rigid foam insulation is normally used in cellar construction; in some cases, "blown-in" insulation is used. The R-value, or quality of insulation, is determined by the rate at which heat passes through the insulation. The higher the R-value, the more resistant the insulation is to conducting heat, and the more consistent your wine cellar temperature will be. Using higher R-values in insulation will lower your operating costs and CellarCool unit run time. (R-13 is the recommended minimum; R-19 is preferred for interior cellar walls, and R-30 for ceilings and exterior walls.)

Vapor Barrier
Water vapor creates its own pressure, separate from the ambient air pressure, and will infiltrate into colder/drier areas. A vapor barrier is **REQUIRED** in order to prevent the intrusion of water vapor and maintain the correct cellar temperature and humidity. It is recommended that 6-millimeter plastic sheeting be applied to the warm side of the cellar walls. The vapor barrier must also be applied to the outside walls and ceiling. If it is impossible to reach the outside, then the plastic must be applied from within the cellar. The most common method is to wrap the entire interior, leaving the plastic loose in the stud cavity so the insulation can be placed between each stud. All of the walls and ceiling must be wrapped in plastic for a complete vapor barrier.

In areas of high humidity, such as Southern and Gulf States, the vapor barrier will prevent infiltration of warm moist air. The moist air can cause mold to form, and standing water in drain pans promotes microbial and fungal growth, which can cause unpleasant odors and indoor air quality problems. If mold is found, remove it immediately and apply a biocide to all areas.

Note: High humidity significantly increases the heat load on the cooling system.

Any break in the vapor barriers (cut, nail hole, over-lapping, etc.) will cause a moisture load and heat load on the cooling system. It is critical that a vapor barrier is intact. The conduit should be insulated and sealed on the warm air end.

PREPARING THE WINE CELLAR, CONTINUED

Unobstructed Airflow

Unobstructed airflow to and from the system is critical for the system's overall performance and lifespan. A minimum of 3 feet of clearance around the unit is crucial (5 feet is ideal). The air blown by the fans needs to circulate and either dissipate or absorb heat from the space. The system will operate more efficiently with a greater amount of air to exchange.

> **Note:** Avoid attempting to camouflage the unit. This will restrict airflow, and thus the system's ability to work efficiently.

Door and Door Seal

An exterior-grade (1¾") door must be installed as a cellar door. It is very important that weather stripping is attached to all four sides of the doorjamb. A bottom "sweep" or threshold is also required. The door must have an excellent seal to keep the cool cellar air from escaping the cellar. If the door is not sealed properly, the cooling system may run continuously, shortening its operational lifespan.

In cases where glass doors are used and the room size is close to the recommended system size, the next larger size CellarCool system should be used. This will compensate for the insulation loss due to the lower insulation rating of glass.

Ventilation

The necessity of dissipating heat away from the condensing unit is critical to the unit's performance and cannot be overstated. As the system operates and cools, a greater amount of heat is generated on the condensing side of the system. Adequate ventilation is required in order to dissipate heat away from the condensing unit. If ventilation is inadequate, the exhaust will heat the area or room and adversely affect the system's ability to cool. In some cases, it may be advisable to install a vent fan to dissipate heat within the exhaust area on the condensing side of the system. However, you must have a fresh air inlet as well.

Note: If you are unsure whether you have adequate ventilation in your installation location, please contact us at support@CellarCool.com or 1-800-343-9463.

BACK -
EXHAUST SIDE

110°F MAX

55°F

FRONT - WINE CELLAR

Condensing unit

Exterior cellar wall
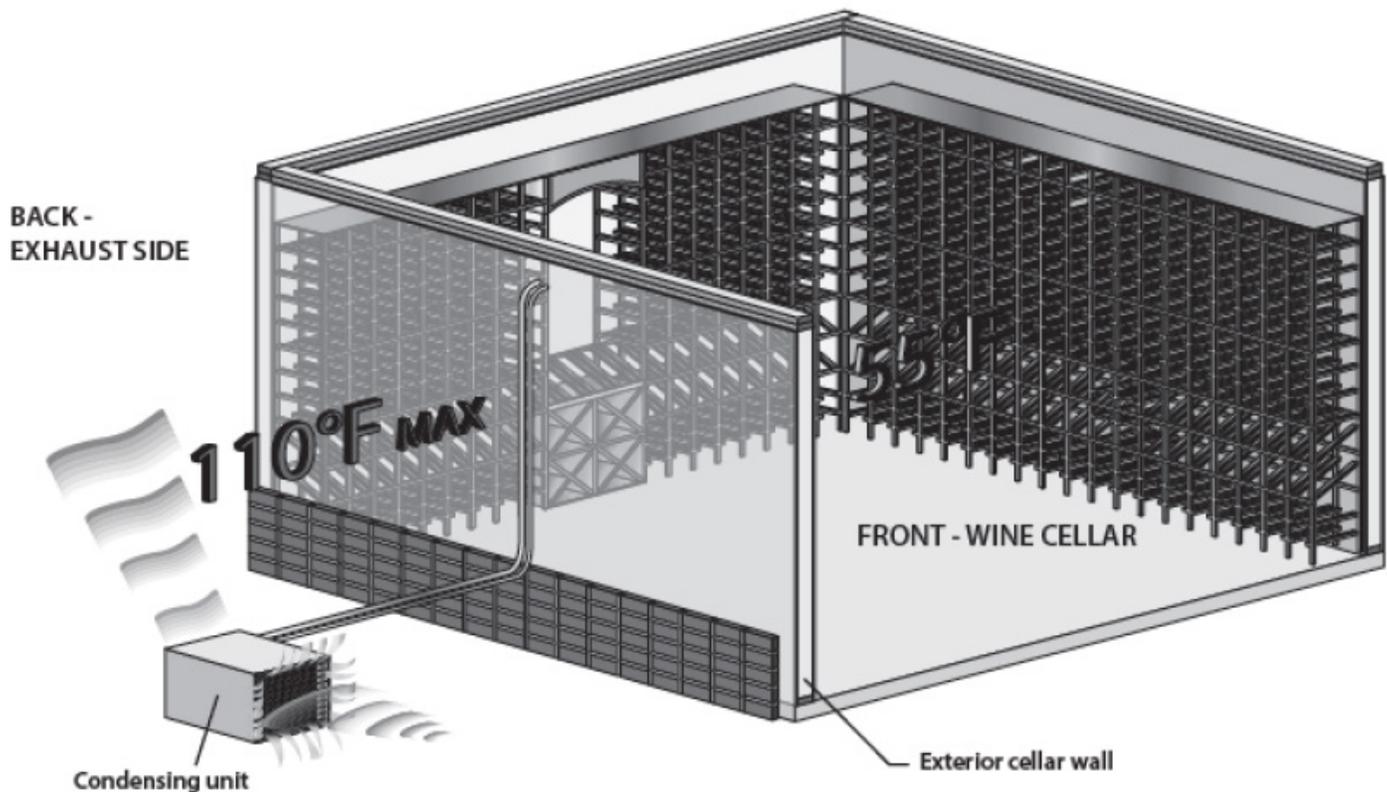
Ambient Temperature Factor

The cooling system has the ability to cool a wine cellar efficiently to 55°F as long as the ambient temperature of the area that it is exhausting to does not exceed 110°F. Therefore, you want the condensing unit to exhaust in a space which will not exceed 110°F and will allow for proper dissipation of the heat exhausted by the condensing unit. Without proper heat dissipation, the system will not have the capacity to keep the wine at a desirable 55°F.

WARNING! Allowing your system to operate in high ambient temperatures for extended periods of time will greatly decrease the life of your system and void your warranty. The cooler the temperature of the air entering the condenser coil, the more cooling capacity the system has. The lower the heat gain through a common wall, the lower the consumption of electricity.

QUICK REFERENCE GUIDE
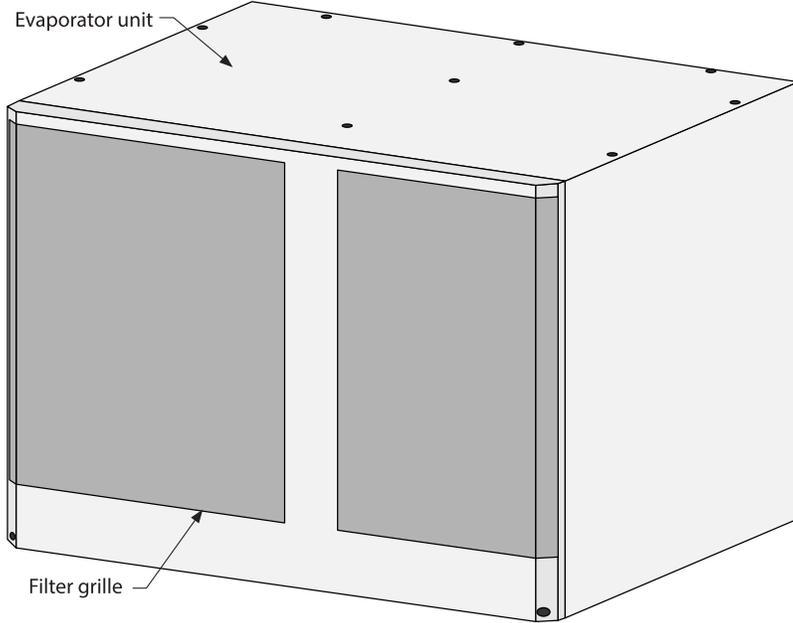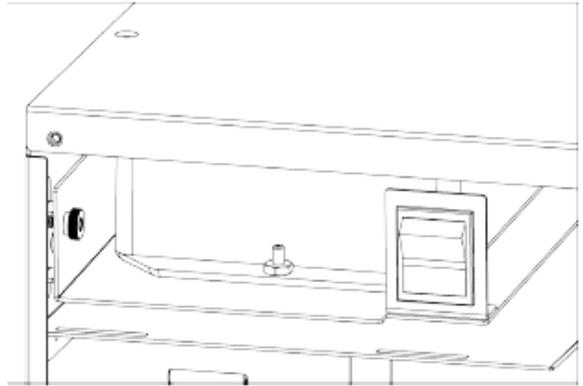
Evaporator unit

Filter grille

Fan Speed Switch

The cooling system comes equipped with a variable fan speed switch. Increasing the fan speed increases the volume of cool air blown from the system. It is set by the factory to MED. To access the fan speed switch it is necessary to remove the front grille.

Mounting keyholes (4)

THROUGH THE WALL
Option 1

Knockout for wiring

Line set knockout

Knockout for drain line

INSIDE CELLAR
Option 2

Knockout for drain line

Knockout for wiring

Line set knockout

CC WM 091925

Evaporator unit

Filter grille
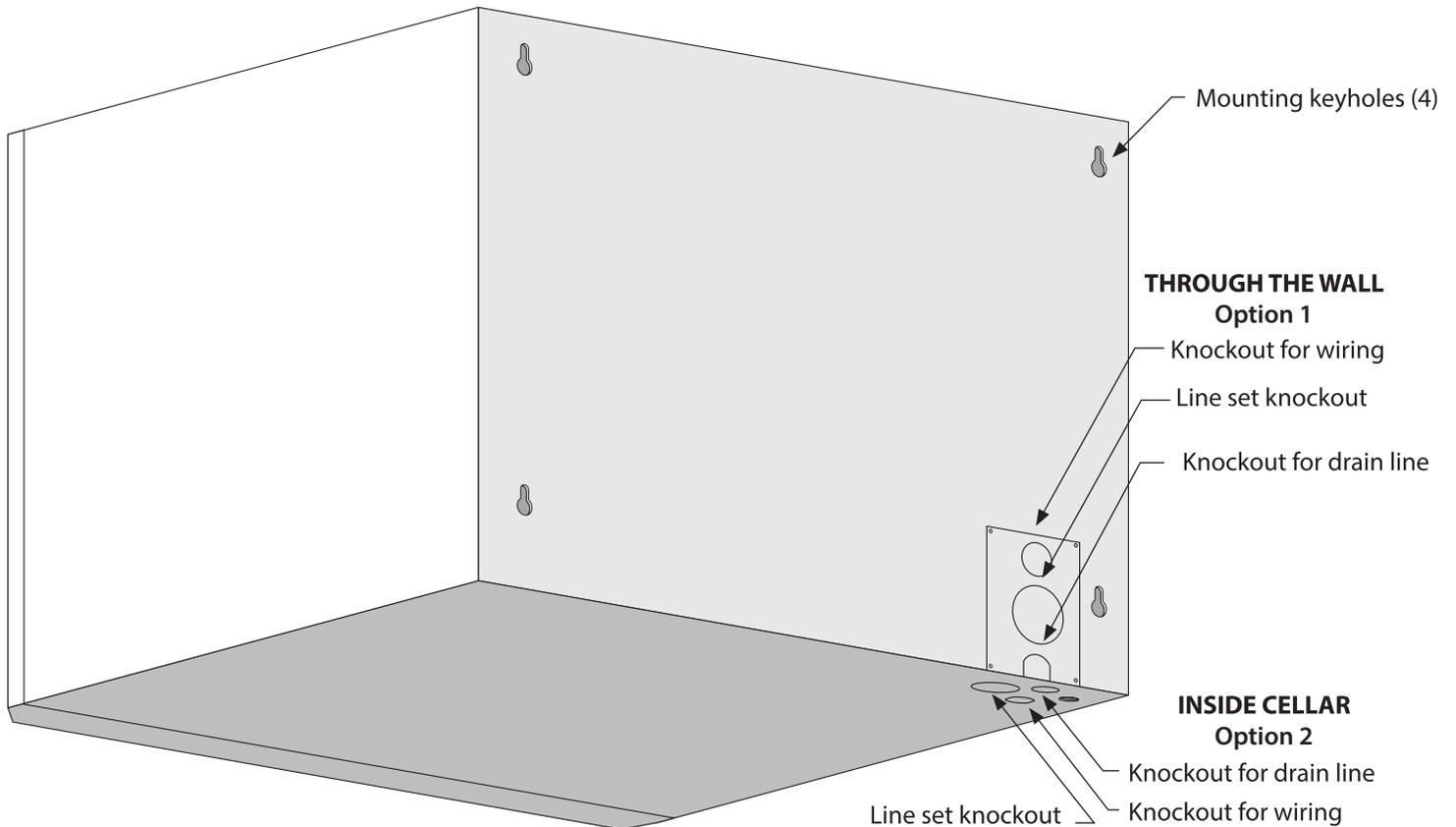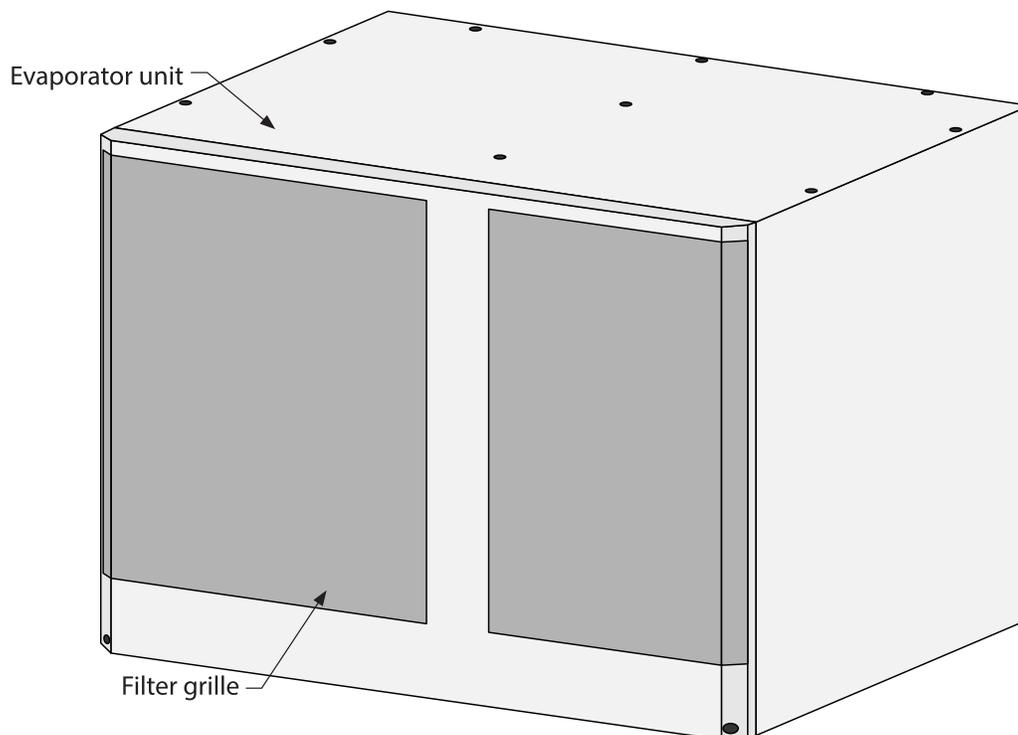
WM SPLIT 3500 WALL-MOUNTED SPECIFICATIONS

Model	WM Split Evaporator (Fan Coil Unit)	Omni Condenser (Air-Cooled Condensing Unit)
Cellar Size	Approx. 1000 cu. ft. when cellar is fully insulated and sealed with a proper vapor barrier.*	
BTU/h w/65°F air entering condenser coil	Low: 4565/5273 • Med: 4786/5488	Omni Condenser 3500 (Air-Cooled Condensing Unit)
BTU/h w/75°F air entering condenser coil	Low: 4177/4561 • Med: 4601/4669	
BTU/h w/85°F air entering condenser coil	Low: 3957/4315 • Med: 4244/4453	
Dimensions	16.1"L x 20.5"W x 15.5"H	23 "L x 15.75 "W x 15.3 "H
Refrigerant	R-134a	
Condensing Unit HP	0.5 HP	
Voltage Rating	110V (15-amp dedicated circuit required)	110V (15-amp dedicated circuit required)
Weight	54 lbs	75 lbs
Amps	2.2 Running Amps	9.7 running amps
Line Set	Liquid line ¼" OD; Suction line ½" OD (less than 50ft.), ⅝" (greater than 50.ft)	
Drain Line	½" ID clear plastic tubing (not provided) - Rigid tube recommended	
Installation	Evaporator unit is installed in the cellar. Condensing unit can be installed up to 100 line feet from the evaporator unit.	
Thermostat	KDT- Advanced digital display (50-ft. cable), liquid-temperature-measuring bottle probe (50-ft. cable), 24V - Customer supplied.	
Temp. Delta	Can maintain a 55°F cellar temperature with up to 120°F condenser air intake temperature.	
Warranty	Two-year limited warranty (parts and labor).	

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WM SPLIT 5000 WALL-MOUNTED SPECIFICATIONS

Model	WM Split Evaporator (Fan Coil Unit)	Omni Condenser (Air-Cooled Condensing Unit)
Cellar Size	Approx. 1750 cu. ft. when cellar is fully insulated and sealed with a proper vapor barrier.*	
BTU/h w/65°F air entering condenser coil	Low: 4814/5687 • Med: 5133/5777	Omni Condenser 5000 (Air-Cooled Condensing Unit)
BTU/h w/75°F air entering condenser coil	Low: 4455/4997 • Med: 4607/5012	
BTU/h w/85°F air entering condenser coil	Low: 4370/4834 • Med: 4577/4982	
Dimensions	16.1"L x 20.5"W x 15.5"H	23 "L x 15.75 "W x 15.3 "H
Refrigerant	R-134a	
Condensing Unit HP	0.5+ HP	
Voltage Rating	110V (15-amp dedicated circuit required)	110V (20-amp dedicated circuit required)
Weight	54 lbs	86 lbs
Amps	2.2 Running Amps	14.08 Running Amps
Line Set	Liquid line ¼" OD; Suction line ½" OD (less than 50ft.), ⅝" (greater than 50.ft)	
Drain Line	½" ID clear plastic tubing (not provided) - Rigid tube recommended	
Installation	Evaporator unit is installed in the cellar. Condensing unit can be installed up to 100 line feet from the evaporator unit.	
Thermostat	KDT- Advanced digital display (50-ft. cable), liquid-temperature-measuring bottle probe (50-ft. cable), 24V - Customer supplied.	
Temp. Delta	Can maintain a 55°F cellar temperature with up to 120°F condenser air intake temperature.	
Warranty	Two-year limited warranty (parts and labor).	

*Sizing the System to the Room
There are several factors such as glass, stone, and concrete which will change the required amount of BTUs needed to properly cool your wine room. We strongly recommend utilizing the cellar wizard on the CellarCool website in order to ensure you are selecting the proper cooling system for your application. Under-sizing your cooling system can lead to premature failure and/or prevent the system from reaching the desired set temperature.

Supply air

Return air

Duct plenum

WM SPLIT 3500 FULLY-DUCTED SPECIFICATIONS

Model	WM Split Evaporator (Fan Coil Unit)	Omni Condenser (Air-Cooled Condensing Unit)
Cellar Size	Approx. 1000 cu. ft. when cellar is fully insulated and sealed with a proper vapor barrier.*	
BTU/h w/65°F air entering condenser coil	Low: 4463/5154 • Med: 4724/5337	Omni Condenser 3500 (Air-Cooled Condensing Unit)
BTU/h w/75°F air entering condenser coil	Low: 3912/4348 • Med: 4351/4544	
BTU/h w/85°F air entering condenser coil	Low: 3766/4096 • Med: 4082/4277	
Dimensions	22.1 ″L x 22.5 ″W x 15.5 ″H	23 ″L x 15.75 ″W x 15.3 ″H
Refrigerant	R-134a	
Condensing Unit HP	0.5 HP	
Voltage Rating	110V (15-amp dedicated circuit required)	110V (15-amp dedicated circuit required)
Weight	54 lbs	75 lbs
Amps	2.2 Running Amps	9.7 running amps
Line Set	Liquid line ¼″ OD; Suction line ½″ OD (less than 50ft.), ⅝″ (greater than 50.ft)	
Drain Line	½″ ID clear plastic tubing (not provided) - Rigid tube recommended	
Installation	Evaporator unit is installed in the cellar. Condensing unit can be installed up to 100 line feet from the evaporator unit.	
Thermostat	KDT- Advanced digital display (50-ft. cable), liquid-temperature-measuring bottle probe (50-ft. cable), 24V - Customer supplied.	
Temp. Delta	Can maintain a 55°F cellar temperature with up to 120°F condenser air intake temperature.	
Warranty	Two-year limited warranty (parts and labor).	

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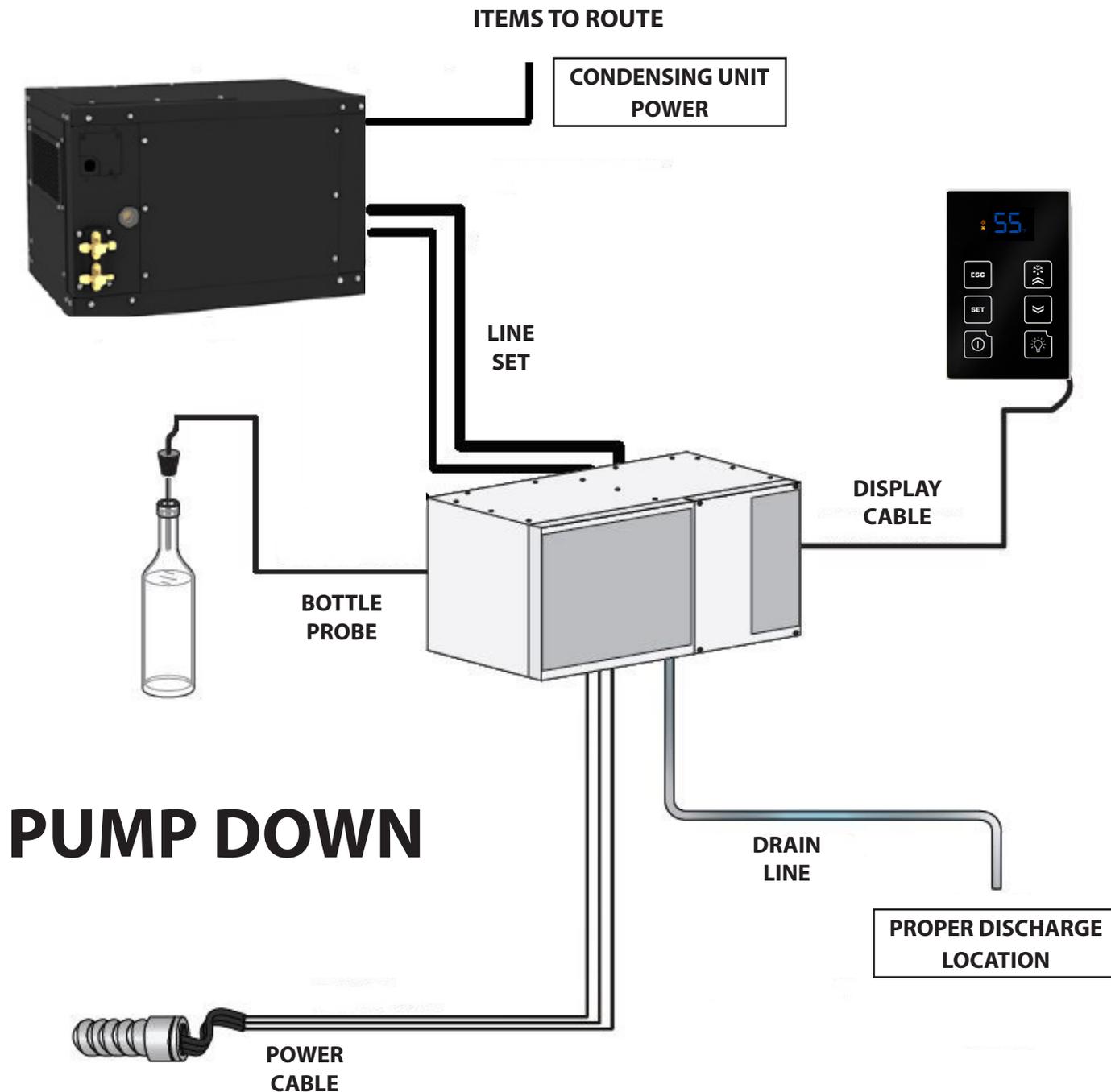## WM SPLIT 5000 FULLY-DUCTED SPECIFICATIONS

Model	WM Split Evaporator (Fan Coil Unit)	Omni Condenser (Air-Cooled Condensing Unit)
Cellar Size	Approx. 1750 cu. ft. when cellar is fully insulated and sealed with a proper vapor barrier.*	
BTU/h w/65°F air entering condenser coil	Low: 4641/5415 • Med: 4724/5337	Omni Condenser 5000 (Air-Cooled Condensing Unit)
BTU/h w/75°F air entering condenser coil	Low: 4427/4839 • Med: 4351/4544	
BTU/h w/85°F air entering condenser coil	Low: 4322/4798 • Med: 4082/42772	
Dimensions	22.1 "L x 22.5 "W x 15.5 "H	23 "L x 15.75 "W x 15.3 "H
Refrigerant	R-134a	
Condensing Unit HP	0.5+ HP	
Voltage Rating	110V (15-amp dedicated circuit required)	110V (20-amp dedicated circuit required)
Weight	54 lbs	86 lbs
Amps	2.2 Running Amps	14.08 Running Amps
Line Set	Liquid line ¼" OD; Suction line ½" OD (less than 50ft.), ⅝" (greater than 50.ft)	
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Warranty	Two-year limited warranty (parts and labor).	

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There are several factors such as glass, stone, and concrete which will change the required amount of BTUs needed to properly cool your wine room. We strongly recommend utilizing the cellar wizard on the CellarCool website in order to ensure you are selecting the proper cooling system for your application. Under-sizing your cooling system can lead to premature failure and/or prevent the system from reaching the desired set temperature.

ITEMS TO ROUTE BEFORE INSTALLING THE EVAPORATOR UNIT

1. Route the line set from the condensing unit to the desired evaporator unit installation location.

2. Route the display cable from the desired location to the evaporator installation location (see display information).

3. Route the bottle probe cable from the desired thermostat bottle location to the evaporator unit installation location (see page bottle probe information).

4. Route the drain line from a proper discharge location to the evaporator unit installation location (see drain line information).

5. Route the power cable wiring to the evaporator unit installation location.

ITEMS TO ROUTE

CONDENSING UNIT
POWER

LINE
SET

DISPLAY
CABLE

BOTTLE
PROBE

PUMP DOWN

DRAIN
LINE

PROPER DISCHARGE
LOCATION

POWER
CABLE

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.)18-5 thermostat wire (communication cable) must be run between the evaporator unit and the condensing unit.

24V Wiring Connections (Evaporator Unit)

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 (red to red, green to green, and blue to blue).

Thermostat Wiring Connections

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

PUMP DOWN 24V
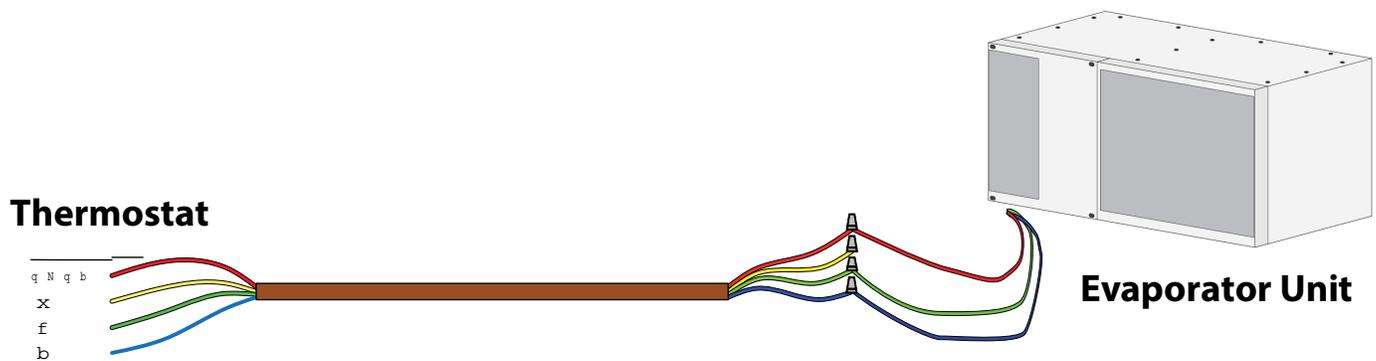
Thermostat

Evaporator Unit

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.

ITEMS TO ROUTE BEFORE INSTALLING THE EVAPORATOR UNIT

1. Route the line set from the condensing unit to the desired evaporator unit installation location.

2. Route the display cable from the desired location to the evaporator installation location (see page 22 for more display information).

3. Route the bottle probe cable from the desired thermostat bottle location to the evaporator unit installation location (see page 21 for more bottle probe information).

4. Route the drain line from a proper discharge location to the evaporator unit installation location (see page 20 for more drain line information).

5. Route the power cable wiring to the evaporator unit installation location.

ITEMS TO ROUTE

CONDENSING UNIT POWER

24V COMMUNICATION CABLE

LINE SET

DISPLAY CABLE

BOTTLE PROBE

COMMUNICATION

DRAIN LINE

PROPER DISCHARGE LOCATION

POWER CABLE

24V WIRING CONNECTIONS (EVAPORATOR UNIT)

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24V Wiring Connections (Evaporator Unit)

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 (red to red, green to green, and blue to blue). **NOTE:** The evaporator will not contain a yellow wire. See the next step for more information on the yellow wire.

4. Connect one wire from the 18-5 thermostat wire to the low-voltage yellow wire (1). Then connect the other 18-5 wire to the blue low-voltage wires (2). The other three wires will not be used.

Thermostat Wiring Connections

Follow the thermostat installation instructions. **NOTE:** The white wire will not be used, as there is no heating function.
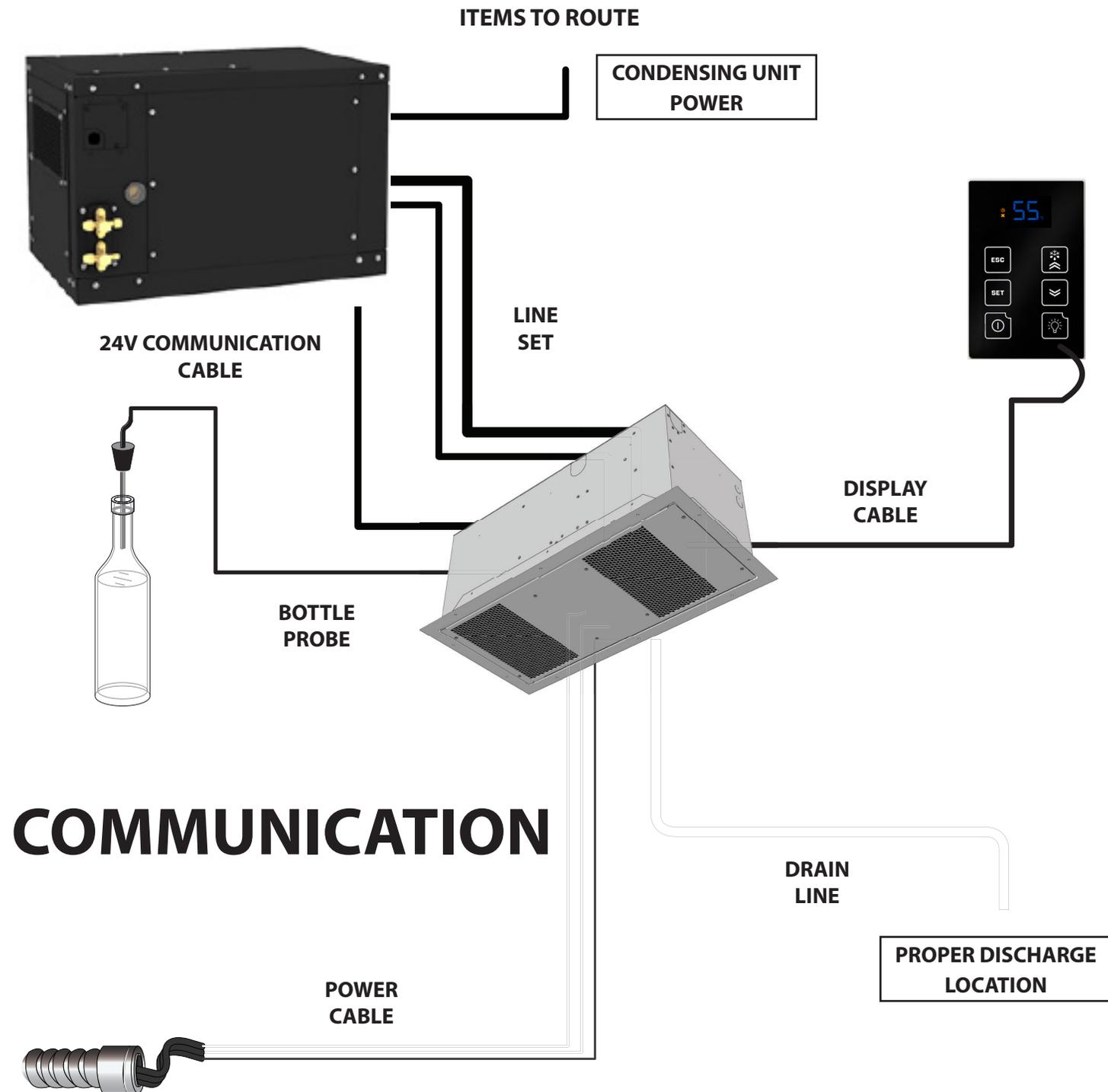
COMMUNICATION 24V
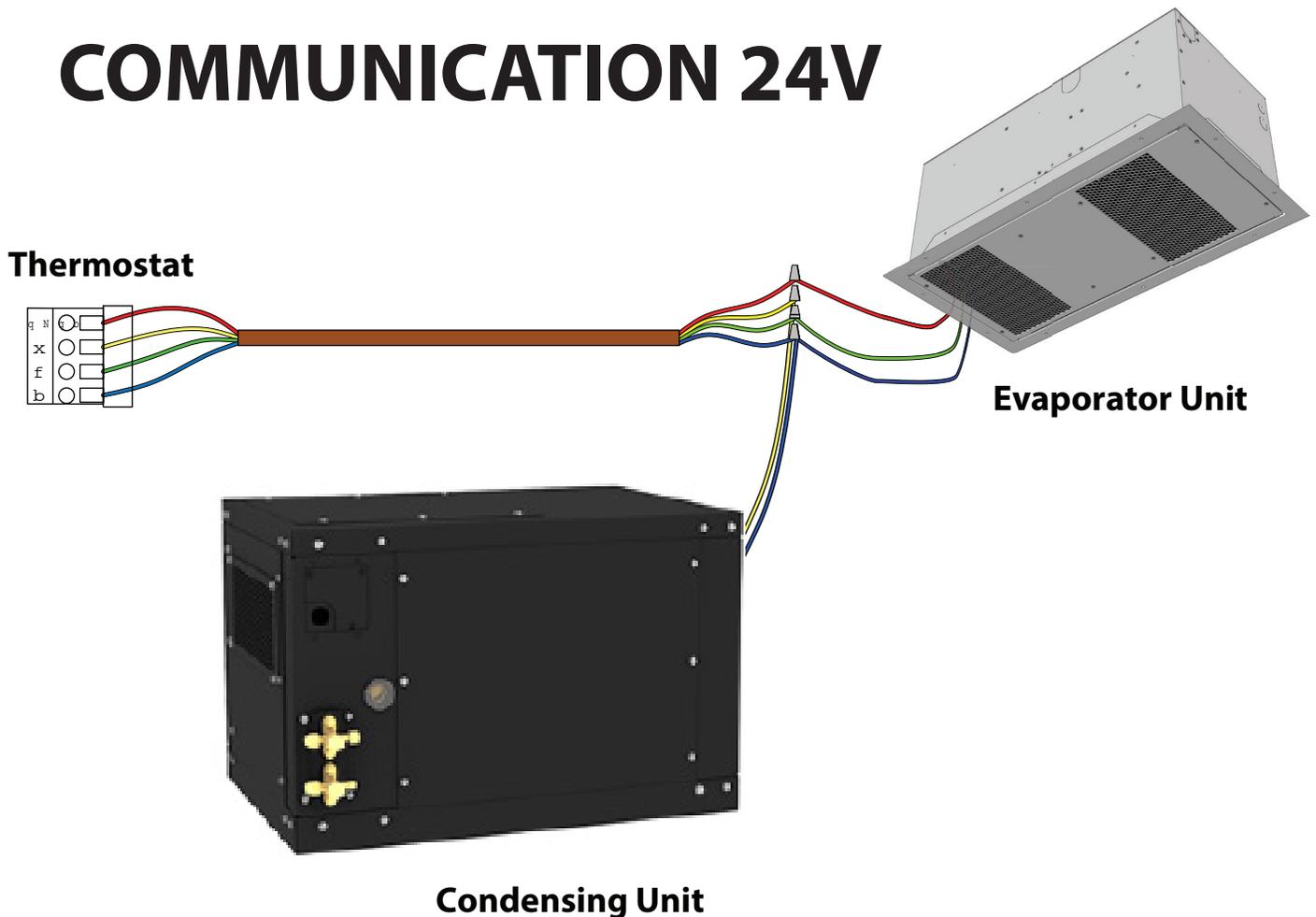
Thermostat

Evaporator Unit

Condensing Unit

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.

PREPARING THE WALL-MOUNTED EVAPORATOR UNIT

Required Tools:

- Drill
- 5/32" drill bit
- 1/4" socket drill bit
- 1/4" wrench
- Phillips-head screwdriver
- Tape measure

- Drywall saw
- Ladder
- Level
- Pliers
- Pencil
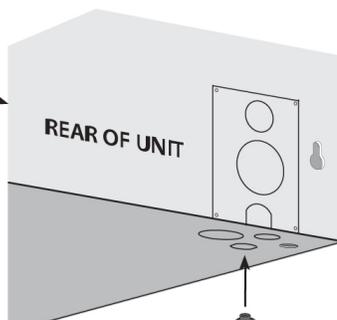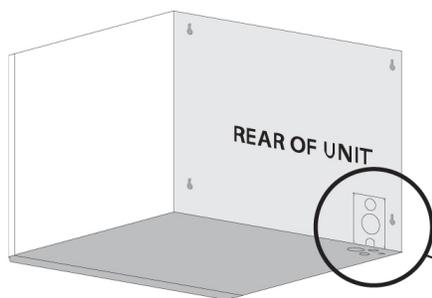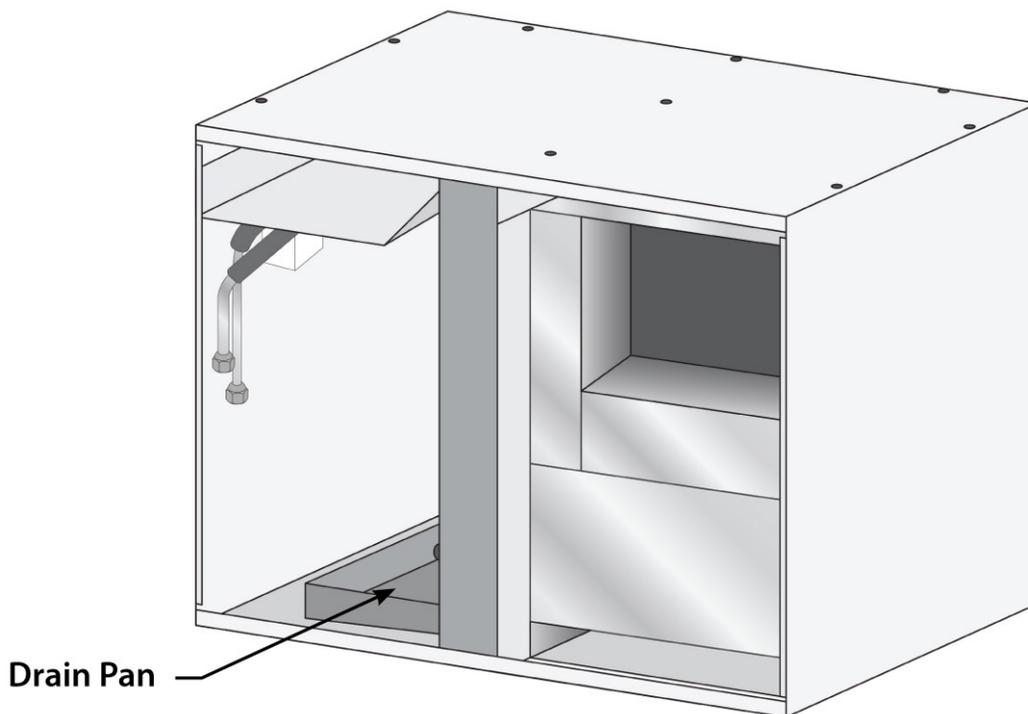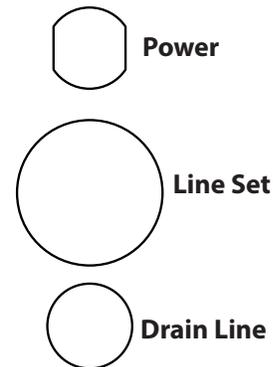
Drain Pan

1. Remove the knockouts that you will be using to route the line set, power wires, display cable, bottle probe, and drain line.
2. Remove the insulation from the knockout holes.
3. For ease of installation, remove the nine (9) screws securing the top and remove the top.

REAR OF UNIT

REAR OF UNIT

Bottle probe connector routing location

Power

Line Set

Drain Line

INSTALLING THE WALL-MOUNTED EVAPORATOR UNIT

Note: The evaporator is designed to be mounted on two standard wall studs spaced 16" apart.

1. Locate two (2) wall studs in the desired mounting location.
2. Mark vertical lines on each stud 16" apart.

Note: The top of the unit must be installed a minimum of 6" and a maximum of 18" from the ceiling.

16"

3. Mark an intersecting horizontal line at the desired height of the unit.
4. Make a mark on each stud 13½" down from the intersection of the horizontal and vertical lines.
5. Install the four (4) supplied 1¾" hex-head screws into the studs at the locations marked leaving 1/8" between the wall surface and screw head.
6. If routing through a wall, cut out an access hole for the line set, drain line, display cable, and power wires.
7. Raise the evaporator to the installation location. Align the rear keyholes with the mounting screws and mount the unit.
8. Using a 1/4" wrench or socket, tighten the top mounting screws.

1/8"

WALL STUD
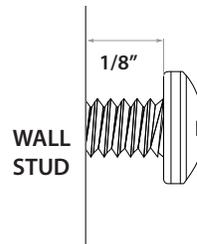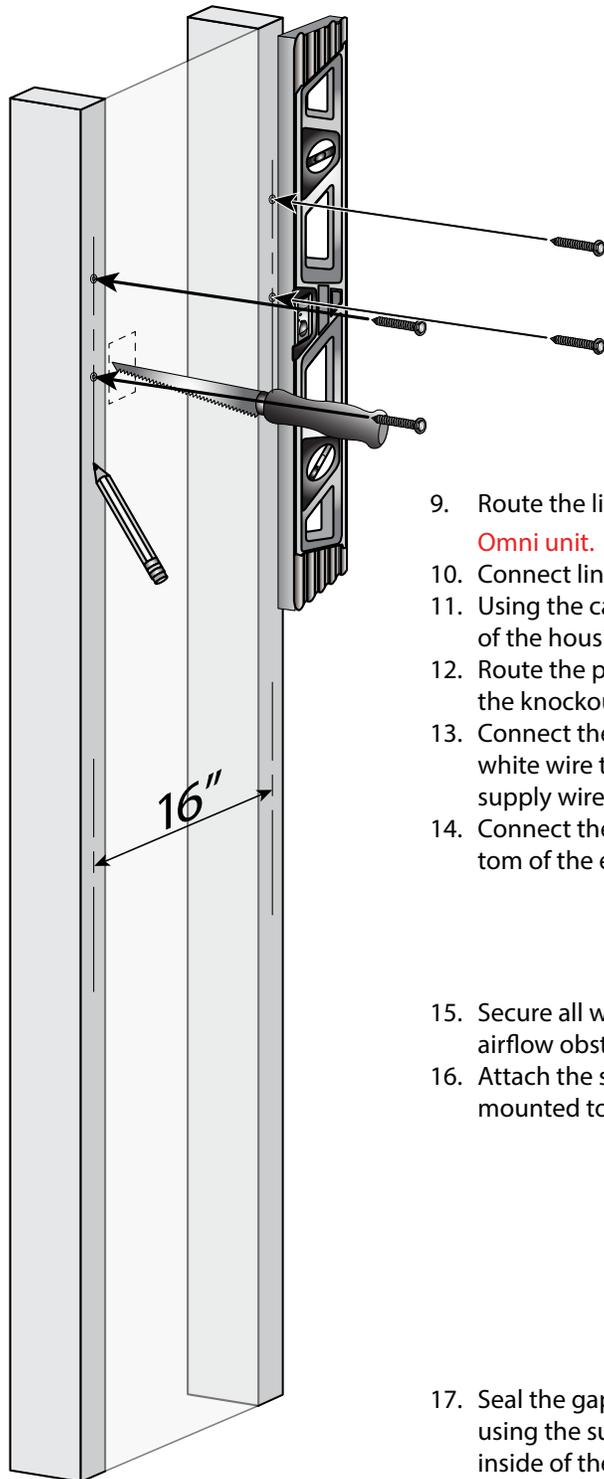
9. Route the liquid and suction lines through the knockouts in the housing towards the Omni unit.
10. Connect line set to the unit using the line set **connection instructions.**
11. Using the cable ties and cable tie mounts provided, secure the drain line to the bottom of the housing to ensure a downward slope.
12. Route the power wire, bottle probe connector, and display cable into the unit through the knockouts.
13. Connect the green wire to the green wire, the black wire to the black wire, and the white wire to the white wire.Install the supplied black strain relief to secure the power supply wires in the housing.
14. Connect the display cable labeled "UNIT" to the wire labeled "UNIT" located in the bottom of the evaporator compartment.

UNIT   UNIT

15. Secure all wiring neatly and as close to the left wall as possible in order to minimize airflow obstruction.
16. Attach the supplied bottle probe to the circular connector located on the small bracket mounted to the side wall in the evaporator compartment.
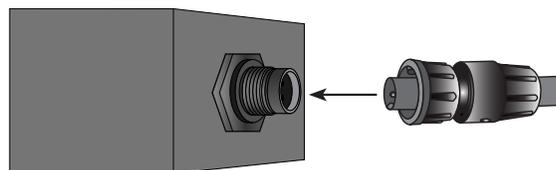
17. Seal the gaps around the display cable, bottle probe cable, and power wire knockouts using the supplied three-inch pieces of cork tape. (For best results, install the cork tape inside of the unit.)

INSTALLING THE WALL-MOUNT KIT

1. If removed, reinstall the top panel of the unit housing.
2. Align the front grille with the four (4) ball studs on the housing. Push the front grille onto the ball studs until it snaps into place.
3. Using a Phillips-head screwdriver, fasten the two (2) screws to fasten the grille to the unit.

DRAIN PAN
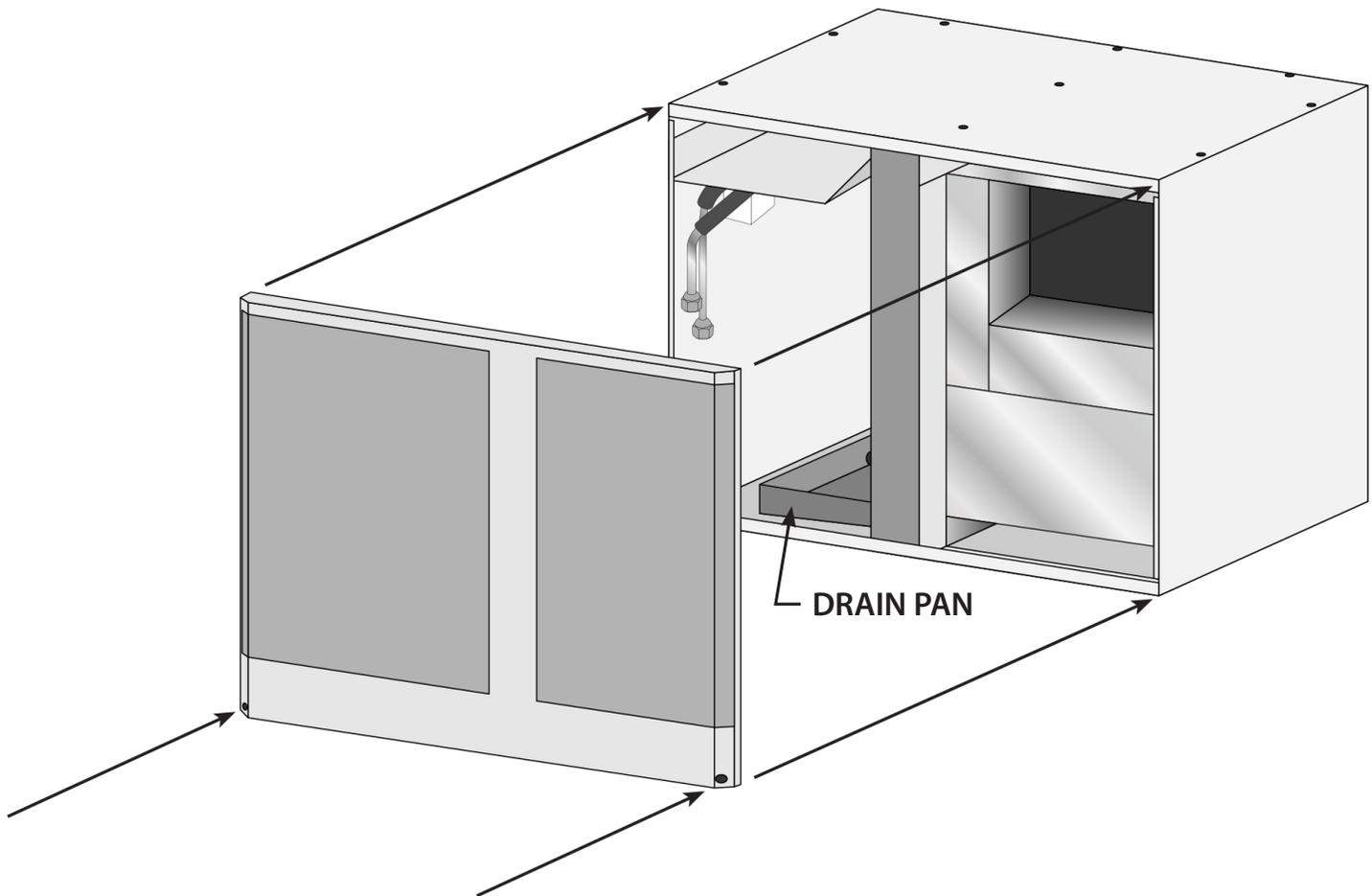
INSTALLING THE DUCTED PLENUM

1. If removed, reinstall the top panel of the unit housing.
2. Align the front grille with the four (4) ball studs on the housing. Push the front grille onto the ball studs until it snaps into place.
3. Using a Phillips-head screwdriver, fasten the two (2) screws to fasten the grille to the unit.
4. Connect the supply and return duct work to the unit.
5. Using duct tape or foil tape, seal the seam between the plenum and unit.
6. Insulate all exposed metal on the unit to prevent surface condensation.

Note: Max ducting length is 25 feet.

Note: A 12" x 12" return air filter grille must be installed to prevent contaminants from entering the cooling system. Supply and return ducts must be insulated so they do not sweat or pick up heat.

PREPARING THE FULLY-DUCTED EVAPORATOR UNIT
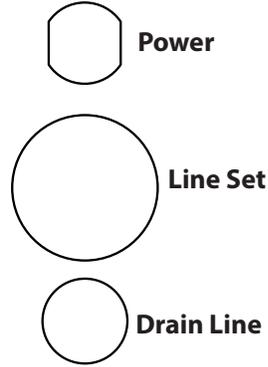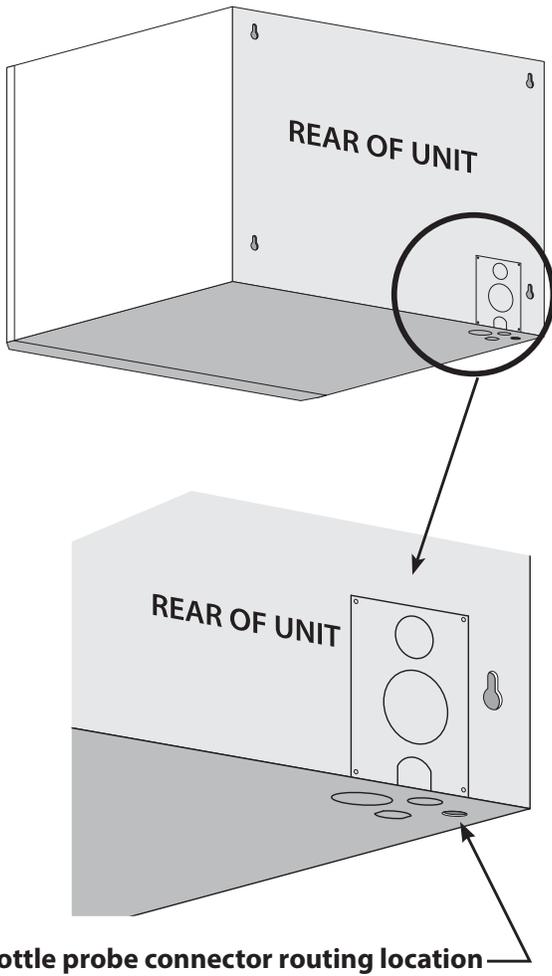
REAR OF UNIT

REAR OF UNIT

Bottle probe connector routing location

Power

Line Set

Drain Line

1. Remove the knockouts that you will be using to route the line set, power wires, display cable, bottle probe, and drain line.
2. Remove the insulation from the knockout holes.
3. For ease of installation, remove the nine (9) screws securing the top and remove the top.
4. Mount the remote display and run the display cable to the evaporator unit

Note: For every 90° bend in the ducting, the system loses 13 CFM of airflow.

Fan Speed Switch

The cooling system comes equipped with a variable fan speed switch. Increasing the fan speed increases the volume of cool air blown from the system. It is set by the factory to MED. To access the fan speed switch it is necessary to remove the front grille.
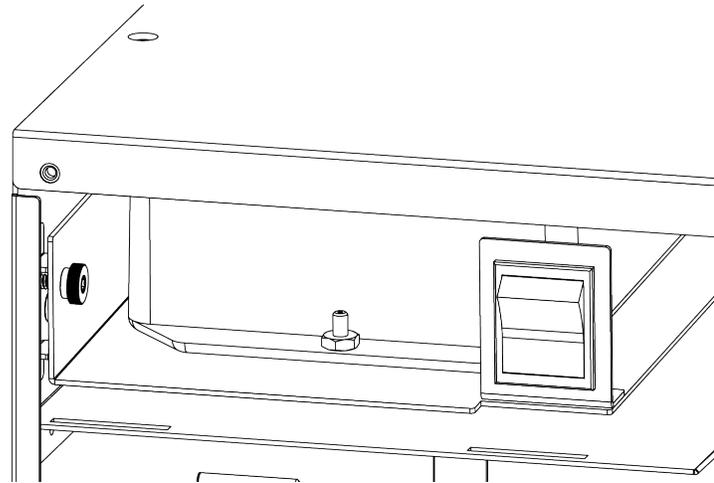
INSTALLING THE FULLY DUCTED EVAPORATOR

1. Using ¼" and ½" copper tubing, route the liquid and suction lines through the knockouts in the housing. Be sure to extend the tubing far enough outside of the housing to extend through the wall if necessary. **NOTE:** ½" copper tubing will slip over the ⅜" suction line on the evaporator for an easy connection.

2. Remove the solenoid coil and wrap the solenoid valve in a wet rag to prevent overheating.

3. To prevent oxidation, purge the system with nitrogen.

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

5. Insulate the suction line using Armaflex or similar insulation.

6. Using the cable ties and cable tie mounts provided, secure the drain line to the bottom of the housing to ensure a downward slope.

7. Route the power wire, display cable, and the bottle connector through the knockouts.

8. Remove the wire nuts from the black, white, and green wires located in the lower left corner of the evaporator unit.

9. Connect the green wire to the green wire, the black wire to the black wire, and the white wire to the white wire.

10. Install the supplied black strain relief to secure the power supply wires and bottle probe wire in the housing.

11. Connect the display cable labeled "**UNIT**" to the wire labeled "**UNIT**" located in the bottom of the evaporator compartment.


12. Secure all wiring neatly and as close to the left wall as possible in order to minimize airflow obstruction.

13. Attach the supplied bottle probe to the circular connector on the bottom of the electrical panel. (See Figure 1.) Follow the directions on page 19 for correct installation and placement of the bottle probe.

14. Seal the air gaps around the display cable, bottle probe cable, and power wire knockouts by installing the supplied three-inch pieces of cork tape. (For best results, install the cork tape inside of the unit.)

Figure 1
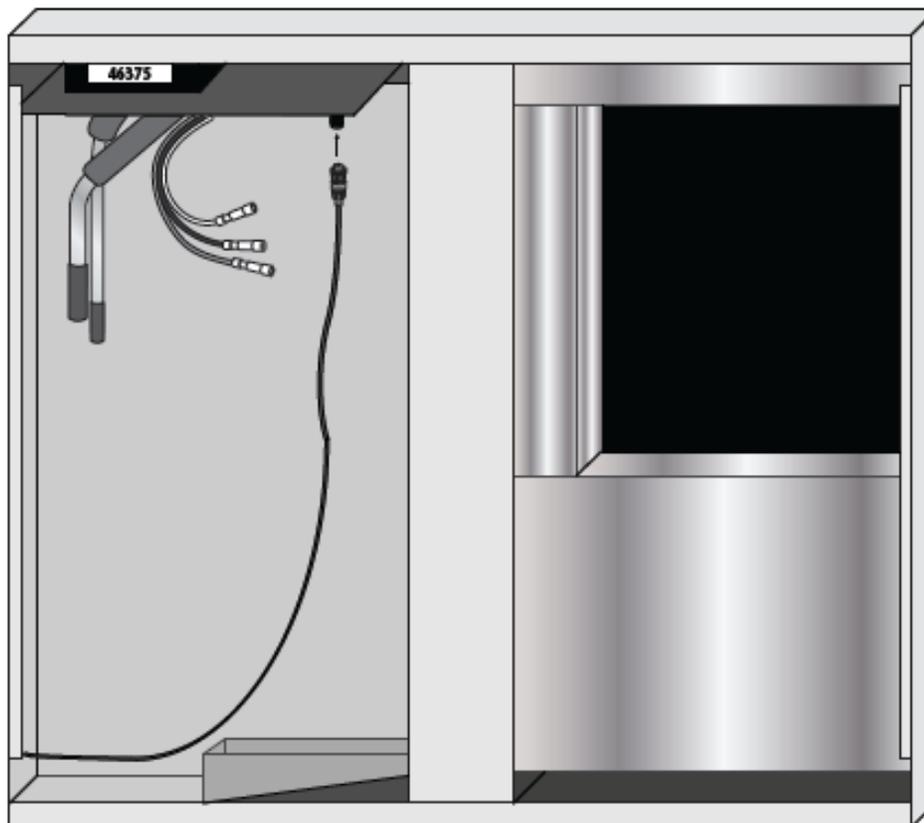
INSTALLING THE FULLY-DUCTED EVAPORATOR UNIT

1. Route the liquid and suction lines through the knockouts in the housing.
2. Connect line set flare fittings to unit line set fittings.
3. Insulate the suction line using Armaflex or similar insulation.
4. Using the cable ties and cable tie mounts provided, secure the drain line to the bottom of the housing to ensure a downward slope.
5. Route the power wire, display cable, and the bottle connector through the knockouts.
6. Connect the green wire to the green wire, the black wire to the black wire, and the white wire to the white wire.
7. Install the supplied black strain relief to secure the power supply wires and bottle probe wire in the housing.
8. Connect the display cable labeled "UNIT" to the wire labeled "UNIT" located in the bottom of the evaporator compartment.
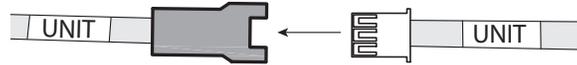
9. Secure all wiring neatly and as close to the left wall as possible in order to minimize airflow obstruction.
10. Attach the supplied bottle probe to the circular connector located on the small bracket mounted to the side wall in the evaporator compartment.
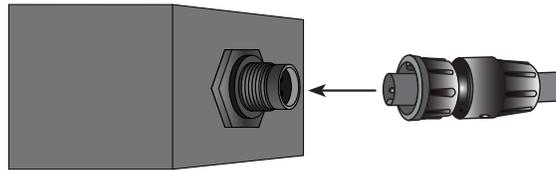
11. Seal the air gaps around the display cable, bottle probe cable, and power wire knockouts by installing the supplied three inch pieces of cork tape. (For best results, install the cork tape inside of the unit.)

CONNECTING THE LINESET

Connect the refrigerant piping according to these instructions.

1. **Cut the pipes**
   When cutting the pipes be very cautious to cut and flare them properly. This will ensure a proper connection and minimize the need for maintenance.

   1. Measure the distance between the indoor and outdoor units.
   2. Using a pipe cutter, cut the pipe. Cut just below your measured distance.
   3. Make sure that the pipe is cut at a perfect 90° angle. Refer to the example.
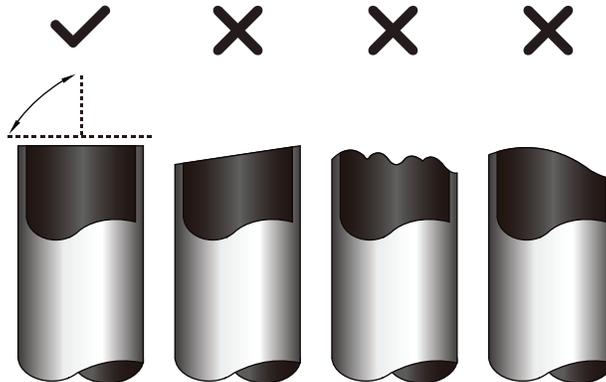
2. **Remove Burrs**
   Burrs can affect the air tight seal of refrigerant piping connection. They must be completely removed.

   1. Hold the pipe at a downward angle to prevent burrs from falling into the pipe.
   2. Using a reamer or deburring tool to remove all burrs from the cut section of the pipe.
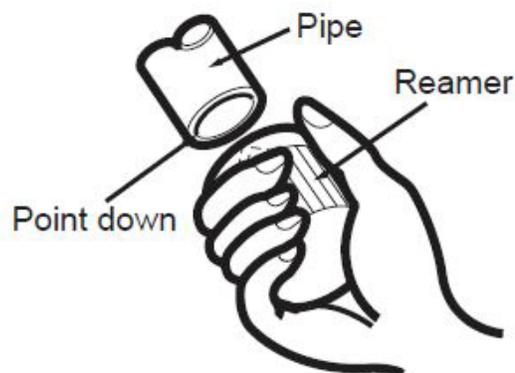
3. **Flare Pipe Ends**
   Proper flaring is essential to acheive an airtight seal.

   1. After Removing burrs from cut pipe, seal the ends with PVC tape to prevent foreign materials from entering the pipe.
   2. Sheath the pipe with insulating material.
   3. Place flare nuts on both ends of pipe. (Flare nuts provided with lineset.) Make sure they are facing the right direction. After flaring the pipe the nuts will not be removable. Remove PVC tape ends of pipe when ready to perform flare work.
   4. Clamp flare form on end of pipe must extend beyond the edge of the flare form in accordance with the dimensions in the table (next page).
   5. Place flaring tool onto form.
   6. Turn the handle of the flaring tool clockwise until the pipe is fully flared.
   7. Remove the flaring tool and flare form, then inspect the ends for any cracks and make sure the flaring is even.

CONNECTING THE LINESET, CONTINUED

PIPING EXTENSION BEYOND FLARE FORM

Outer Diameter of Pipe (in.)	A (in.)	
	Min.	Max.
¼"	0.0275"	0.05"
⅜"	0.04"	0.063"
½"	0.04"	0.07"
⅝"	0.078"	0.086"
¾"	0.078"	0.094"

Flare form

A
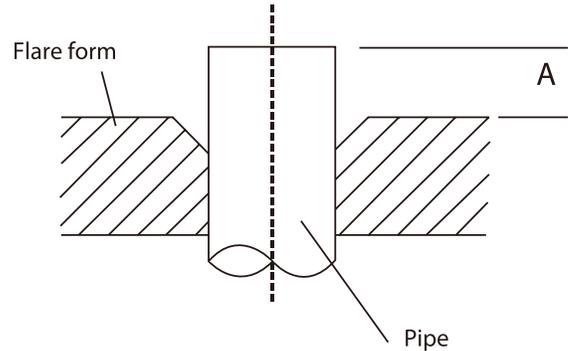
Pipe

1. **Cut the pipes**
   When connecting refrigerant pipes, be careful not to use any excessive torque or to deform the piping. You should first connect the low pressure pipe, then the high pressure pipe. It is recommended to use a CFC and HCFC compatible thread sealant on all threaded pipe connections.

1. Align the center of the two pipes that will be connected. To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.
2. Tighten the flare nut as tight as possible by hand.
3. Using a spanner, grip the nut on the unit tubing.
4. While firmly gripping the nut on the unit tubing, use a torque wrench to tighten the flare nut according to the torque values in the torque requirements table (**below)**. Loosen the flaring nut slightly, then tighten again. Prior to applying recommended torque to brass flare nut, it is highly recommended that a small amount of refrigeration oil be applied to the flare threads, flare sealing surface, and copper tubing flared surface. This will prevent galling of sealing surfaces and aid in providing a refrigerant tight seal (Use refrigeration oil for R134a). Be careful not to overtighten the connection, as this may damage the flare or fitting.
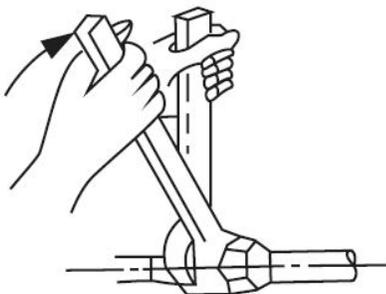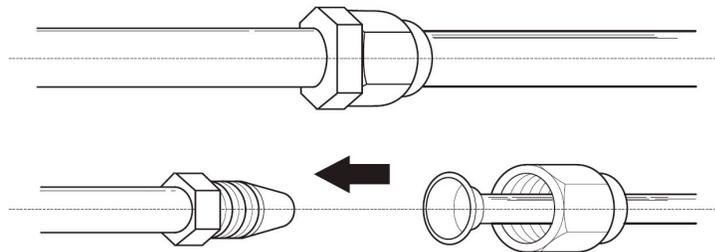
TORQUE REQUIREMENTS

Outer Diameter of Pipe (in.)	Tightening Torque (lb/ft)
¼"	11 lb/ft
⅜"	18.4 lb/ft
½"	25.8 lb/ft
⅝"	33.19 lb/ft
¾"	47.94 lb/ft

EVAPORATOR DUCTING OVERVIEW

Use ductwork to connect the unit to the supply and return outlets in the wine cellar. Use only insulated ductwork to minimize cooling losses, prevent sweating, and reduce noise. Use ductwork on the condenser section to redirect or absorb sound, bring in outside air to the unit inlet, and/or exhaust the hot air.

> **Note:** Do not exceed a total of 12.5 feet for each length of ductwork run and a combined total of 25 feet for both the supply and return lengths.

Avoid crimping the flexible ducts. This reduces airflow, causing the unit to operate improperly. Be sure all ductwork and outer surfaces in contact with the airflow are insulated and have a vapor barrier on the outside. Uninsulated supply and return ducts may cause bare, exposed metal surfaces to sweat, further degrading the insulation and equipment cooling capacity.

⚠️ **Do not allow sharp turns to squeeze or decrease the inside diameter of the flexible ducting.** ⚠️

General duct recommendations:

- Provide support for the flexible duct to prevent sags and bends.

- WM Split duct size: 8" supply and 10" return

- Stretch out the duct to make a smoother interior which reduces air resistance.

- Maximum duct length is 25 feet per evaporator unit.

- For 90° bends, use a 90° adjustable elbow.

- No more than two 90° bends on each duct. Sweep 90° bends are recommended rather than sharp 90° bends.

   NOTE: For every 90° bend, the system loses 13 CFM of airflow.

   NOTE: A 12" x 12" return air filter grille must be installed to prevent contaminants from entering the cooling system. Supply

- duct must be insulated so it does not sweat or pick up heat.

- Generously apply duct sealant to all metal seams to fill in gaps that can leak air. Allow sealant to dry until firm to the touch

- before applying fiberglass insulation.

- Do not squeeze or reduce the inside diameter of the ducts, as this will reduce airflow.

- Use short and straight ductwork where possible.

- Check that all fan blades move freely.

- Keep air paths free of loose foreign objects and debris.

- To provide adequate airflow the fan speed must be set to high when the unit is ducted.

- Locate the supply and return grilles inside the cellar to create an airflow pattern that maximizes air circulation in the room.

- Avoid short circulation of the air.

- If the unit is installed through the wall, it must be mounted no more than 18 inches from the wine cellar ceiling. If the unit is

- ducted, the cold air supply duct must be installed no more than 18 inches from the wine cellar ceiling.

DO NOT:

Install through-the-wall return air grilles at floor level where they will collect dust from the floor.
Locate the supply or return air grille where it is blocked by bottles, boxes, or cases.

OMNI DUCTING OVERVIEW

Use ductwork to connect the unit to the supply and return outlets in the ventilated area. Use only insulated ductwork. Use ductwork on the condenser section to redirect or absorb sound, bring in outside air to the unit inlet, and/or exhaust the hot air.

> **Note:** Do not exceed a total of 25 feet for each length of ductwork run and a combined total of 50 feet for both the supply and return lengths. Avoid crimping the flexible ducts. This reduces airflow, causing the unit to operate improperly.

<div align="center">

Do not allow sharp turns to squeeze or decrease the inside diameter of the flexible ducting.

</div>

General duct recommendations:
- Provide support for the flexible duct to prevent sags and bends.
- The required duct sizes are 10" (return) and 10" (supply).
- The recommended register size is 12" x 12". The filter should also be 12" x 12", and located at the return register. Registers and filters are not included with the unit. *Fiberglass filter recommended.*
- Stretch out the duct to make a smoother interior which reduces air resistance.
- Maximum duct length is 50 combined feet.
- No more than three 90° bends on each duct. Sweep 90° bends are recommended rather than sharp 90° bends. *Highly recommend to use rigis ducting when doing 90° and 180°.*
- Generously apply duct sealant to all metal seams to fill in gaps that can leak air. Allow sealant to dry before powering on.
- Do not squeeze or reduce the inside diameter of the ducts, as this will reduce airflow.
- Use short and straight ductwork where possible. Flexible duct must be insulated (R-8 insulation rating or higher).
- Check that all fan blades move freely.
- keep air paths free of loose foreign objects and debris.
-

DO NOT:
- Install through-the-wall return air grilles at floor level where they will collect dust from the floor.
- Locate the supply or return air grille where it is blocked by bottles, boxes, or cases.
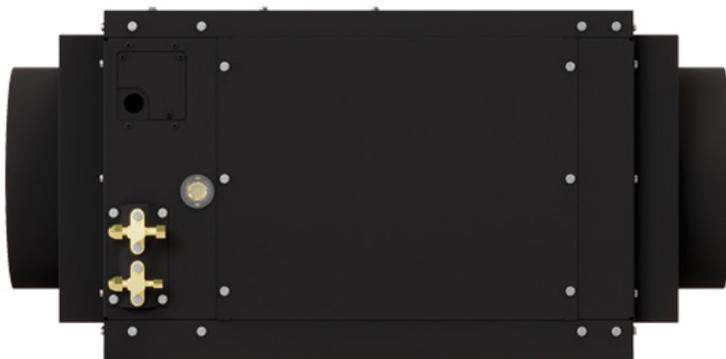
DUCTING CONFIGURATIONS

There are a variety of ways to duct this unit. Please review the different configurations to determine a basis for your particular installation. Remember to contact a wine cellar professional if you have any questions.

Cold Air Supply
(Cellar side)

Line Set to Condensing Unit

Return Air
(Cellar side)

Adjacent Room
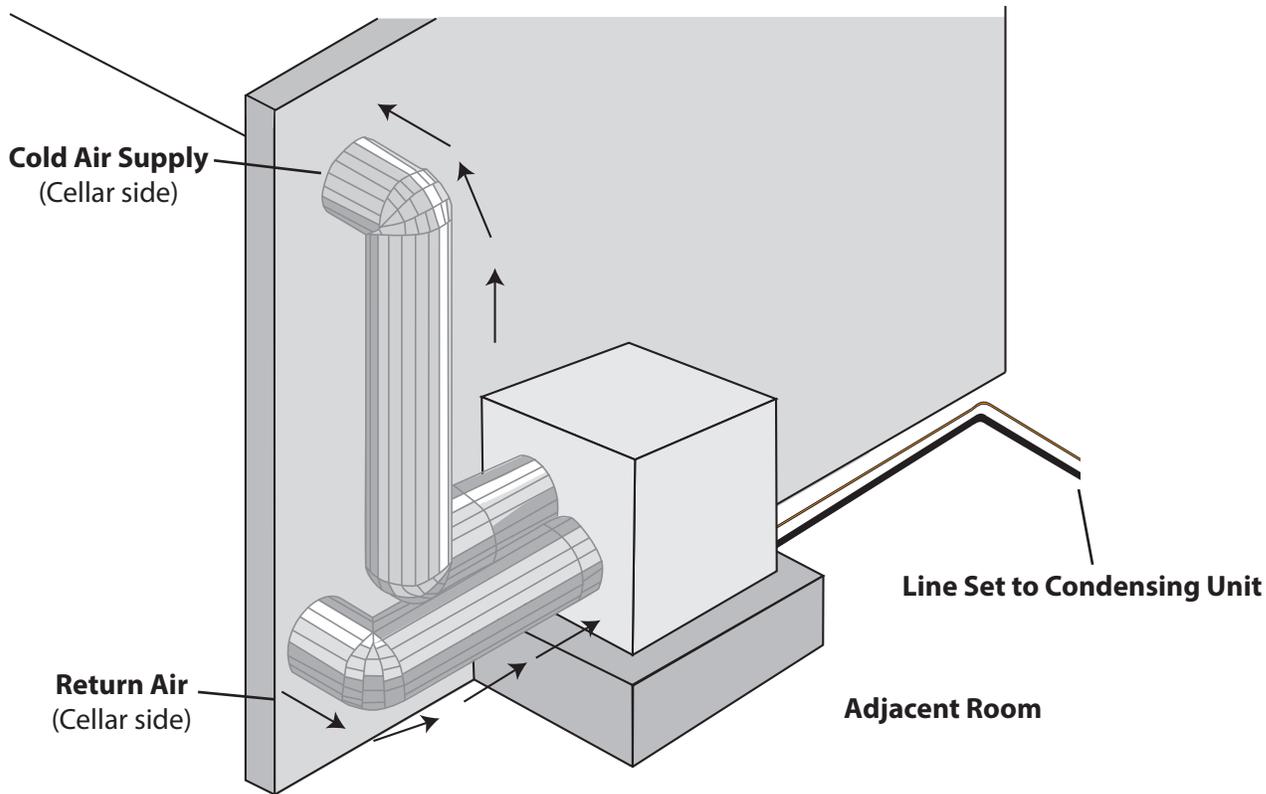
Attic Mounted Unit

It is required to use a secondary drip tray to prevent water damage. NOT supplied by CellarCool.

Evaporator

Secondary Drip Trap

Cold Air Supply

Mechanical Room

Return Air

Line Set to Condensing Unit

Condensing Unit
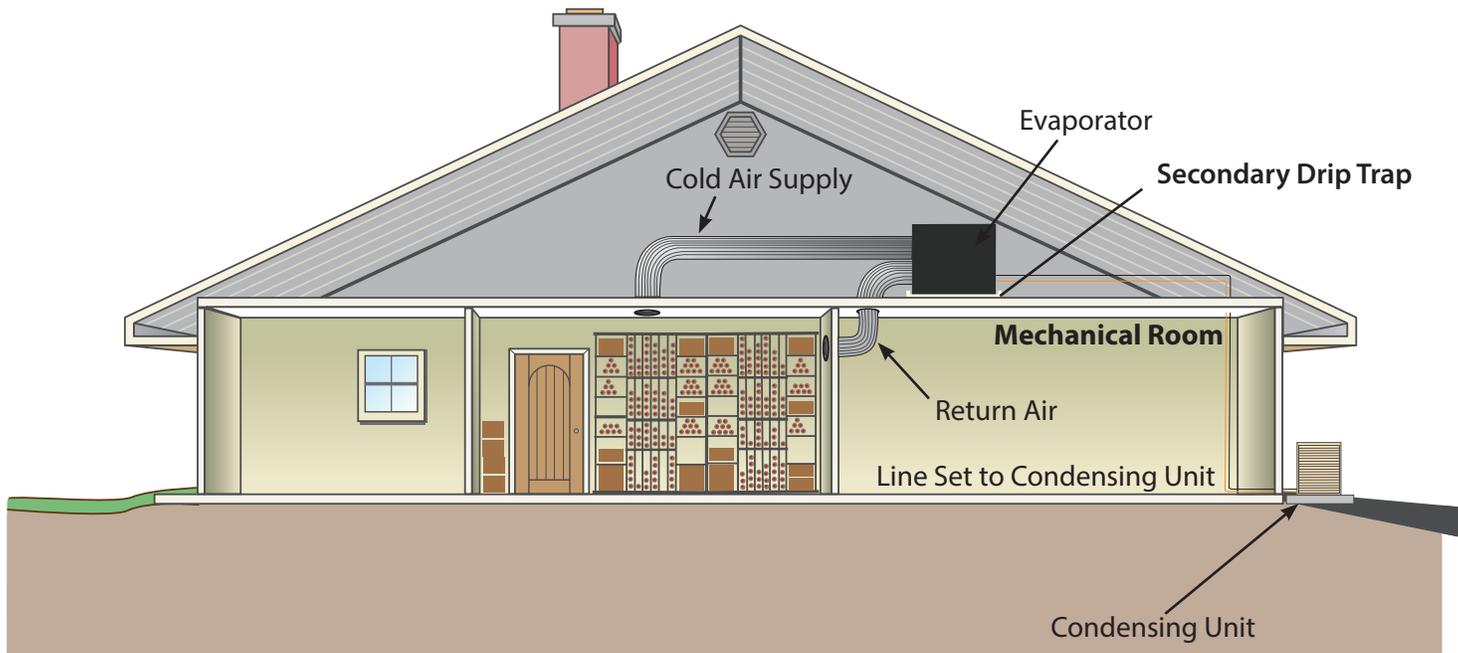
DRAIN LINE

Condensation Drain Line (not provided, but required)

The condensation drain line tube moves excess condensation from the evaporator unit to a proper discharge location. It is important for the drain line tube to be properly connected in order to prevent leakage and other problems associated with excess condensation

<u>Failure to use the condensation drain line tube will void the warranty on the unit.</u>

Drain Line

All systems come with a drain line connection tee and two 90-degree fittings. The unit is equipped with a ½" OD barbed fitting coming from the drip tray. (**NOTE:** ½" ID clear PVC tubing will need to be purchased and installed by the installing technician.) Installation of the drain line is mandatory, whether it leads through the wall and out of the cellar or remains inside the cellar. During operation, the cooling system will strip excess water from the air in order to maintain the proper level of humidity within the cellar. However, in extreme humidity, additional condensate will be removed; thus the drain line will prevent overflow and leakage by discharging the excess condensate.

Routing the tubing out of the unit:

Cut a small piece of ½" tubing and connect one end to the drip tray port and the other to a 90-degree fitting. (This will direct the tubing toward the back of the unit where the tube will exit the unit.) Be sure to extend the tubing far enough outside the housing to extend through the wall if necessary.

If routing out of the rear: Cut a piece of tubing long enough to protrude out of the knockout on the back side of the unit.

If routing out of the bottom: Cut a piece of tubing long enough to reach the knockout in the bottom of the unit and install the supplied 90-degree fitting. (This will direct the tubing out of the bottom of the unit without the risk of kinking the tubing.) ***DO NOT USE TEE WHEN ROUTING OUT OF THE BOTTOM.***

Routing to discharge location if routed out of the bottom:

Connect the drain line directly to the second 90-degree barb fitting previously installed. Route the drain line to an appropriate drain location. No tee is required if draining through the bottom of the unit.

Routing to discharge location if routed out of the rear:

Insert the middle barb of the barbed tee fitting into the end of the drain line coming from the evaporator. Rotate fitting so tee is in the orientation shown in the diagram below. Connect a 3-inch piece of ½" drain line to the barb on top. Connect the remaining "long" piece of drain tubing to the bottom barb of the tee. Route the drain line to an appropriate drain location.
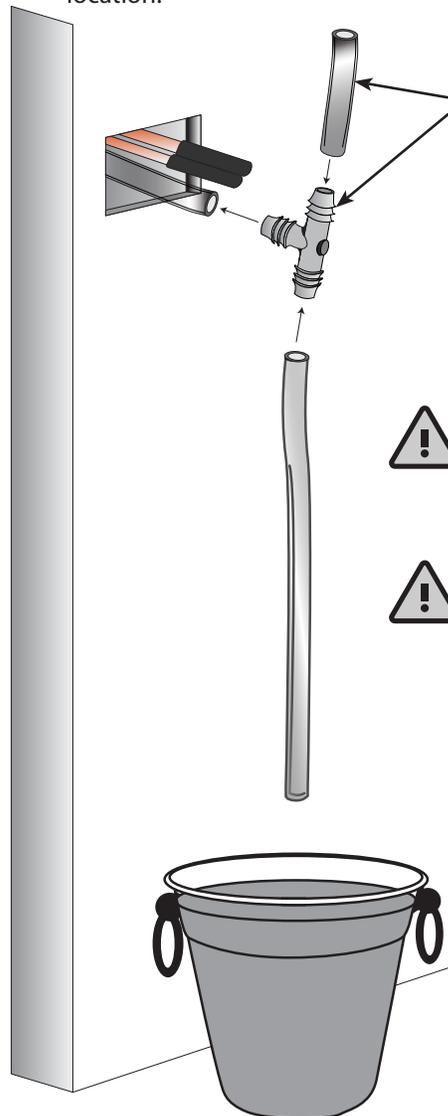
NOTE: The fitting should be placed vertically with the 3" cutout facing up.

⚠ **Failure to install the drain line voids the warranty.**

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

WRONG: Drain line is under water.

LIQUID-MEASURING THERMOSTAT SYSTEM (BOTTLE PROBE)

CellarCool cooling units come with a liquid-temperature-measuring thermostat. The self-calibrating probe contains a sensor chip, which communicates back and forth with the thermostat. This results in a consistent temperature setting and accuracy. Wine should be kept at a very precise, controlled temperature and humidity. By measuring the liquid temperature rather than air, the unit will operate 75–80% of the time.

Figure 1

Setting up the Bottle Probe:

1. Locate an empty wine bottle.

2. Fill it 75% full with room-temperature tap water.

3. Place bottle probe securely into bottle as seen in Figure 1.

4. Place the wine bottle in your wine cellar. Ensure sensor tip is fully submerged.

5. To ensure a consistent temperature, place bottle probe approximately three (3) feet away from the air output and not in the flow of the air.

It is recommended that the bottle be placed in a central location of your wine cellar. Avoid pulling too much on the probe cord. It may become disconnected resulting in limited functionality of the unit.

Note: The thermostat can be set between 50–70°F.

Remember: The unit operates based on the temperature of the water. Do not be misled by thermostats reading air temperature. The air temperature in the cellar will be cooler than the liquid temperature of the wine while it is reaching the optimum balanced temperature.

ADDING PAN TABS

Pan tabs kill bacteria and related odors, remove sludge and scale, and help to prevent water damage caused by condensate overflow. They are non-corrosive and easy to install. Simply remove any access panel to drop a pan tab into the drip tray every six weeks.

> **WARNING:** *Keep pan tabs out of reach of children. They contain quaternary ammonium chloride and can cause skin and eye irritation. They are harmful or fatal if ingested. Wear protective gloves when handling pan tabs. Wash thoroughly after handling. If pan tabs make contact with eyes, rinse cautiously with water for several minutes. In case of an emergency, call 1-800-255-3924 (24 hours).*

CLEANING P-TRAP

To clean the P-trap, remove the ¾" PVC cap and run a drain line brush through the T-junction until all sludge and slime is removed. If necessary, rotate T-junction for easier access. See illustration below for details.

2. INSERT DRAIN LINE BRUSH FROM THIS END

1. REMOVE CAP

TO UNIT
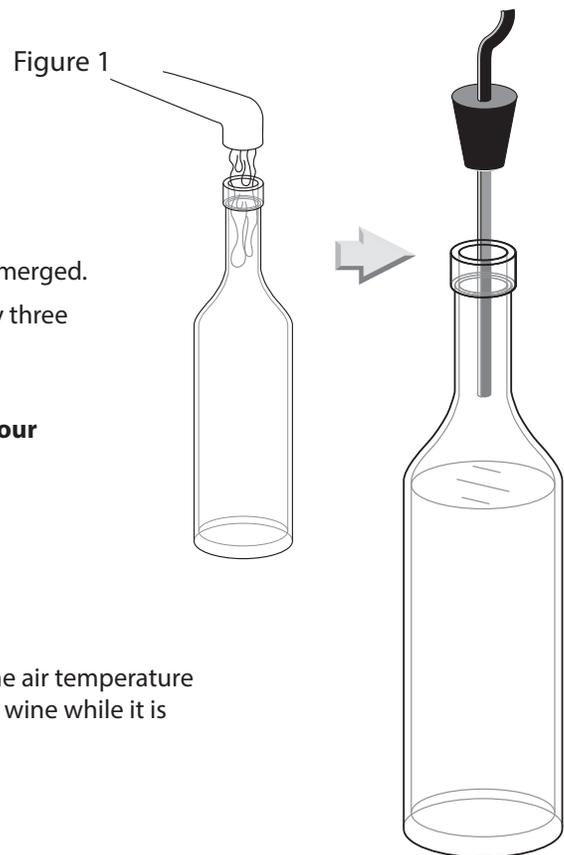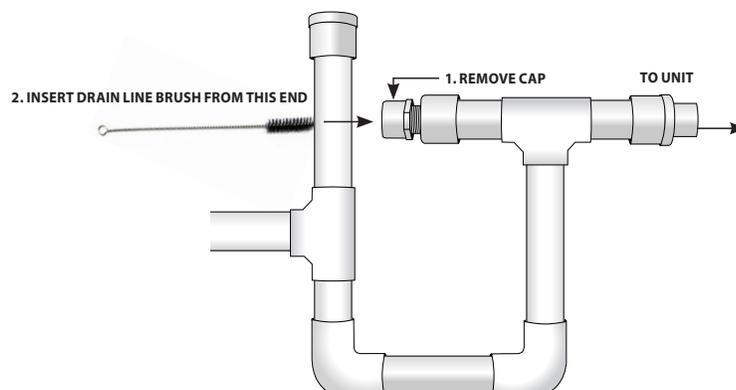
REMOTE DISPLAY: INSTALLATION AND CONFIGURATION*

Tools needed: ⁵⁄₁₆" drill bit, ³⁄₁₆" drill bit, drywall saw, level, pencil
What's included: Display panel, wall mount bracket, flush mount bracket, flush mount template
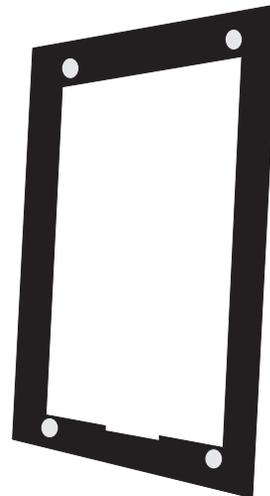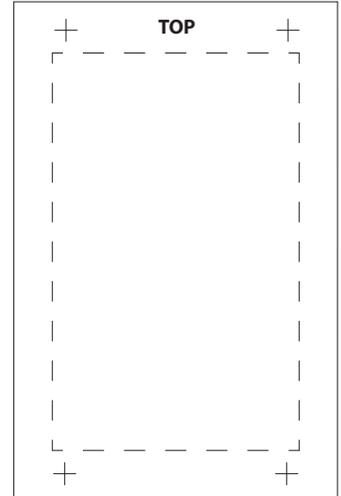
| Display panel | Wall mount bracket | Flush mount bracket | Flush mount template |

Wall Mount Bracket Installation

1. Place the bracket on the wall. Use a level to ensure that the bracket is level. Using a pencil, mark the four screw holes in the rear of the bracket.
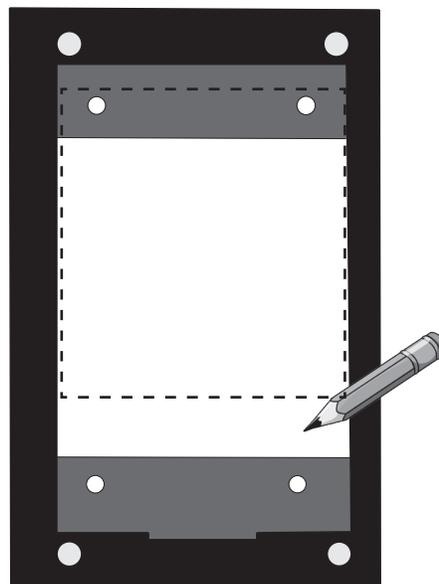
NOTE: Cut hole in the location shown for routing the display cable.

* The display can be mounted on any wall (inside or outside the wine cellar), up to 50 feet from the cooling unit.

WALL MOUNT BRACKET INSTALLATION, CONTINUED

2. Using a drill with a ³⁄₁₆" bit, drill four holes in the drywall for the screws. Insert the four (4) provided drywall anchors into the drywall, then tap them in with a hammer until they are flush with the wall.
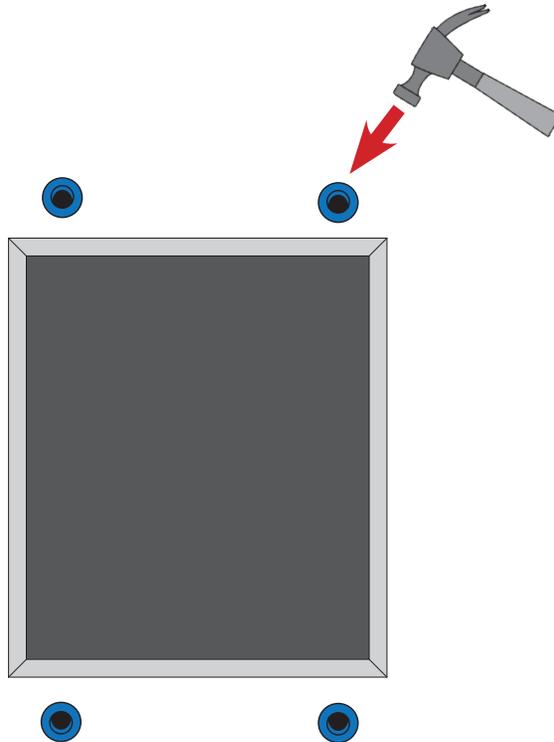
3. Place bracket against wall, aligning screw holes with drywall anchors. Insert the four supplied Phillips-head screws into the drywall anchors. Tighten the screws to secure the bracket to the wall.

CELLARCOOL
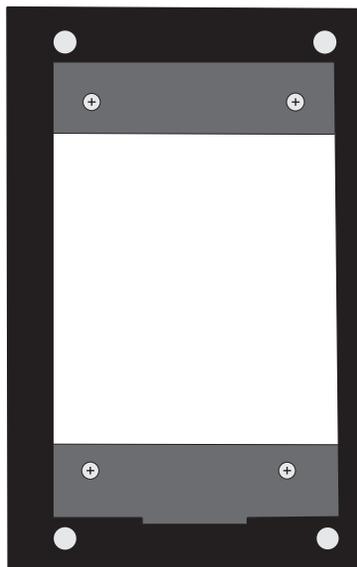
WALL MOUNT BRACKET INSTALLATION, CONTINUED

NOTE: Before you continue to Step 4, locate the area where the display will be mounted. You may route the display wire into the housing one of three ways: either through the wall or through one of the holes on the top or bottom edges of the wall mount bracket. If you'd like to route the display cable through one of these holes, place a rubber grommet into the hole and then route the display cable through the grommet and into the wall mount bracket.

4. Connect the end of the display cable labeled "DISPLAY" to the JST connector on the back of the display.

JST connector
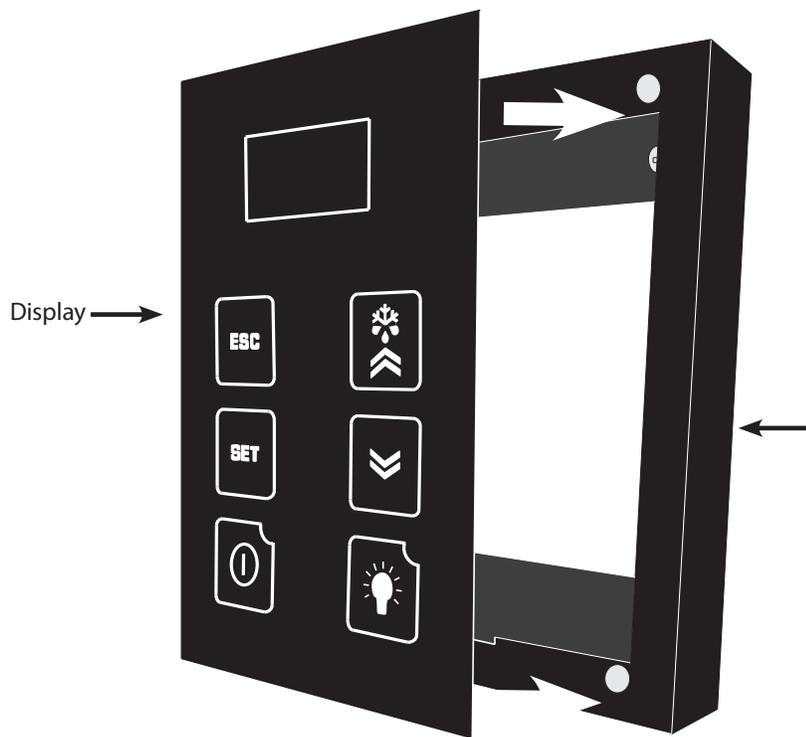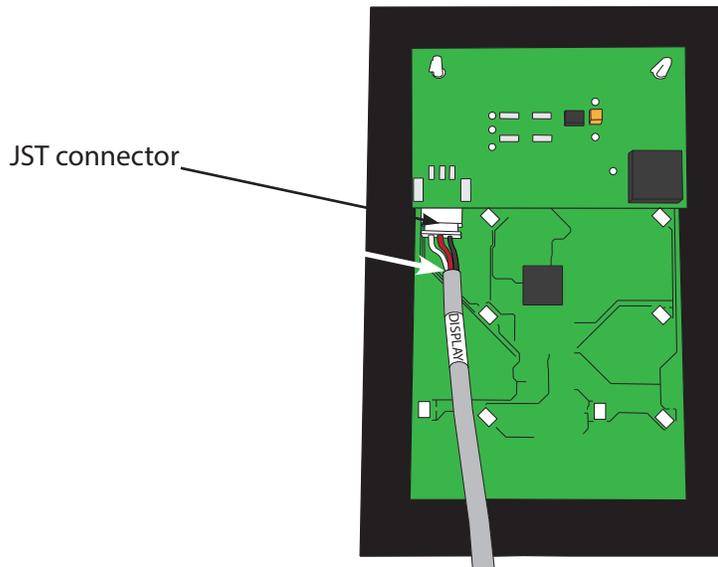
DISPLAY

Display

5. Place the display on the wall mount bracket as shown, attaching the back of the display panel to the magnets on the mounting bracket. Make sure that the alignment tab on the back of the display panel sits in the notch on the bottom of the bracket.

FLUSH MOUNT BRACKET INSTALLATION

Flush Mount Bracket Installation

1. Square the flush mount template on the wall using a level. Then draw a 3" line along the bottom edge of the template.

2. Peel the backing off the template and stick it to the wall, aligning the bottom edge with the line drawn in Step 1.

TOP

TOP

Pencil line
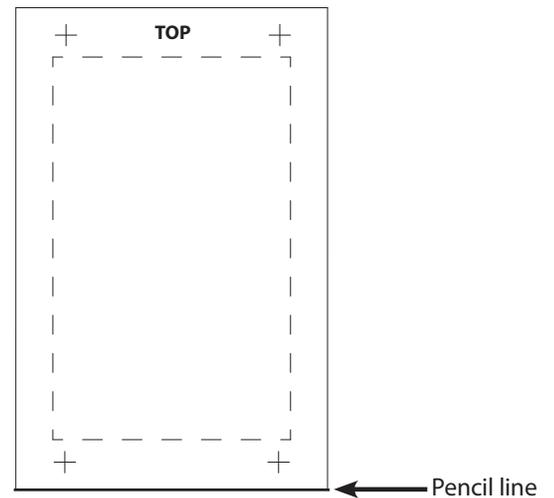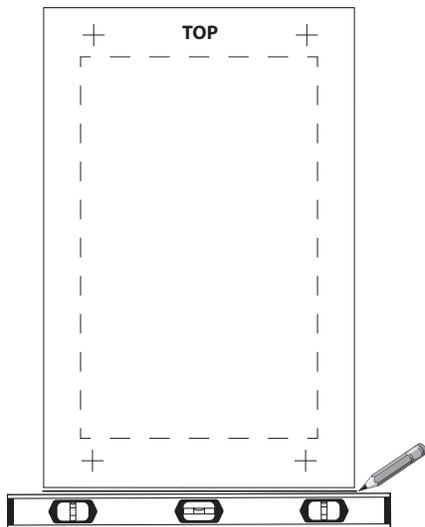
3. Use a ⁵⁄₁₆" drill bit to drill a hole in the center of each cross (+).

4. Cut along the perforated lines. When finished, remove template from wall.

TOP

TOP

Saw
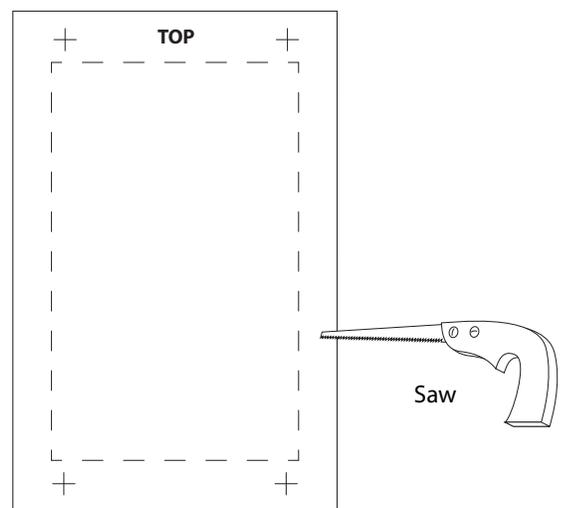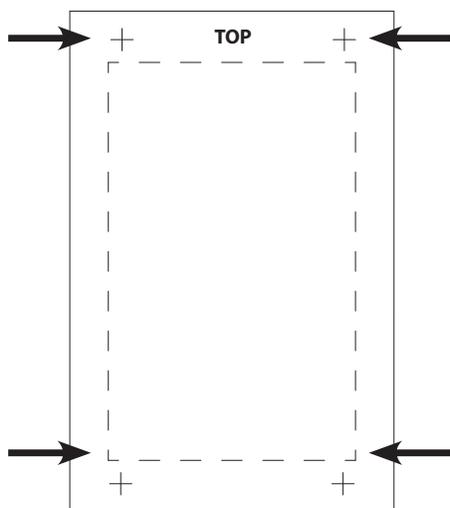
FLUSH MOUNT BRACKET INSTALLATION, CONTINUED

5. Remove the backing from the double-sided tape on the flush mount bracket.
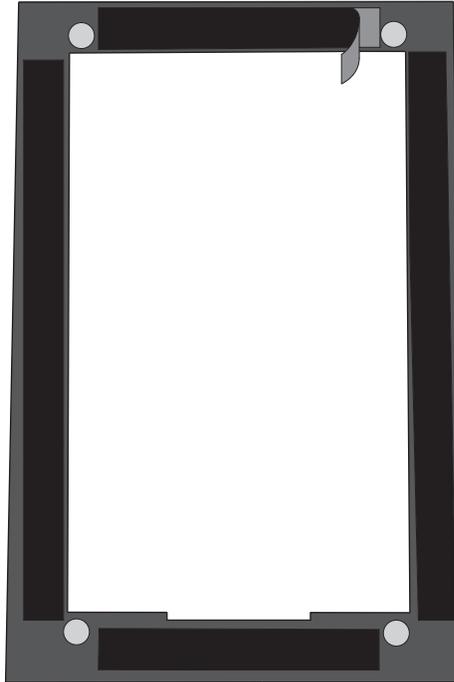
6. Align magnets with previously drilled holes. Make sure the cut-out portion of the bracket (circled below) is on the bottom. Press the bracket firmly against the wall.

WALL

HOLE

CUTOUT
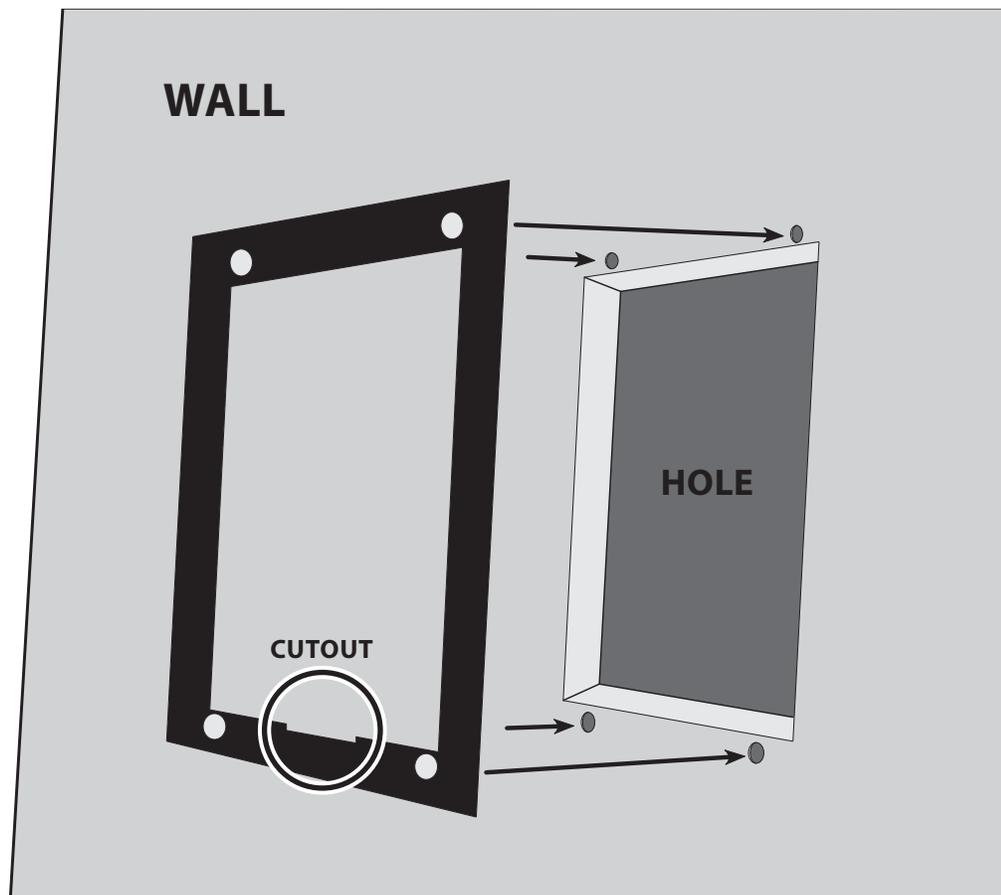
FLUSH MOUNT BRACKET INSTALLATION, CONTINUED

7. Connect the end of the display cable to the JST connector on the display panel.
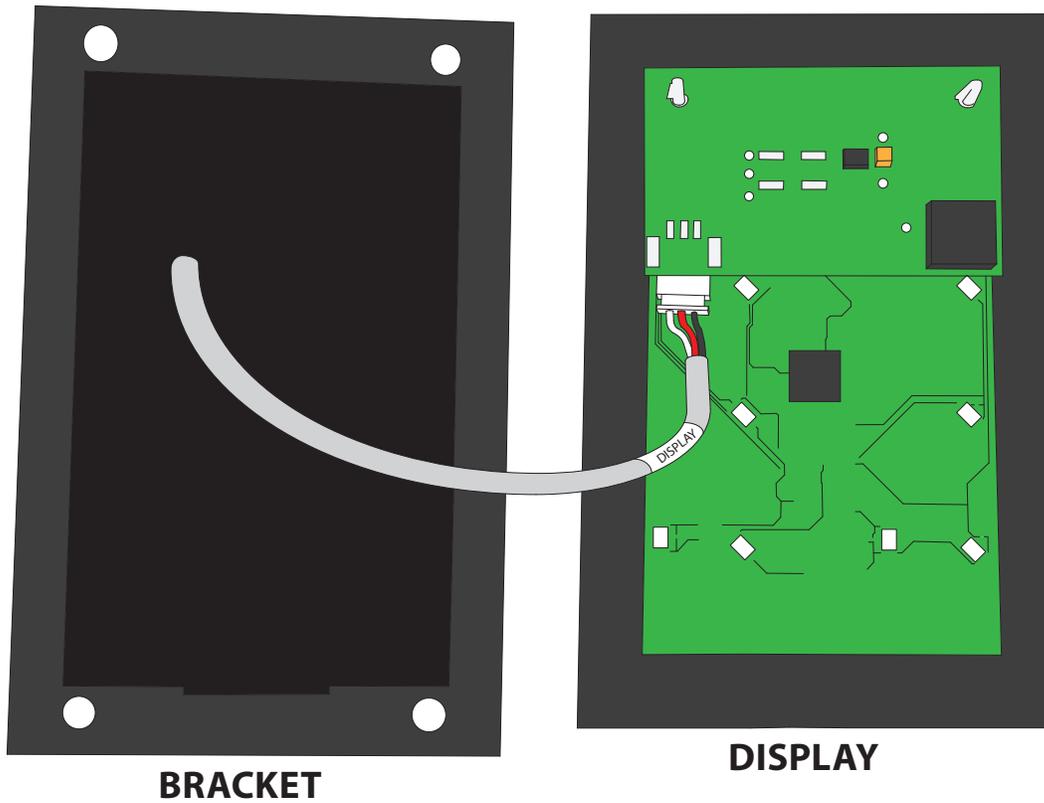
BRACKET

DISPLAY

8. Place the display on the flush mount bracket as shown, attaching the back of the display panel to the magnets on the mounting bracket. Make sure that the alignment tab on the back of the display panel sits in the notch on the bottom of the bracket.

WALL

EVAPORATOR UNIT WIRING DIAGRAM (KDT) <u>PUMP DOWN</u>

EVAPORATOR UNIT WIRING DIAGRAM (24V) <u>PUMP DOWN</u>

115V LINE
115V NEUTRAL
GROUND

BLACK
WHITE
GREEN

WHITE
GREEN
BLACK

BLACK

WHITE

WHITE
BLUE
GREEN

YELLOW
BLACK
BLUE

BLUE
YELLOW
BLACK
GREEN

133mm
AFL
Blower

GREY
BROWN

WHITE

Capacitor

Fan
Neutral
Line
Solenoid

LEGEND
Field Installed
Factory Installed

24V
Thermostat

C
R
RC
G
Y

Blue
Red
Red
Green
Yellow

Blue
Red
Green
Yellow

Platinum / WM/FD Version 5
24V

Black
White
Blue

Black

Solenoid
Relay

Fan
Relay

24v
Transformer

Yellow
Blue

Black
Black
Black
Black
Black

Blue
Blue
Blue
Blue
Blue

EVAPORATOR UNIT WIRING DIAGRAM (KDT) <u>COMMUNICATION</u>

ELIWELL RTN400

RED

Evap

B Probe

DI CPBPb3 CPBPb2 CPBPb1

KDT PLUS DISPLAY

PANASONIC

KEYB

GND D 12V

NEUTRAL LINE   OUT 2   OUT 3

| 1 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | 10 | 11 | 12 | 13 | 14 | OUT 4 |

NEUTRAL LINE C NO NC C NC NO OUT 1 C NO C NO

WHITE

BLUE

BLACK

BLACK
BLACK
BLACK
BLACK

1   4

PS-WM/FD
H.E.

1   4

BLACK

BLUE

BLACK

115V LINE   BLACK
115V NEUTRAL WHITE
GROUND   GREEN

24V Transformer

BLACK

YELLOW

WHITE

Capacitor

GREY   BROWN

BLACK

WHITE

GREEN   GREEN
BLACK   BLACK
YELLOW
BLUE

133mm
AFL
Blower

W   LM

GREEN
WHITE

YELLOW
BLUE

YELLOW
BLACK
BLUE

WHITE

24V WIRES
TO CONDENSING
UNIT

EVAPORATOR UNIT WIRING DIAGRAM (24V) <u>COMMUNICATION</u>

PS/WM/FD 24V H.E.

LEGEND
Field Installed
- - - - - - -
Factory Installed

24v Thermostat

C — Blue — Blue
R — Red — Red
RC
G — Green — Green
Y — Yellow

Blue
Yellow

24V Wires to Condensing Unit

Yellow
Blue

24v Transformer

Fan Relay
0   1
4   6

Blue Blue Blue

White
Black

Black
Black
White

Fan Neutral Line

1   4

Black Black

1   4

115V LINE — BLACK
115V NEUTRAL — WHITE
GROUND — GREEN

BLACK

WHITE

BLACK

W   LM

GREEN
WHITE

BLACK

Capacitor

GREY   BROWN

GREEN — GREEN
BLACK — BLACK
YELLOW — YELLOW
BLUE — BLUE

133mm AFL Blower

WHITE

YELLOW BLACK BLUE

OMNI CONDENSER PUMP DOWN

TS

LPS

blue blue

blue

black black

black

black

black
black
black
black
black

H

receiver heater

crankcase heater

Compressor
Relay

7
NC
3

8
C
4

6
NO
2

1

0

blue

Comp

white
white
black
black
blue

N

white

green
blue

brown
blue

green
green
green
green

G

green

Condenser
EC Fan

red
yellow
blue

Condenser
Fan Module

green

G N H
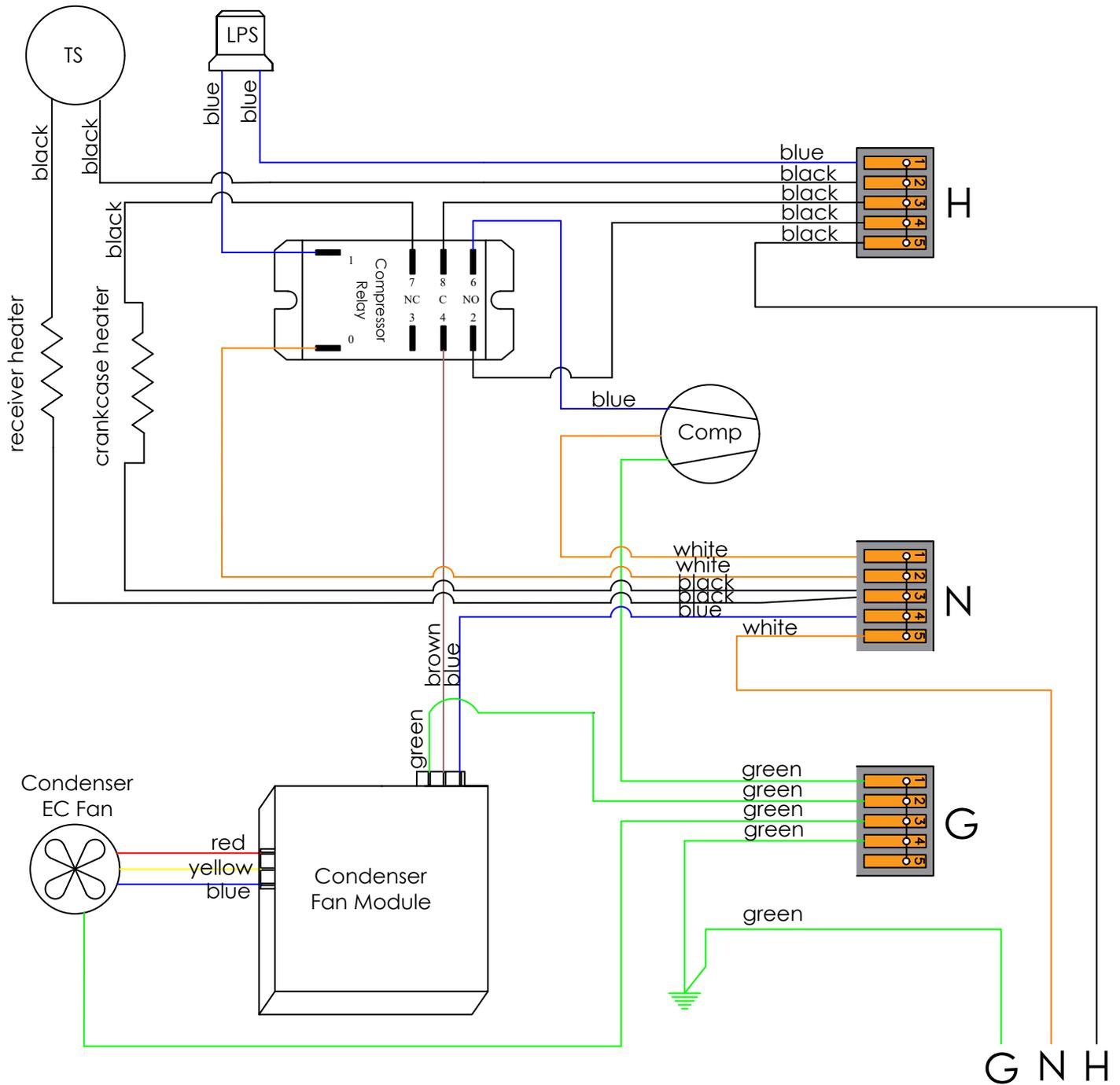
OMNI CONDENSER
COMMUNICATION DIAGRAM

TS

black

black

blue

black

black

receiver heater

crankcase heater

Compressor Relay

7 NC 3

8 C 4

6 NO 2

1

0

blue

yellow

blue
black
black
black
black

L2

blue

Comp

white
white
black
black
blue

L1

white

brown
blue

green

green
green
green
green

G

green

Condenser
EC Fan

red
yellow
blue

Condenser
Fan Module

G N H COMM.

PREPARING THE CONDENSING UNIT

Electrical Needs
The 2500 Omni condensing unit requires a dedicated 110V, 15-amp circuit.
The 3500 Omni condensing unit requires a dedicated 110V, 15-amp circuit.
The 5000 Omni condensing unit requires a dedicated 110V, 20-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.
   • Ensure the supplied voltage 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. CellarCool 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.

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.

Communication ONLY Cable Operation
CellarCool's split systems operate like traditional air conditioners where there is wiring between the condensing unit and the
evaporator unit.

CellarCool's Omni Communication Condensing Unit systems do not utilize a solenoid valve or low-pressure switch, which al-
lows the system to run like a residential HVAC system. A 24V communication cable must be ran between the condensing unit
and the evaporator unit. When the thermostat calls for cooling, a 24V signal is sent from the evaporator air handler unit to the
relay located on the outdoor Omni condensing unit via the 24V communication cable. Once the relay is energized, power is
then delivered to the compressor and the system beings to operate.

When the cellar reaches the desired temperature and the thermostat is satisfied, the relay is de-energized, and the compres-
sor shuts off.

The compressor is controlled by a thermostat. 18-5 thermostat (communication line) wire must be ran from the evaporator
unit to the condensing unit which energizes the relay and allows the condensing unit to operate.

Pump Down ONLY Operation
CellarCool's Pump Down split systems operate. With a dedicated circuit and circuit breaker, the condensing unit will have suf-
ficient power for effective operation. (Thecompressor is controlled by a low-pressure transducer mounted on the condensing
unit. This feature eliminates the need for wiring between the evaporator unit/fan coil unit and the condensing unit.)

INSTALLING THE CONDENSING UNIT

The condensing unit can be installed inside a well-ventilated area of the home or mechanical room, but is typically installed outside. Exterior applications will require the use of a protective housing. The amount of sun exposure should be considered when selecting the placement of the condensing unit .The 2500 and 3500 condensing unit requires a dedicated 15-amp circuit (non-GFI), and 5000 Omni condensing unit requires a dedicated 20-amp circuit (non-GFI). Ensure at least three (3) feet of horizontal clearance in every direction around the unit inlcuding if inside an exterior housing. The unit may either be hard-wired or plug-in, depending onlocal electrical codes.

Ensure that the condensing unit is level and has the proper amount of clearance outlined in the instructions. Also make sure you have the name plate power supplied, proper electric disconnect, and fuse protection connected but not turned on and ready for piping connections.

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 inlcuding if inside an exterior housing. The unit should be elevated 18 inches in order to avoid damage

Refrigeration Lineset:

Omni 3500/5000	Line Set Length	<25 ft.	26-50 ft.	50-100 ft.
Suction Line	Horizontal Tubing	1/2"		5/8"
	Veritcal Rise	1/2"		
Liquid Line	Vertical Rise	1/4"		

Omni 2500	Line Set Length	<25 ft.	26-50 ft.	50-100 ft.
Suction Line	Horizontal Tubing	3/8"		1/2"
	Veritcal Rise	3/8"		
Liquid Line	Vertical Rise	1/4"		

INSTALLING THE CONDENSING UNIT

These are two suggested examples for running the line set from the coil to the condensing unit. Example 1 is specifically applicable when the system is installed with the condensing unit below or leveled to the coil. Example 2 is applicable when the system is installed with the condensing unit at a higher elevation than the coil.

Reverse oil return bend

Downward slope pitched toward compressor **1/2"/ 10'**

Oil saving bend

Evaporator Coil

Option 1

Suction Line

Liquid Line

Unit

Within **16'** of height

Unit

Liquid line

Option 2

Suction Line

Oil return bend

Maximum height difference between condenser and evaporator should not exceed **50'**

50'

Oil saving bend

Evaporator coil
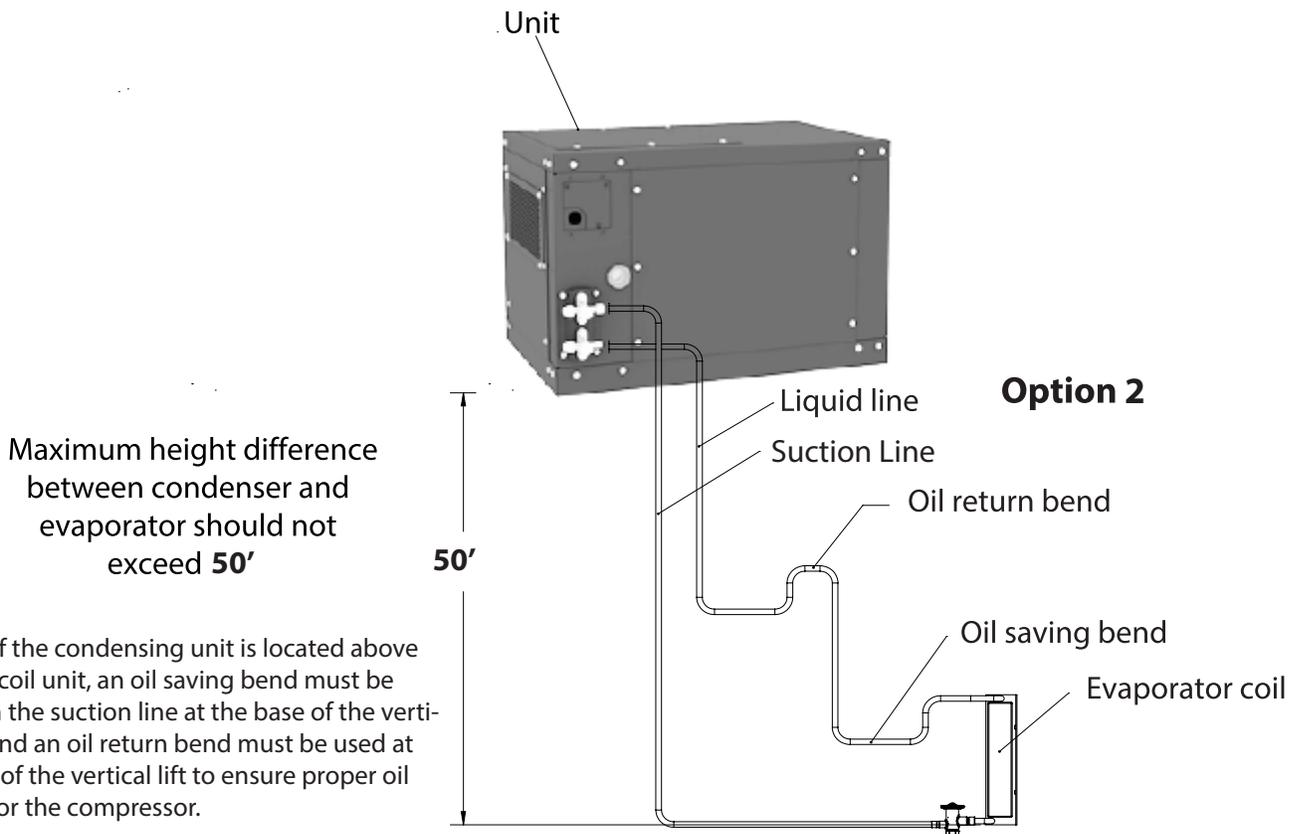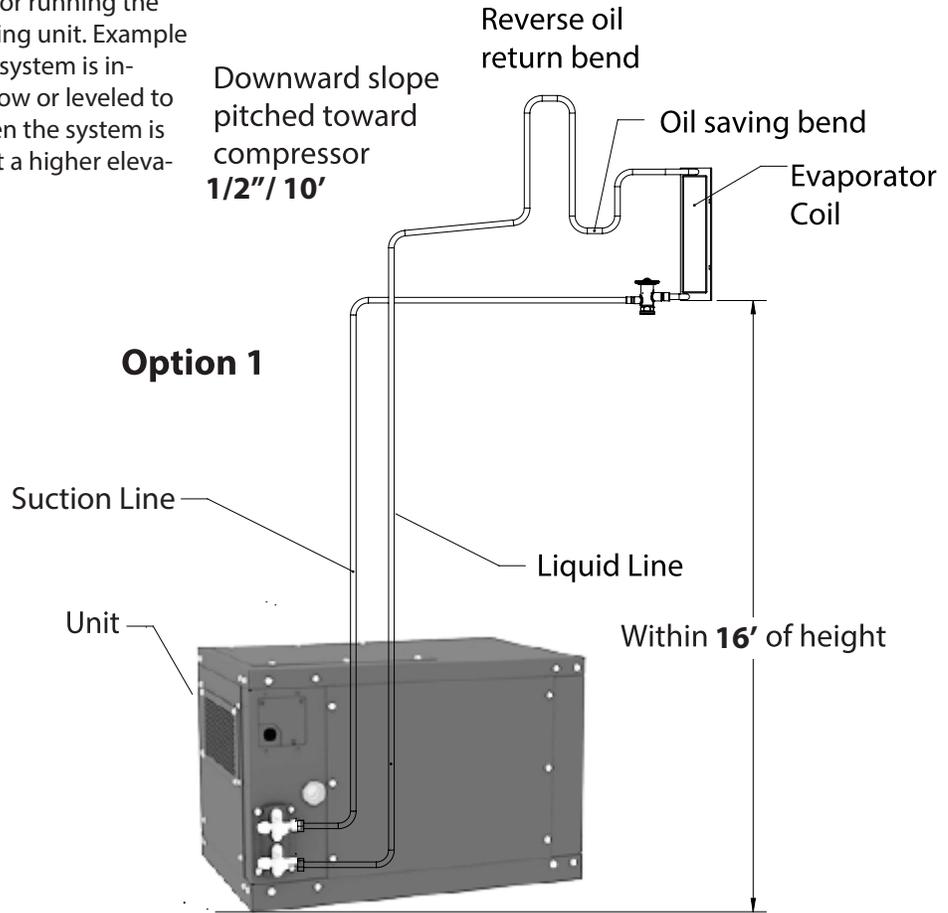
NOTE: If the condensing unit is located above the fan coil unit, an oil saving bend must be used on the suction line at the base of the vertical lift and an oil return bend must be used at the top of the vertical lift to ensure proper oil return for the compressor.

INSTALLING THE CONDENSING UNIT

1. **Select installation location**
   Before installing the outdoor unit, you must choose an appropriate location and ensure an exterior housing is used. The following are standards that will help you choose an appropriate location for the unit.

   Proper installation locations meet the following standards:

   - Meets all suggested spatial requirements according to diagram.
   - Good air circulation and ventilation.
   - Firm and solid—the location can support the unit, is level, and will not vibrate.
   - Condensing unit is suggested to be mounted on concrete pad. Exterior housing REQUIRED for outdoor installation.
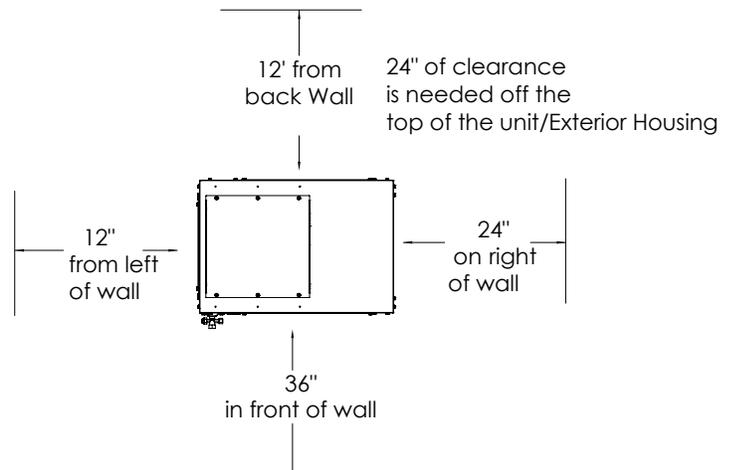
   DO NOT install unit in the following locations:

   - Near an obstacle that will block air inlets and outlets.
   - Near a public street, crowded areas, or where noise from the unit will disturb others.
   - Near animals or plants that will be harmed by hot air discharge.
   - Near any source of combustible gas.
   - In a location that is exposed to large amounts of dust.
   - In a location exposed to a excessive amounts of salty air.

12' from back Wall

24" of clearance is needed off the top of the unit/Exterior Housing

12" from left of wall

24" on right of wall

36" in front of wall

Special Considerations For Cold Weather And Other Outdoor Conditions

If the unit is frequently exposed to heavy rain or snow: Build a shelter above the unit to protect it from the rain or snow. Be careful not to obstruct air flow around the unit. The unit should be elevated to prevent build up of debris and snow in front of fan.

2. **Anchor outdoor unit**
   The outdoor unit can be placed onto an exterior housing platform which will be anchored to the ground. The unit itself can be placed directly onto the platform.

3. **Connect signal and power cables**
   The outside unit's electrical wiring is protected by a cover plate on the side of the unit.

INSTALLING THE CONDENSING UNIT, CONTINUED

4. **Connect line set to condensing unit**
   Line set piping size is determined by the unit size and the line set length. Determine the length before selecting the size. For the vertical rise on the suction and liquid lines refer to the line set piping examples previously shown. When the condensing unit is mounted above the evaporator unit it is recommeded that the suction line should have oil saving bends placed every 15'.

   1. Using a crescent wrench, grip the body of the valve. Do not grip the nut that seals the service valve.
   2. While firmly gripping the body of the valves, use a torque wrench to tighten the flare nut according to the correct torque values.

TORQUE REQUIREMENTS

Outer Diameter of Pipe (mm)	Tightening Torque (kg/m)
¼"	11 lb/ft
⅜"	18.4 lb/ft
½"	25.8 lb/ft
⅝"	33.19 lb/ft
¾"	47.94 lb/ft
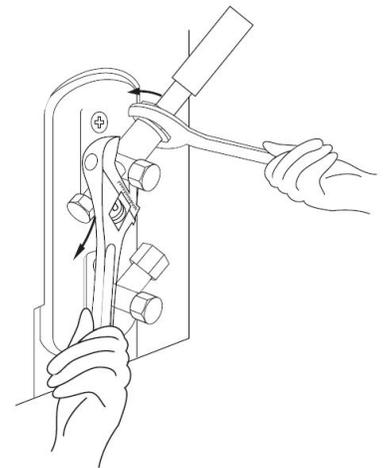
   3. Loosen the flaring nut slightly, then tighter again.
   4. Repeat steps for the remaining pipe.

LINE SET PIPING SIZE

Omni 3500/5000	Line Set Length	<25 ft.	26-50 ft.	50-100 ft.
Suction Line	Horizontal Tubing	1/2"		5/8"
	Veritcal Rise	1/2"		
Liquid Line	Vertical Rise	1/4"		

Omni 2500	Line Set Length	<25 ft.	26-50 ft.	50-100 ft.
Suction Line	Horizontal Tubing	3/8"		1/2"
	Veritcal Rise	3/8"		
Liquid Line	Vertical Rise	1/4"		

INSTALLING THE CONDENSING UNIT, CONTINUED

5. **Pressure Test**
    After the line set has been connected securely to the evaporator and condensing unit, remove valve stem caps from low-pressure (suction) and high-pressure (liquid) valves on condensing unit. Ensure service valve stems are Open.
    If valve cores have been removed, they should be reinstalled in valves after pressure testing, vacuum, and charging procedures are complete.

    Connect charge hoses of the manifold gauge to the service ports on the outdoor unit's low pressure and high pressure valves. Leave gauge manifold knobs in closed position until nitrogen is ready to be admitted into the system. Connect service hose from service port on manifold to nitrogen regulator. Set nitrogen tank regulator to approximately 225 psi. Open both high side and low side gauge manifold knobs SLOWLY at the same time to admit nitrogen into the system until the gauge manifold reads 225 psi, then close gauge manifold knobs. Let pressure stand for minimum of 10 minutes. Use soapy solution to check flare connection points for leaks. If no leaks are present and pressure is maintained after 10 minutes of pressure test, proceed with evacuation process. If any leak is detected, it must be corrected before moving onto the evacuation process.

6. **Air Evacuation/ Vacuum**

    1. Remove the nitrogen from the system
    2. Remove the nitrogen tank from the manifold and attach the manifold to the vacuum pump
    3. Install service caps on the valves.
    4. After confirming that there is fresh oil in the vacuum pump, connect the hose from the manifold to the pump.
    5. **Pump Down ONLY: Energize the liquid line solenoid valve.**
    6. Start the pump and run it until micron gauge reads 250 microns or less.
    7. Once vacuum of 250 microns or less is achieved, disconnect the vacuum pump from the system.
    8. Remove the micron gauge from the access valve.
    9. Close the valves on the manifold.

    NOTE: For adjusting the service valves on the condensing unit a 3/16 allen wrench is needed.

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 on the exterior of the condensing unit, about 4" away from the housing. *Saturation temp — liquid line temp.

3-12°F SUBCOOLING REQUIRED FOR WARRANTY APPROVAL

INSTALLING THE CONDENSING UNIT, CONTINUED

7. **Charging**
    The chart below provides the approximate refrigerant charge amount for initial startup based on the line set length. Please see the chart below for the initial charge amount. The installing technician may still need to add additional charge and dial in the desired subcooling to achieve optimum performance.

    Subcooling range is between 3-12°F:

    - When charging during colder ambient temperatures (below 60°F), your target will be the lower end of the subcooling range.
    - When charging during hotter ambient temperatures (above 95°F), the target will be the upper end of the subcooling range.

    1. Invert refrigerant tank on a scale. Purge the charging hose up to the manifold and then zero out the scale in preparation for liquid refrigerant charging.
    2. With the power off to the condensing unit, admit liquid refrigerant through the liquid line service valve.
    3. Prior to turning on condensing unit, ensure evaporator (air handler) unit is ON and controller is calling for cooling.
    4. Turn on the circuit breaker for the condensing unit. The compressor and condenser fan should begin to operate.
    5. After startup, wait a minimum of 10 minutes for system to stabilize before checking subcooling or superheat.
    6. Place refrigerant tank in upright position in preparation for adding vapor refrigerant (if necessary).
    7. Add refrigerant (in vapor form) to the low side of the system through the suction line service port if necessary to achieve recommended subcooling.
    8. Check the superheat at suction service valve on the condensing unit.
    9. Adjust the TXV until the superheat is between 8-25°F at the service valve.
    10. After recommended superheat and subcooling is achieved, place the service valve stems in the back-seat position (all the way out counter-clockwise) and reinstall the Schrader valve cores. Once hoses are disnected, reinstall all caps on service valves.

Omni 2500
APPROXIMATE INITIAL CHARGE CHART

Line Set ft	Charge Total lbs
10	2.0
20	2.15
30	2.3
40	2.45
50	2.6
60	2.75
70	2.9
80	3.05
90	3.2
100	3.35

Omni 3500/5000
APPROXIMATE INITIAL CHARGE CHART

Line Set ft	Charge Total lbs
10	2.5
20	2.65
30	2.8
40	2.95
50	3.10
60	3.25
70	3.4
80	3.55
90	3.70
100	3.85

INSTALLING THE CONDENSING UNIT, CONTINUED

Finalizing the Installation

- Confirm the entire suction line from the evaporator unit to the condensing unit is insulated using cellular insulation or equivalent. Seal all seams with Armaflex 520 Foam Insulation Adhesive or equivalent.
- Confirm that the control is displaying the correct temperature and that no alarms are present.

APPROXIMATE OPERATING PRESSURES
(CELLAR TEMPERATURE 14°C)

Temp.	Low Side	High Side
16°C	23-27 PSIG	82-87 PSIG
24°C	25-29 PSIG	105-110 PSIG
30°C	26-30 PSIG	135-140 PSIG
35°C	27-31 PSIG	152-157 PSIG

TXV ADJUSTMENT

The TXV is shipped from the factory preset for 50 Feet. A TXV adjustment may be necessary based on the ambient temperatures in the cellar and at the condensing unit.

Danfoss TXV

Most units are equipped with a Danfoss adjustable TXV.

- Adjust the TXV until the total superheat measured at the suction (vapor/low pressure) line service valve is 8°F to 25°F. With the power off to the condensing unit, admit liquid refrigerant through the liquid line service valve.

To adjust the TXV use a 5/32" hex key to remove the cap from the TXV superheat adjustment port. (Figure 1)

1. With the cap removed, insert the hex key into the superheat adjustment port.
2. Increase superheat by turning clockwise.
3. Decrease superheat by turning counter-clockwise.

FIGURE 1
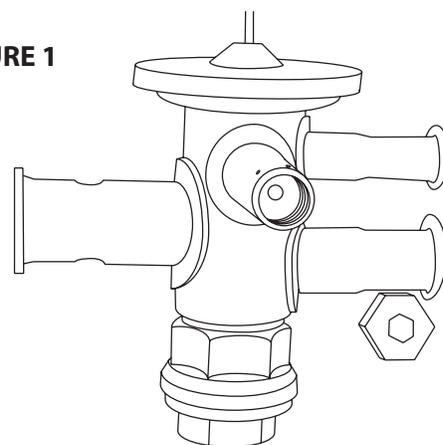
TXV ADJUSTMENT, Continued

Sporlan TXV Adjustment

Some units are equipped with a Sporlan adjustable TXV.

Adjustment Steps:

1. Remove the seal cap using two wrenches. (Figure 2)
    - i.   Use a 7/8" wrench on the BOTTOM cap.
    - ii.   Use a 3/4" wrench on the TOP (seal) cap.
2. With the cap seal removed. (Figure 3)
    - i.   Use a 3/16" service wrench to tighten or loosen the service stem located under the seal cap.
    - ii.   When the adjustment is completed, secure the seal cap.

FIGURE 2

FIGURE 3
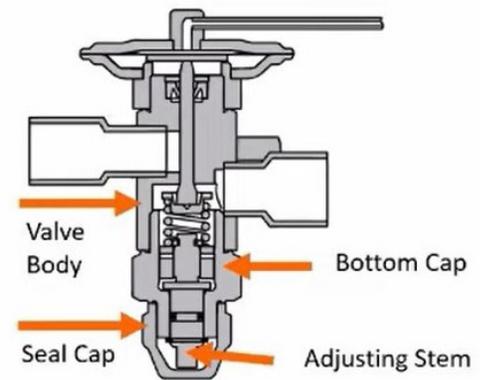
Sanhua TXV Adjustment

Some units are equipped with a Sanhua adjustable TXV.

Adjustment Steps:

1. Remove the seal cap using two wrenches. (Figure 2)
    - i.   Use a wrench on the BOTTOM cap.
    - ii.   Use a wrench on the TOP (seal) cap.
2. With the cap seal removed. (Figure 3)
    - i.   Use a Flat Head to tighten or loosen the service stem located under the seal cap.
    - ii.   When the adjustment is completed, secure the seal cap.

Seal Cap

Charge Chart & TXV Adjustment Ranges

SUPERHEAT CHART

CELLAR TEMPERATURE

	50°F	55°F	60°F	65°F	70°F	75°F	80°F	85°F
40 °F	16	16	17	17	18	18	19	19
45 °F	16	17	17	18	18	19	19	20
50 °F	17	17	18	18	19	19	20	21
55 °F	17	18	18	19	19	20	21	22
60 °F	18	18	19	19	20	21	22	23
65 °F	18	19	19	20	21	22	23	24
70 °F	19	19	20	21	22	23	24	25
75 °F	19	20	21	22	23	24	25	26
80 °F	20	21	22	23	24	25	26	27
85 °F	21	22	23	24	25	26	27	28
90 °F	22	23	24	25	26	27	28	28
95 °F	23	24	25	26	27	28	28	29
100 °F	24	25	26	27	28	28	29	29
105 °F	25	26	27	28	28	29	29	30
110 °F	26	27	28	28	29	29	30	30

OUTDOOR TEMPERATURE

Superheat: within shade rance +/- 2

SUBCOOLING CHART

CELLAR TEMPERATURE

	50°F	55°F	60°F	65°F	70°F	75°F	80°F	85°F
40 °F	3	3	4	4	5	5	6	6
45 °F	3	3	4	4	5	5	6	6
50 °F	3	3	4	4	5	5	6	6
55 °F	4	4	5	5	6	6	7	7
60 °F	4	4	5	5	6	6	7	7
65 °F	4	4	5	5	6	6	7	7
70 °F	5	5	6	6	7	7	8	8
75 °F	5	5	6	6	7	7	8	8
80 °F	5	5	6	6	7	7	8	8
85 °F	6	6	7	7	8	8	9	9
90 °F	6	6	7	7	8	8	9	9
95 °F	7	7	8	8	9	9	10	10
100 °F	7	7	8	8	9	9	10	10
105 °F	8	8	9	9	10	10	11	11
110 °F	8	8	9	9	10	10	12	12

OUTDOOR TEMPERATURE

Subcooling: within shade rance +/- 1

CELLARCOOL

DISPLAY LAYOUT

❄ Compressor is on

✿ Fan is on

❄ Anti-Frost Cycle running

((•)) Alarm is present

55 °F

Return to Previous Menu

Scroll Button

Change Setpoint

View/Change Setpoint

Enter User Menu

Scroll Button

Change Setpoint

Power On/Off
(hold for 5 sec)

Unlock Button
(hold for 1 sec)
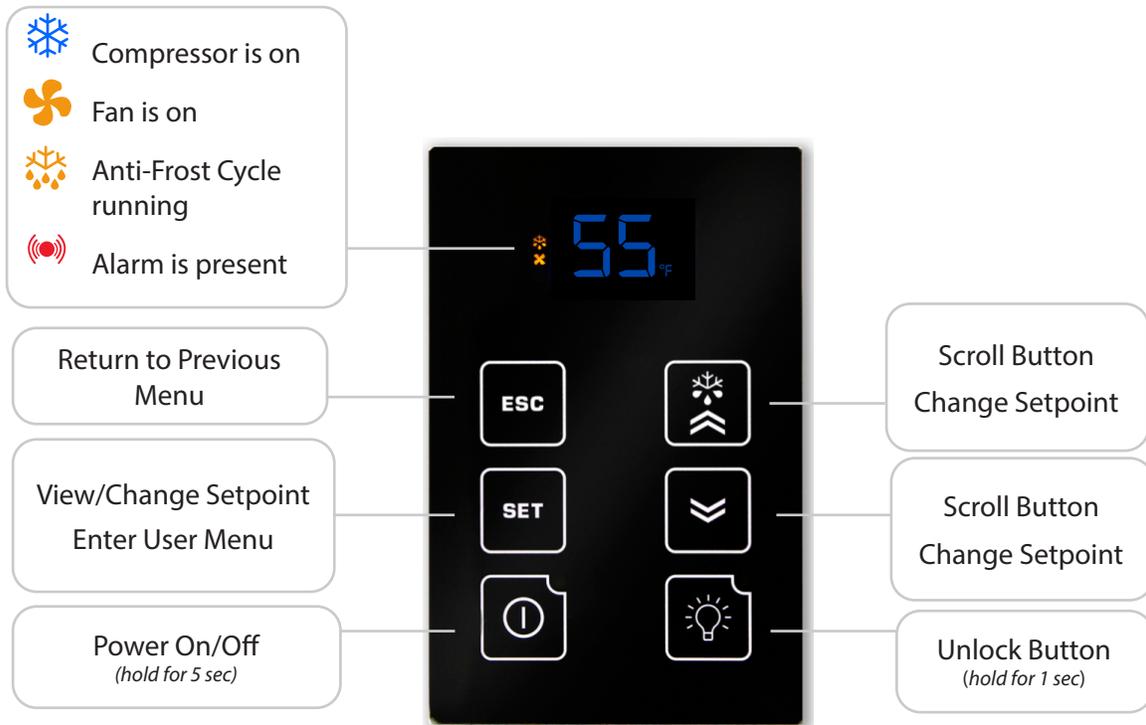
CONTROLLER FUNCTIONS

Button	Normal Functions
INITIAL STARTUP	When the unit is plugged in and power is sent to the controller, a beep will sound, confirming that the controller is getting power. All LEDs on the display will blink three times. Three dashes will then appear on the screen. All display LEDs will then blink three times. Once the controller has gone through the initial startup process, and all LEDs have cycled, the home screen will be displayed.
UNLOCKING THE DISPLAY	Press and hold any button for one second to unlock the display. (A white LED will appear in the top left corner of the button being pressed.) A beep will sound, signifying that the display is unlocked. **NOTE**: The display must be unlocked before any button functions become available.
ON/OFF	To turn the unit ON, press and hold the ON/OFF button until the red LED turns OFF. To turn the unit OFF, press and hold the ON/OFF button until the red LED turns ON.
UP/DOWN	The up and down arrows are used to navigate through menus and adjust parameters such as setpoint, Fon/FOF, etc.
SET	• To change the setpoint, press the SET button. When "SEt" is displayed on the screen, press the SET button once more. Use the UP and DOWN ARROW buttons in order to change the value until the desired setpoint is reached.
	• The SET button allows you to view the setpoint, evaporator temperature, bottle temperature, alarms, and the hidden menu. • Press the SET button once. "SEt" will be displayed. Press the UP or DOWN ARROW buttons to scroll through ALr, Pb1, or Pb2.
	<table><tr><td>**Set**</td><td>Setpoint</td></tr><tr><td>**Alr**</td><td>Alarm folder</td></tr><tr><td>**Pb1**</td><td>Liquid (bottle probe) temperature</td></tr><tr><td>**Pb2**</td><td>Evaporator coil temperature</td></tr></table>
	• Press the SET button again to view any of these values.
	• Hold the SET button for approximately 5 seconds to enter the User Menu. • Other parameters in the User Menu which are not available for adjustment include: idF, rEL, and LAn.
ESC	This button confirms changes made to parameters such as the setpoint and returns you to the previous menu.
LIGHT	The light function is not in use. However, this button can still be used to unlock the display.

ICON GLOSSARY

Icon	Meaning
SNOWFLAKE	**Blinking:** The unit is calling for cooling, but must wait five minutes before restarting the compressor. This five-minute delay serves as an Anti-Short Cycle for the compressor's protection. **Constant:** The unit is in cooling mode and the condensing unit is running.
DRIPPING SNOWFLAKE	The unit is undergoing an Anti-Frost Cycle. While the Anti-Frost Cycle is running, "dEF" will be displayed on the screen. See System Operation page for further details.
FAN	The evaporator fan is running.
ALARM	The alarm icon is shown when the unit encounters an issue that needs attention. Alarm codes are explained on the following page. All temperature-related alarms are blocked for the first 10 hours after the unit is plugged in to allow the system to stabilize and acclimate to the new environment.

CELLARCOOL CONTROLLER ALARM CODES

Code	Cause	Solution
The following alarm codes will be displayed on the screen along with the alarm icon. (((●)))		
E1	Bottle probe is not connected	Attach bottle probe to circular connector
	Faulty bottle probe connection	Locate faulty bottle probe connection by inspecting all wiring connections between the bottle probe and the circuit board. The two-pin connector for the bottle probe should be connected to the CPB/PB1 terminal on the circuit board. If it is not connected, plug it in. If a faulty connection has been identified, correct the issue or contact customer service for further assistance. **NOTE:** The E1 code will not appear in the alarms menu. It will be permanently displayed on the screen.
	Defective bottle probe	Replace the bottle probe
E2	Faulty evaporator probe connection	Locate faulty evaporator probe connection by inspecting evaporator probe wire. The two-pin connector for the evaporator probe should be connected to the CPB/PB2 terminal on the circuit board. If it is not connected, plug it in.
	Defective evaporator probe	Replace the evaporator probe
E7	No communication between keypad and circuit board for 60 seconds	Verify that the display cable is connected to the keypad and the circuit board and is not damaged, frayed, or kinked. If problem persists, contact Customer Service for troubleshooting information.
E10	Clock battery is dead	Replace battery **NOTE:** A dead clock battery will not affect the operation of your cooling unit.
The following alarm codes will not be displayed on the home screen. However, the alarm icon will be displayed in the event of an alarm. The alarms can be viewed in the Set Menu's ALr folder. (((●)))		
EA	Unit is not draining properly	1. Check to see that the unit is level; if not, level it 2. Verify that the drain line is not clogged; if so, clear obstruction 3. Ensure that the condensate pump is operating 4. Verify wire connection at D.I. port of circuit board **NOTE**: If the drain line is obstructed or the pump fails for some reason, and the water level in the drip tray gets too high, the unit will not operate until the water in the internal drip tray drops back below the proper level. **NOTE**: If the unit loses power (due to a power outage or being manually un-plugged), the condensate pump may need to be reset. To do this, disconnect and reconnect the black cables on the condensate pump.
AH1	The bottle probe is sensing a temperature that is 4°F above the setpoint	1. Allow time for the wine to reach the desired temperature 2. Ensure that the cellar is sealed properly 3. Verify that the bottle probe is calibrated correctly (refer to the User Menu on the following page) 4. Verify that the unit is sized correctly for the cellar
AL1	The bottle probe is sensing a temperature that is 4°F below the setpoint	1. Make sure the unit is not in cooling mode (the snowflake icon will not be illuminated) 2. Add heat to the room until the wine reaches the desired temp 3. Verify that the bottle probe is calibrated correctly (refer to the User Menu on the following page)
Ad2	The Anti-Frost Cycle ended on time-out	1. Check the evaporator coil for ice buildup. Unplug the unit and allow the coil to thaw before restarting. 2. Make sure the room to which the unit is exhausting is not below 60°F 3. If the unit repeatedly goes into Anti-Frost Cycles (one per minute), call Customer Service for more troubleshooting information

USER MENU

The User Menu is accessed by **pressing and holding the SET button for 3 seconds.** Use the UP and DOWN ARROW buttons to navigate to desired parameters. Press the SET button again to view these parameters. Press the UP and DOWN ARROW buttons to adjust a parameter.

The following parameters are available in the menu:

| Parameter	Description
Fdc - humidity enhancement	This parameter is measured in minutes, and is preset at the factory to 1. An increase in this parameter will increase the humidity enhancement of your cellar. This parameter should not be adjusted to zero. Adjustments should be made in increments of 5, with a maximum of 15 and a minimum of 1. After making any adjustments to humidity enhancement, **you should wait a minimum of 3 days** before making any additional adjustments. This will allow sufficient time for the cellar to acclimate to the new setting.
FOF - "fan off"	This setting controls how long the fan stays off after the setpoint has been reached. It is preset to 15 minutes. This setting should not be adjusted, as most properly constructed wine cellars retain an ample amount of humidity during the "fan off" cycle. If, however, you wish to decrease the duration of the "fan off" cycle (in order to increase the wine cellar's relative humidity), you can adjust this setting in the User Menu.
Fon - "fan on"	The "fan on" time is preset to zero minutes. This keeps the relative humidity of the wine cellar at a stable level. If, however, you wish to raise the relative humidity of your wine cellar, you can increase the duration of the "fan on" cycle in increments of five (5, 10, or 15 minutes). After making any adjustment to the "fan on" cycle, **you should wait a minimum of 3 days** before making any additional adjustments. This will allow sufficient time for the cellar to acclimate to the new setting.
CA1 - bottle probe (Pb1) calibration	**CA1 - bottle probe (Pb1) calibration:** You may use this parameter to calibrate the bottle probe to a known temperature. This parameter can be adjusted between -12°F and 12°F. For example, if the bottle probe temperature is 58°F, and the known temperature is 55°F, you can set the CA1 parameter to -3°F to match the known temperature.
PA2 - installer menu	This menu is only accessible using a password and is not available for adjustment.
dOA - digital input	This setting determines which of the unit's components will be activated or deactivated when a certain electrical relay is activated or deactivated in response to an alarm. The controller comes pre-programmed with a factory setting of 2. 2 = activates the compressor and fans 5 = disables the compressor and fans **NOTE:** Setting the dOA to any number other than 2 or 5 will prevent the unit from operating properly.

CellarCool 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 a service tech to troubleshoot
The evaporator unit has not gone through an Anti-Frost Cycle yet	Check the coil for surface ice. Melt with blow drier until coil is warm to the touch. Soak up water with a towel.
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.

Unit does not run/power up

Possible cause	Solution
Evaporator Unit is not plugged in	Make sure the unit is plugged into an outlet
Power switch not on	Turn unit on by pressing the power button on the control
Line voltage rating is incorrect for the system	Check line voltage to make sure there is 110V-120V
Bottle at setpoint	Lower setpoint
Thermostat not calling for cooling	Lower setpoint
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.
Setpoint too high	Lower the setpoint
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; 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.
Condensate pump needs to be reset	Disconnect and reconnect the black cables attached to the pump

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 at 1-800-343-9463
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
Running an Anti-Frost Cycle	1) If the system is maintaining the correct cellar temperature and there is a dripping snowflake symbol illuminated on the control, the system is going through an Anti-Frost Cycle. No action is required. 2) If the system is not maintaining the correct cellar temperature, this may be due to a dirty evaporator filter or coil. 3) Call installing technician to troubleshoot, as the system may be low on charge or require an adjustment to the TXV.
Compressor and/or starting components faulty	Please contact the installing technician to troubleshoot
System may be performing the WHM function	Allow cooling system to revert back to cooling mode
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 controller	Please contact the installing technician to troubleshoot

Compressor short cycles

Possible cause	Solution
Evaporator unit blows on bottle probe	Move bottle probe to a more central location
System low on refrigerant charge	Please contact the installing technician to troubleshoot
Condensing 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

Condenser Component Identification

A	ECM Blower 1-240860
B	Magnacraft Relay: 1-141120 24V Relay *Communicaiton only* : 1-141122
C	Liquid Reciever: 5-120056 Tension Spring: 1-141021 Receiver Heater: 5-120056
D	Mini Comp: 1-116090 4000 Comp: 1-116212 8000 Comp: 1-116215
E	Vibration Eliminator 5-120054
F	Filter Drier 1-190001
G	Check Valve 1-182863
H	Mini Coil: 2-121211 4000 Coil: 2-110801 8000 Coil: 2-110801
I	*Service Valves*
J	Sight Glass 5-120055
K	Suction Accumulator 1-182164
L	Crank Case Heater 5-120057

I: **Suction Line**
I: **liquid Line**
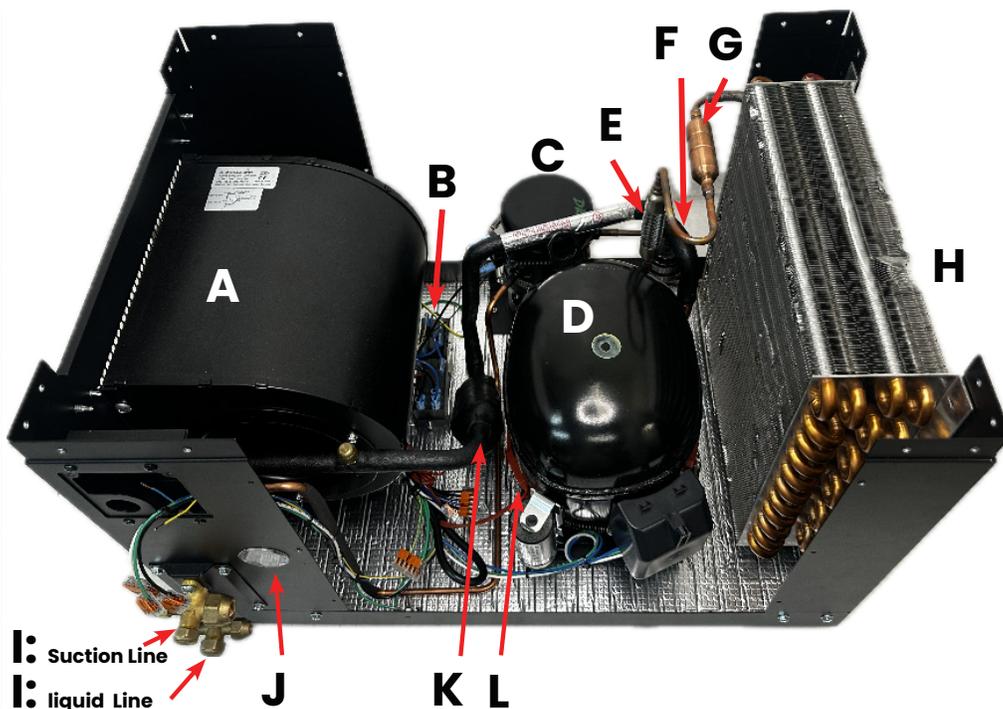
Service Valves

Omni 2500	Omni 3500/5000
5-12007: Suction Service Valve 3/8" 2-120006: Liquid Service Valve 1/4"	5-120021: Suction Service Valve 1/2" 5-120006: Liquid Service Valve 1/4"

220V Components
Mini Comp Global: 1-116222   **Mini Comp Domestic:** 1-116092   **Crank Case Heater:** 5-120019   **ECM Blower:** 1-240866   **Pump Down Relay**
220v Coil: 1-14112   **Communication Relay 24V Coil:** 1-191008 2   **220v Reciever Heater:** 1-261312 **4000 Comp**: 1-116223 **8000 Comp:** 1-116224

CELLARCOOL

SYSTEM OPERATION- KDT

Initial Start-Up
When the unit is plugged in and power is sent to the controller, a beep will sound, confirming that the controller is getting power. All LEDs on the display will blink three times. Three dashes will then appear on the screen. All display LEDs will then blink three times. Once the controller has gone through the initial startup process, and all LEDs have cycled, the home screen will be displayed.

Setpoint
The setpoint is preset at the factory to 55°F. It can be adjusted by the customer between 50–70°F in one-degree increments.

Indoor Fan Operation
The indoor fan will run when the controller is calling for cooling and turn off once the cooling cycle has ended. During the cooling cycle, the system will remove some relative humidity from the cellar. Some of the humidity that was removed can be reintroduced into the cellar by adjusting the "fan on" and "fan off" functions. (The cooling system is not equipped with a humidifier and does not add humidity.)

The FOF cycle should be shortened first. This will reduce the amount of time that the fan remains off following a cooling cycle. When the unit has completed a cooling cycle, the compressor and the condenser fan will turn off, but the indoor fan will continue to run for whatever length of time the customer has set. The Fon function may then be lengthened to allow the fan to run longer and reintroduce moisture from the evaporator coil back into the wine cellar.

For more information about fan settings, refer to the User Menu.

Anti-Short Cycle Communication
The Anti-Short Cycle ensures that the unit will remain off for a period of five minutes after the unit has reached the setpoint. This allows the pressure in the refrigeration system to equalize prior to starting the compressor.

Anti-Short Cycle Pump Down
Once the solenoid relay is de-energized, the controller must wait five minutes before reenergizing the relay. This prevents the compressor from repeatedly turning off and on. If the unit is calling for cooling during this time, the compressor icon will blink, indicating that cooling is needed but the controller is waiting for the Anti-Short Cycle delay.

Anti-Frost Cycle
When the evaporator probe senses a temperature of 26°F for a duration of one minute, an Anti-Frost Cycle will be initiated. This will shut down the compressor, allowing the evaporator fan to run and melt any frost accumulation on the coil. While the Anti-Frost Cycle is running, "dEF" will be displayed on the screen. The compressor will remain off until the evaporator coil reaches 40°F, or for a maximum of one hour. The unit will then return to normal operation.

Digital Display
The display is designed to give the user the ability to adjust the setpoint, Fon/FOF parameters, and other settings. (See User Menu for more details.) The bottle probe temperature is displayed by default. "dEF" will be displayed during an Anti-Frost Cycle. The bottle probe and evaporator probe temperatures can be accessed by pushing the SET button and scrolling through "Pb1" (bottle probe) and "Pb2" (evaporator probe). The light button may be used as an unlock button.

Safety Features
In the event of a faulty bottle probe, the compressor will cycle off for 10 minutes and on for 40 minutes. "E1" will be displayed on the screen.

Alarms
See "Alarm Codes" in the Controller Functions chart.

SYSTEM OPERATION- 24V

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.

Indoor Fan Operation
The indoor fan will run when the controller is calling for cooling and turn off once the cooling cycle has ended. During the cooling cycle, the system will remove some relative humidity from the cellar. Some of the humidity that was removed can be reintroduced into the cellar by adjusting the "fan on" and "fan off" functions. (The cooling system is not equipped with a humidifier and does not add humidity.)

The FOF cycle should be shortened first. This will reduce the amount of time that the fan remains off following a cooling cycle. When the unit has completed a cooling cycle, the compressor and the condenser fan will turn off, but the indoor fan will continue to run for whatever length of time the customer has set. The Fon function may then be lengthened to allow the fan to run longer and reintroduce moisture from the evaporator coil back into the wine cellar.

For more information about fan settings, refer to the User Menu

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.

Operation in Low Ambient Temperatures
The condensing unit comes equipped with a fan cycle switch, which controls the condenser fan operation to maintain optimal system pressures. During cold ambient temperatures when the high side pressure falls below 75 psi, the fan cycle switch will open and the condenser fan will be shut off to maintain minimum head pressure. Once the pressure reaches 110 psi, the fan cycle switch will close and allow the condenser fan to continue operation.

MAINTENANCE SCHEDULE

Monthly	1. Check for debris surrounding condensing unit (leaves, branches, trash, etc); remove all obstructions 2. Check for unusual noise or vibration 3. Check the drain line to see if it is above the waterline (if draining into a vessel)
Quarterly	**Clean out drip pan inside evaporator** 1. Use a vacuum with brush attachment to clean the evaporator coil; be careful not to crush coil fins when cleaning 2. Remove the evaporator filter and clean with warm water 3. Ensure the condensing unit is free of debris and dust 4. Have a certified HVAC-R technician service the condensing unit and clean the condenser coil 5. Insert a pan tabs into the stainless steel drip tray
Annually	1. Inspect for corrosion 2. Check wiring connections and integrity of cords 3. Pour a 50/50 bleach solution into the drain line every spring

TECHNICAL ASSISTANCE

CellarCool 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 CellarCool 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 CellarCool Customer Service
1738 E. Alpine Ave
Stockton, CA, 95205
www.CellarCool.com

Email: support@CellarCool.com
Fax: 209-466-4606

ACCESSORIES FOR COOLING UNITS

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

Little Giant 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.

Accessories can be purchased at www.CellarCool.com

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

ATTENTION: PLEASE READ THESE TERMS OF USE CAREFULLY BEFORE INSTALLING YOUR CellarCool COOLING SYSTEM. INSTALLING YOUR CellarCool 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 CellarCool 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 (CellarCool.com) or by contacting CellarCool directly for a new copy. CellarCool reserves the right, in its sole discretion, to change its Terms and Conditions at any time, for any reason, without notice.

2. CellarCool 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 CellarCool and described in the CellarCool 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 CellarCool within thirty (30) days of installation of Product. The Split Startup Checklist must be approved by CellarCool 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 CellarCool. 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 CellarCool in accordance with the terms and conditions of the Limited Warranty, CellarCool warrants against defects in material and workmanship as follows:

   1. **LABOR** —For a period of two (2) years commencing on the date of purchase and up to an additional (1) year grace period upon approved startup checklist, CellarCool will, at its option and discretion, reimburse up to $400 to the End User for cost incurred for repairing, removing or installing warranty parts. Invoice for service must be forwarded to CellarCool 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 CellarCool to service the Product.

   2. **PARTS** — For a period of two (2) years commencing on the date of purchase and up to an additional (1) year grace period upon approved startup checklist, CellarCool will supply, via a deposit, new or rebuilt replacement parts in exchange for defective parts. Replacement parts are warranted only for the remainder of the original warranty period.

   3. **UNIT** - CellarCool will replace the Product with an authorized factory replacement under the terms of our Replacement Agreement via a deposit. The Replacement Agreement outlines the terms, procedures, and additional condiserations should the End User request a replacement for a cooling unit that is found to fall under warranty. For more information on our Replacement Agreement, visit www.CellarCool.com/warranty-information.

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

- 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 CellarCool 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 CellarCool 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 CellarCool voids this limited warranty.

10. The End User must first contact CellarCool 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 CellarCool 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 CellarCool'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 CellarCool 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 CellarCool 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 CellarCool Customer Service for approval. The original condenser skid must be returned within 21 days to CellarCool 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 CellarCool 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. CellarCool 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 CellarCool to be a warranty repair prior to the work being performed.

5. Sales and Use Tax

CellarCool only collects California sales tax for orders shipped within the State of California; CellarCool 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

CellarCool's customer service department is available to answer any questions or inquiries for End Users regarding a CellarCool 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 Support@CellarCool.com. CellarCool reserves the right to have a certified, CellarCool-approved, HVAC/R technician go on site and inspect the product if the initial trouble shooting warrants further investigation. CellarCool 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. CellarCool ("manufacturer") strives to provide our customers with a superior Product and we back our Product with a Two Year Limited Warranty. Please review the CellarCool 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 CellarCool approved Independent Certified HVAC/R Technician. The evaluation of the Technician on all issues or matters of identifying the responsible party (CellarCool or Installing Technician) shall be determined in a written report. This report will be made available to all concerned parties. If discovered under warranty, CellarCool will assume the financial responsibility under their warranty guidelines. If the report finds the Owner's Installer as the responsible party, CellarCool 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 CellarCool 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 ninety (90) 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. CellarCool 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 CellarCool, 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 CellarCool and Purchaser. Any dispute will be resolved by the courts in and for the County of San Joaquin, State of California, and all parties, CellarCool, Purchaser and End User, hereby irrevocably submit to the personal jurisdiction of such courts for that purpose. No waiver by CellarCool 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. CellarCool 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 at Support@CellarCool.com or please send a letter via U.S. Mail to:

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

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

B. Technical Assistance. WhipserKool Customer Service is available Monday through Friday from 6:30 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 WhipserKool UNIT.

2. The location of the system and installation details, such as ventilation, construction of your wine cellar, and room size.

Replacement Agreement

CellarCool will replace the item(s) with the same or compatible item(s) for products that fail within warranty. Before initiating a warranty claim, the customer must complete all troubleshooting steps and the warranty claim process with a customer service representative.

Terms and Conditions

1. The customer will be charged a deposit to replace and ship the item via standard ground shipping under warranty. The total deposit amount will depend on the item being replaced. The customer is responsible for any cost associated with the removal or reinstall of the product.

2. For Unit Replacements:

   a. The cellar must be constructed per the guidelines in the Owner's Manual; an adequately built wine cellar must be fully insulated and include a completely sealed vapor barrier that will prevent excessive moisture from entering the wine cellar.

   b. The cooling unit must be installed with no obstruction to the airflow. Adequate ventilation is required to dissipate heat away from the unit.

   c. The condenser intake air temperature must not exceed the maximum recommended by CellarCool.

   d. The customer must install the external drain line to dispel the condensate.

   e. **Warranty will be void if the unit is not installed, operated, maintained and serviced in accordance with instructions issued by CellarCool, and a replacement will not be covered.**

Required Procedures

- An RMA (Return Merchandise Authorization) number will be issued at the time of the order.
- Once the replacement item has been received and installed, use the new packaging to re-pack the original item and ship it back to the factory.
- The customer will be provided a pre-paid return label or freight pickup for the return shipping of the item.
- **If you fail to return the original CellarCool unit or part to the factory within 30 days of issued RMA, or no problem is found with the product, you will not be eligible for a refund of the deposit amount.**
- All orders covered by warranty will receive a full refund after evaluation has been completed and the claim has been verified, excluding items not covered under warranty, additional fees associated with the claim, and any expedited shipping charges associated with the order.

Additional Considerations

- This program is only for existing CellarCool units under warranty.
- Replacement units are subject to availability. Your size replacement may not be available at all times.
- Refurbished cooling units may also have minor cosmetic imperfections.
- Factory-Authorized Replacements have been tested and are in proper operating condition at the time of shipment.
- The customer's responsibility is to secure haven/storage for ANY AND ALL items kept and stored in their wine cellar. CellarCool takes no responsibility for the safety and preservation of the items mentioned above if the environment becomes unsuitable to maintain a proper storage environment.
- If you have any questions or require further assistance, please contact our Customer Service Department at 1-(800) 343.9463 or email at **support@CellarCool.com**.

By signing below, the customer hereby agrees to the Replacement Agreement and its Terms and Conditions described herein:

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, the website, or e-mail.

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

Fax to:
209-466-4606

Scan and email to:
warranty@CellarCool.com

SCAN ME

Model _____ **Serial Number** ___ ___ ___ ___ ___ ___

Installed by _____ **Date** _____

Whisper**KOOL**™