

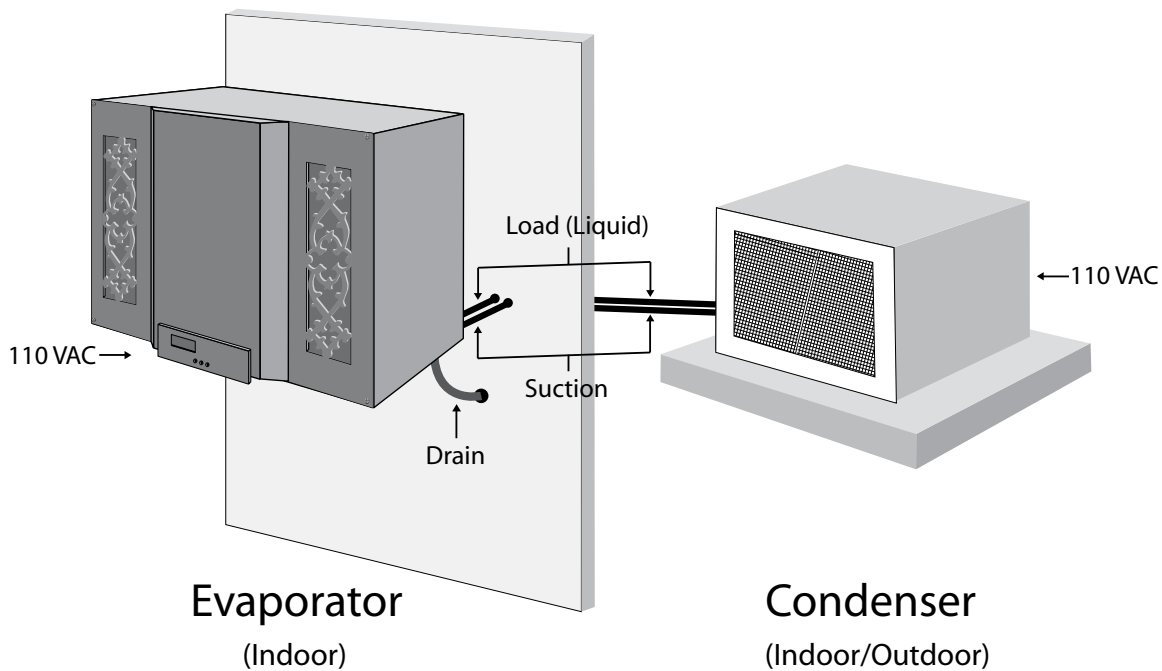
WhisperK00L

by Vinothèque

“THE COOLEST THING IN WINE STORAGE.”

**Split System.
SS4000 & SS7000.**

Split Refrigeration System



⚠ The WhisperK00L Split Cooling System requires professional installation by a licensed refrigeration technician.

Thank you for choosing WhisperK00L Split Cooling System for your wine preservation needs. This unit has been specifically designed and engineered to create the ideal balance of temperature and humidity within a wine cellar. This, along with a properly designed and constructed cellar, creates the optimum environment for the proper aging of fine wine. Please take the time to read through the owner's manual so you understand the correct operations of the WhisperK00L unit.

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FEATURES & BENEFITS

Designed specifically for wine storage, the WhisperKOOL system is a specialized refrigeration unit designed for one purpose only: to maintain the optimal temperature and humidity levels conducive to the proper aging of fine wines.

Humidity Control

The cooling unit is designed to maintain relative humidity at 50-70%. The proper humidity level is managed through the design and engineering of the unit. There are no separate switches for controlling humidity. As the temperature begins to drop within the cellar, the relative humidity will rise. The WhisperKOOL units do not create humidity. If you live in a dry area of the country, you may need to create humidity in the wine cellar. This can be done by introducing a non-heat humidifier or installing a small fountain within the cellar. The unit will remove excess humidity from the air and discharge it through the drain line hookup on the evaporator unit.

Quiet Operation

Years of experience with our self contained cooling units has resulted in a totally new design which accounts for a number of environmental conditions which are unique to wine cellars. We have accounted for these variables and incorporated the use of state of the art components, which offer quiet and sophisticated operations while keeping the basic concept rather simple.

Indoor and Outdoor Condenser Installations

This system offers the option of installing the condenser unit indoors or outdoors. This will allow home builders and architects to incorporate this system with the utmost ease with regard to installation and space requirements. Note: **Exterior installations require the condenser housing.** Please specify the need of this requirement at the time of order.

Temperature Differential

The WhisperKOOL split system is designed with a 55 degree temperature differential. This means the unit can operate correctly even if the ambient temperature outside (or wherever the condenser unit is mounted) even in 110 degree heat. This is a significant improvement over most cooling units designed for wine storage.

RECEIVING & UNPACKING

The system includes both the evaporator and condenser units packaged in two (2) separate containers. An exterior housing is optional for outdoor installations and will arrive packed separately.

Evaporator



Condensers (Shown With Optional Housing)



Thermostat

The split system evaporator has been designed to incorporate the Vinotheque PDT™ series thermostat.

Years of research and testing have gone into the design of the PDT thermostat- resulting in advanced microprocessor controlled digital technology and pinpoint accuracy. This system incorporates a probe designed to measure the liquid temperature in a wine bottle rather than the air temperature of the cellar. This results in several distinct advantages:

- Wine is maintained at a precise, measured temperature.
- The unit will switch on/off less often, extending cooling unit life.
- The unit will run longer during cycles effectively maintaining humidity.

Additional Features:

Digital probe—contains a microchip which communicates back and forth to the thermostat, resulting in accuracy.

Heavy Duty Circuitry—designed to resist power surges, which play havoc on sensitive electrical components.

Fahrenheit and Celsius readout—for use in the United States as well as around the world.

Built In Defrost Cycle—designed to prevent icing on the evaporator coil.



PDT Thermostat

PACKAGE CONTENTS

SS4000

Box 1

Evaporator Unit (part #: 03-4000SS-0120)
Sight Glass
Filter Dryer

Box 2

Condenser Unit (part #: 1-122100)
Accessory Kit (par #: 09-950-9997SS)

Box 3

Optional Exterior Housing (part #: 03-4000SS-0120)
Mounting Hardware

Box 4

Optional Electrical Pack

SS7000

Box 1

Evaporator Unit (part #: 03-7000SS-0120)
Sight Glass
Filter Dryer

Box 2

Condenser Unit (part #: 1-122101)
Accessory Kit (par #: 09-950-9997SS)

Box 3

Optional Exterior Housing (part #: 03-7000SS-0120)
Mounting Hardware

Box 4

Optional Electrical Pack

Accessory Kit	part #: 09-950-9997SS	Quantity
Brass Fitting, 3/8" Barb x 1/8	1-141012	1
Brass Nipple, 1/8" Male Pipet	1-141025	1
Bypass Plug Jumper w/Molex	1-212455	1
Screw #8 x 1-3/4 SH Black	1-422813B	9
Owner's Manual	M-4/7SS RevA	1

WINE CELLAR / SPACE PREPARATION

Preparing the Wine Cellar

The proper design and preparation of the wine cellar is essential in order to maintain the ideal temperature and humidity levels. We have created a typical presentation on "How to Build a Wine Cellar" which is available for viewing on our web site at www.whisperkool.com. Failure to prepare the cellar accordingly will result in improper functioning of the cooling unit and is not covered under warranty.

Technical Specifications

Sizing Guide & Specifications						
Vinothèque model	Cellar Volume	Run Amps	Start-Up Amps	Ton	H x W x D	Lbs
SS4000 Condenser	1000 cu. ft.	10 Amps	15 Amps	1/3	13.5"x18.5"x12"	56
SS4000 Evaporator	1000 cu. ft.	1 Amp	2 Amps		15.75"x23.5"x15.5"	60
SS7000 Condenser	1750 cu. ft.	9 Amps	18 Amps	7/12	13.5"x18.5"x12"	66
SS7000 Evaporator	1750 cu. ft.	1.5 Amps	3 Amps		15.75"x23.5"x15.5"	60
Outside Enclosure (All)	NA	NA	NA	NA	20.75"x25.75"x18"	30

Power Source

Condenser -110Volt, 20Amp Dedicated (Non-GFI) Breaker

Evaporator -110Volt, 15Amp Dedicated (Non-GFI) Breaker

Lines and Wiring

1/4" Liquid Line

3/8" Suction Line for lines 50 ft or less, or

1/2" Suction Line for lines 51-100 ft

Insulation for Suction Line

For each line reduce the line set calculation by 10 ft for every 90° bend. Do not exceed 100 ft total length. No wiring required between condenser and evaporator.

SPLIT SYSTEM INSTALLATION GUIDELINES

General Installation Guidelines and Instructions

Vinotheque requires that a **certified HVAC technician** install the Split System unit modules. Please take a moment to review State and City building codes to insure the safe and proper installation of the unit.

Installing Condenser Unit

The condenser unit can be mounted inside a utility area of the home or outside utilizing the optional outdoor condenser housing. The system will operate on a 55 degree temperature differential. This means that the unit will have the capacity to produce cool air into the cellar as long as the ambient temperature does not climb above 110 degrees Fahrenheit. This unit requires a dedicated 20 amp circuit, non-GFI. Make sure there is a minimum three-foot horizontal clearance in front and rear of the unit. The unit may either be hard wired or plug-in depending on local electrical codes. **The unit must be installed at an elevation lower than the evaporator unit. If not, a “P Trap” must be installed.**

- **Internal Condensing Unit Installations.** Internal installations require special consideration by having adequate ventilation to dissipate the heat created during normal operations. An exhaust port with fan may need to be installed to assure that heat is effectively dissipated from the utility room. Unobstructed airflow to and from the unit is a critical factor in the unit's overall performance. Make sure there is a minimum three-foot horizontal clearance in front and rear of the unit. This will assure that the unit can move the air around the room in an efficient manner.
- **External Condensing Unit Installations.** You must utilize the optional exterior condenser housing for outdoor installations. Place the condenser on a solid foundation in a location with adequate ventilation. There should be three feet for clearance in the front and rear of the unit and one foot on each side. The unit should be elevated in order to avoid any possible flooding and should be clear from leaves, dirt, and other debris.

Mounting Evaporator Unit

The evaporator unit should be mounted approximately 18 inches or less from the ceiling of the cellar in order to achieve sufficient cooling. As the room cools down, warm air will rise to the ceiling, which is then captured into the cooling unit in order to create a consistently cool environment. Mounting the unit low in the room will result in a temperature variation due to the unit's inability to draw warm air down from the ceiling into the unit itself.

Unobstructed Airflow

Unobstructed airflow to and from the unit is a critical factor in the unit's overall performance. Make sure there is horizontal clearance in front of the unit. This will assure that the unit can move the air around the room in an efficient manner.

CONDENSER SKID PREPARATION

PLEASE NOTE: Minor assembly to compressor solenoid valve is required prior to installation.

The Condenser Skid requires assembly prior to charge/operation. The included solenoid valve needs to be connected. In Figure A – locate the capped nut. Remove the nut and replace Teflon tape on the threads. Install the Solenoid valve – insuring a leak-tight torque (Figure B). Remove the protective valve cap to expose the valve stem. Using a tuning wrench, rotate the valve stem 9 revolutions counter-clockwise (Figure C). This will open the compressor system and prepare the unit for charging.

Note: The compressor unit is shipped with a protective foam pad/ block to prevent damaging tubing against the evaporator coil fins. Please ensure that this pad is removed prior to operation.

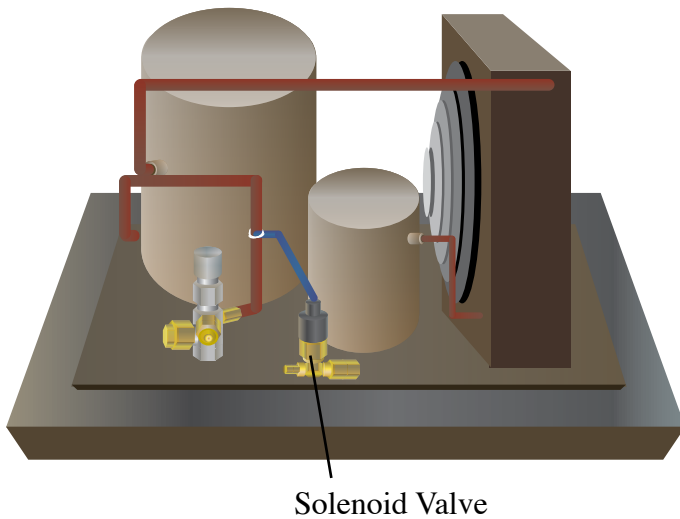


Figure A

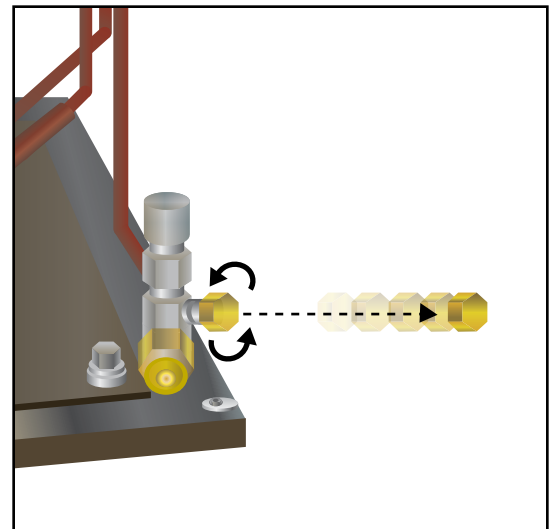


Figure B

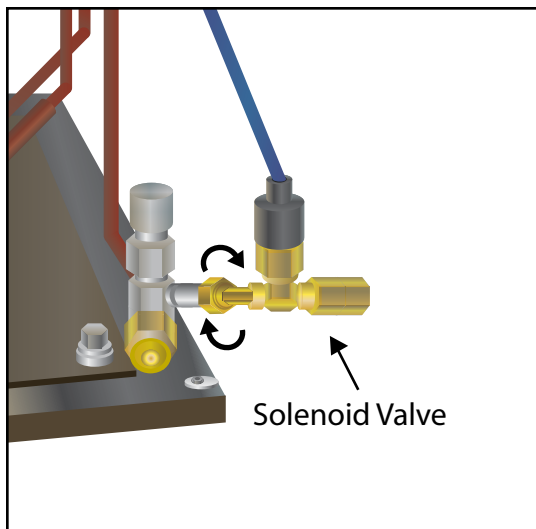
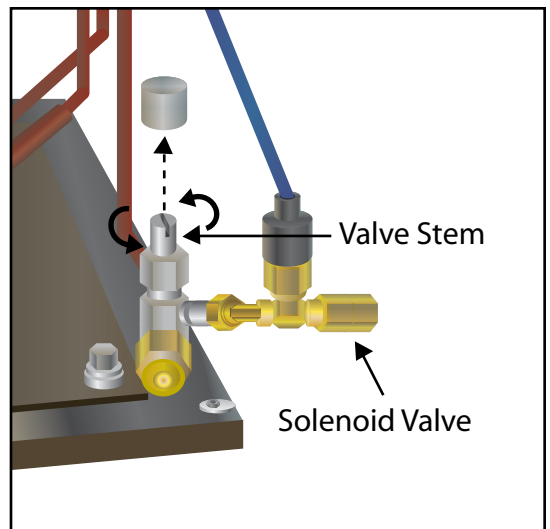
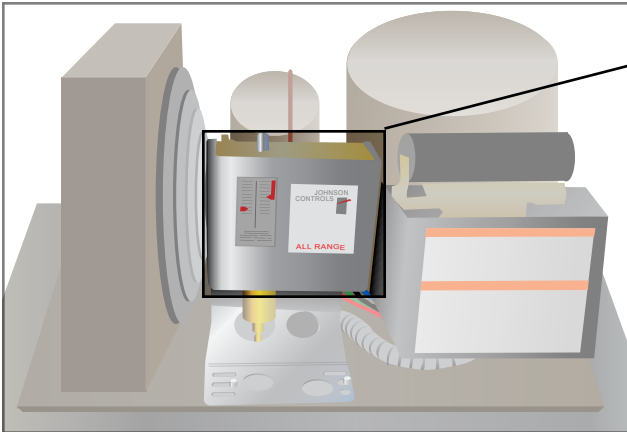


Figure C



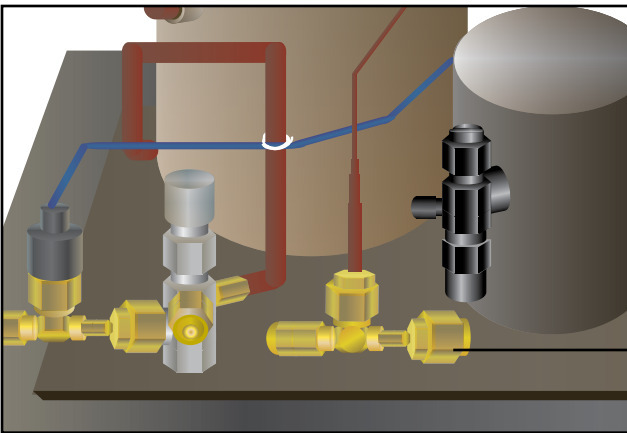
Head Pressure Control valve:

The head pressure control valve is designed to protect the compressor from excessive system pressure that could be caused by condenser fan failure. The valve is also used to cycle the fans at low ambient temperature. The unit is preset at the factory, the switch is set to engage the fan at 135 psig and disengage at 90 psig. These settings will keep the refrigerant in the condenser between 83 degrees F and 105 degrees F and prevent freeze up of a properly charged and maintained unit.



Fan Switch:

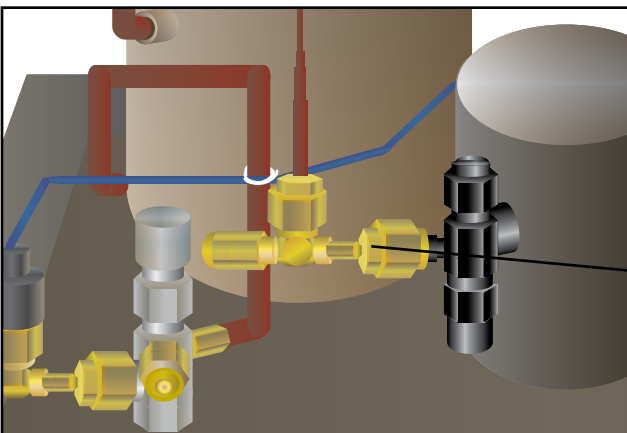
Illustration of the fan switch.



Head Pressure Control Valve:

The head pressure control valve is included with the cooling unit, but is not installed at the factory.

Head Pressure Control Valve (not connected)



Connecting the Head Pressure Control Valve:

To connect the head pressure control valve to the receiver, remove the cap from the receiver and install the 1/4 inch access valve.

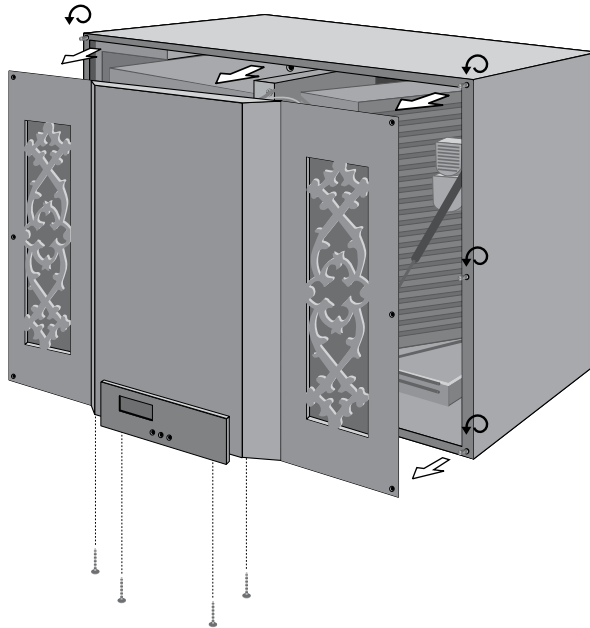
Head Pressure Control Valve
(connected to receiver)

MOUNTING THE EVAPORATOR UNIT

1. Disassemble evaporator unit.

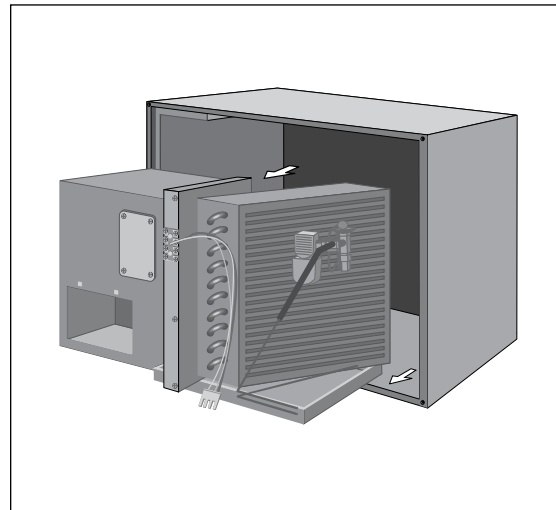
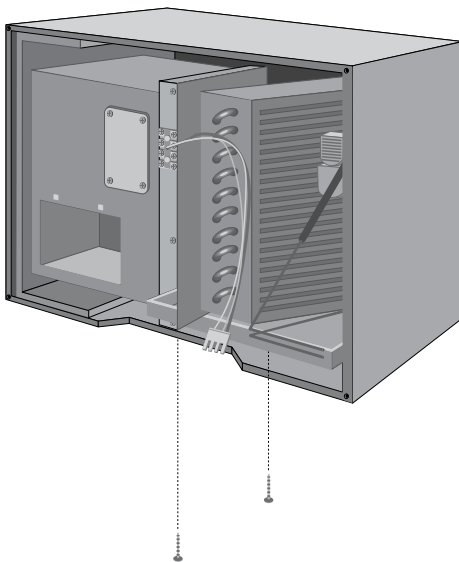
In order to mount the housing to the wall, the internal components will need to be removed and reinstalled. Remove front cover by unscrewing six captive screws located on each corner of the cover and two at bottom of front cover. Then remove two screws from the bottom of the thermostat and remove it.

Note: Thermostat is not plugged into electrical line.



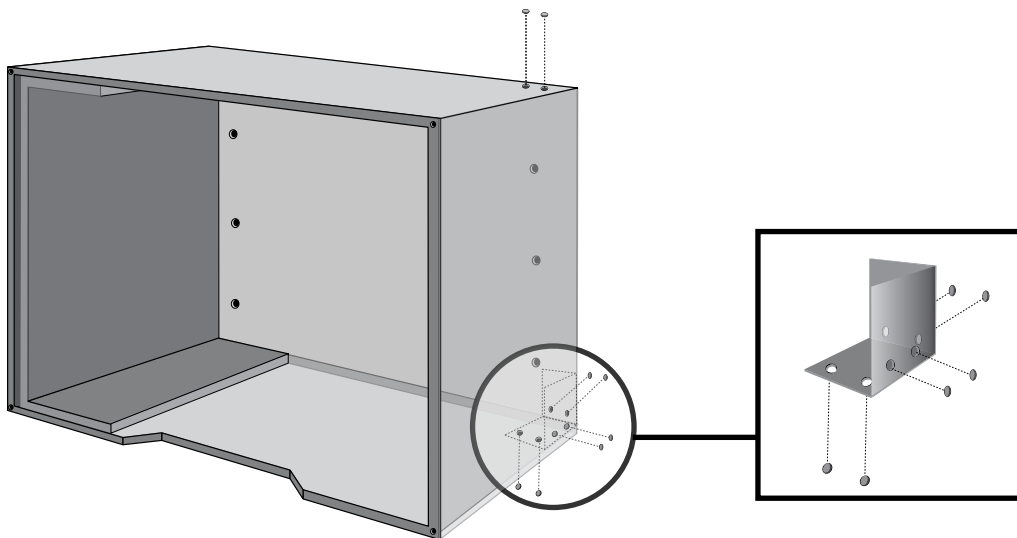
2. Remove interior assembly.

The interior assembly is one piece. Remove the two mounting screws located on the bottom of the unit. The assembly should slide out on mounting rails as one piece.



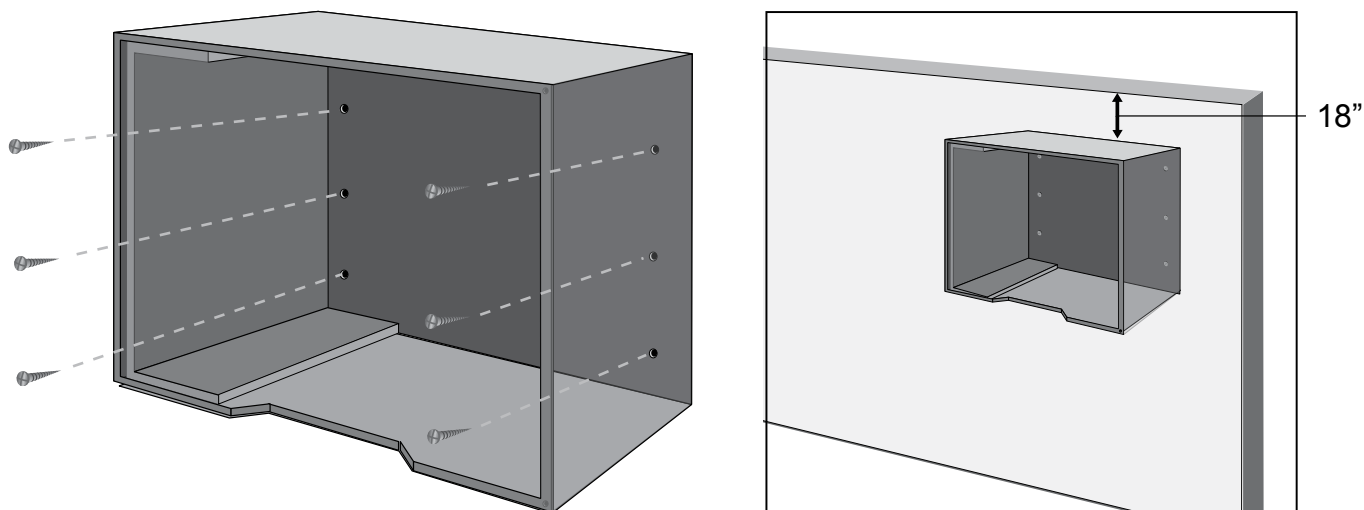
3. Identify and remove appropriate knockouts.

There are knockouts located on the rear panel, right side panel and on top. Remove knockouts for the two refrigeration lines and install the two grommets supplied. Remove knockout for electrical line.



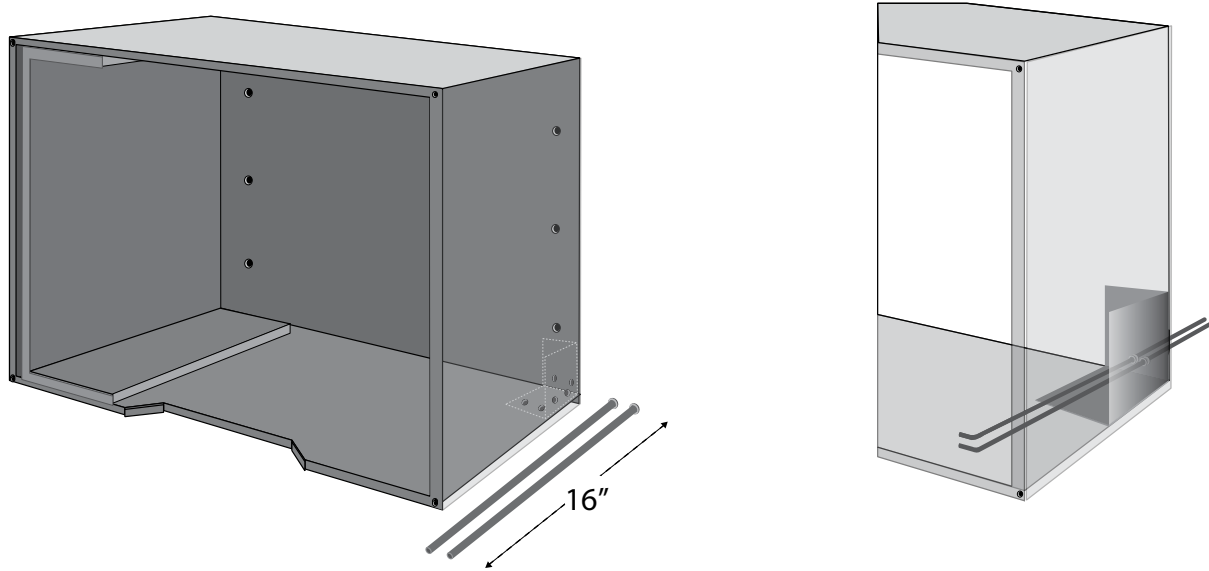
4. Mounting housing to wall.

The unit has six mounting holes on 16 inch wide centers. Utilize all mounting screws to secure the housing to the wall.



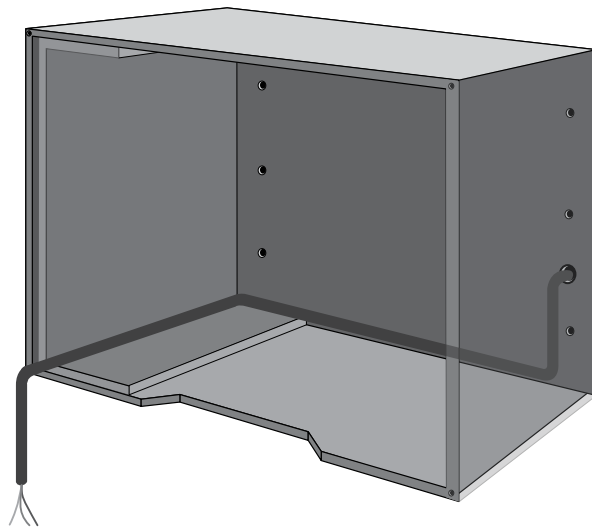
5. Installing refrigeration lines into evaporator housing.

Run both refrigeration lines into the housing through the grommets supplied. The refrigeration lines should be 16 inches long to assure a simple attachment to refrigeration lines in the evaporator.



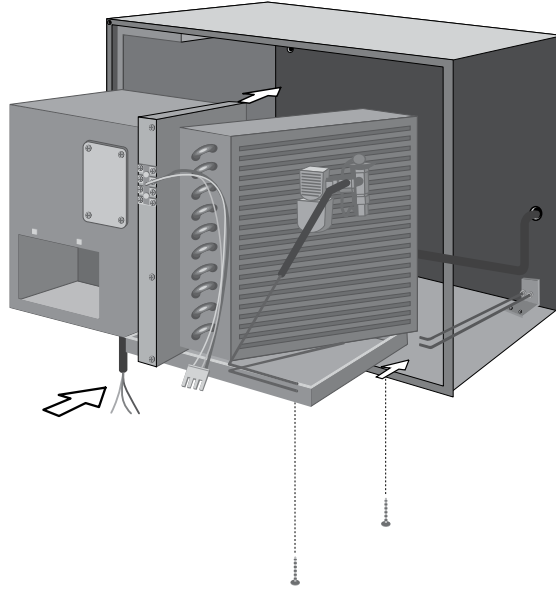
6. Run the electrical line into evaporator on bottom of left side over insulation.

Wires should be at least 36" long going into the cabinet.



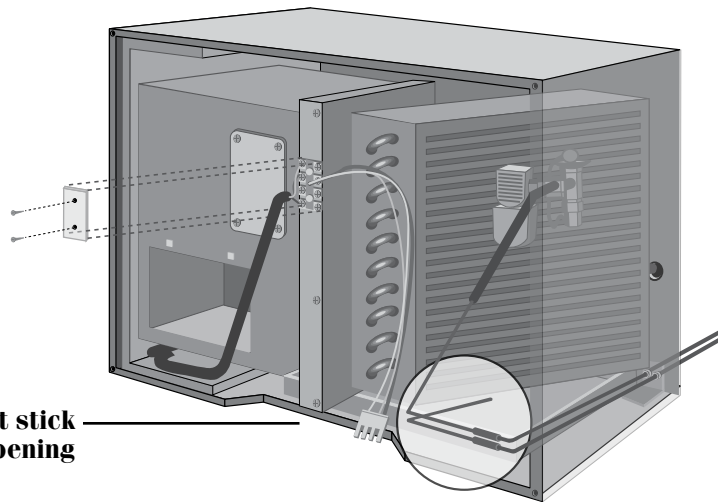
7. Reinstall interior assembly.

Slide interior assembly back into housing gently. Reattach using the two screws.



8. Attaching refrigeration lines.

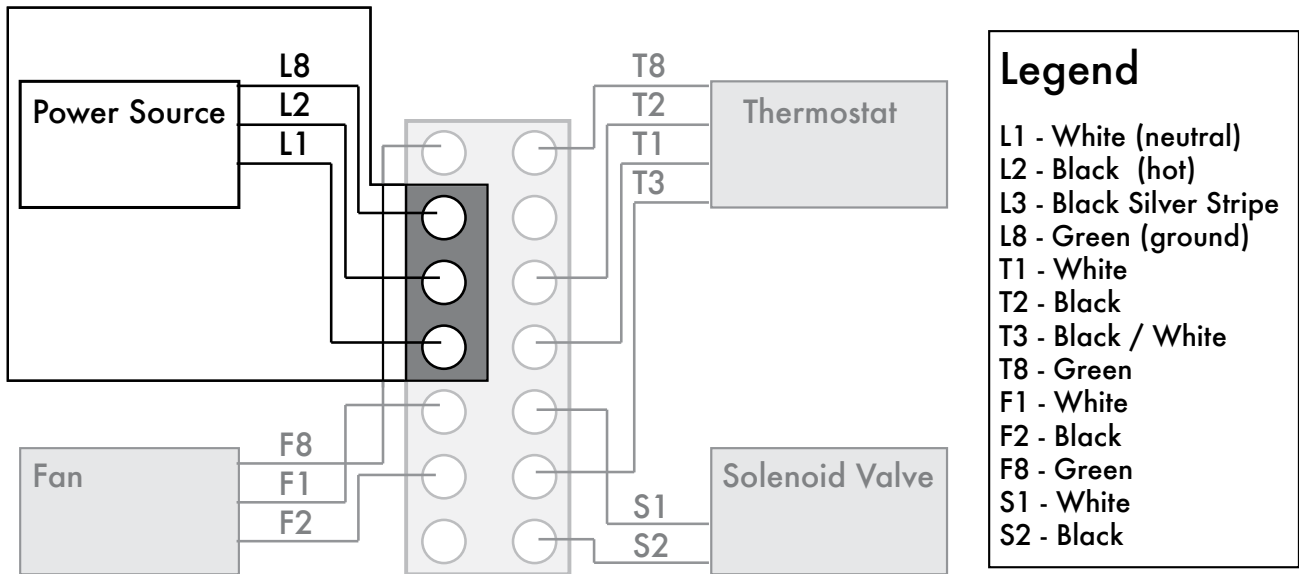
Braze (solder) lines using couplings supplied. Secure tubing lines as low as possible, using wire ties supplied, in unit to prevent refrigeration lines from showing through air inlet port. Attach electrical hand guard plate (shield).



Note: Be sure the tubes do not stick out beyond the evaporator opening for the front panel.

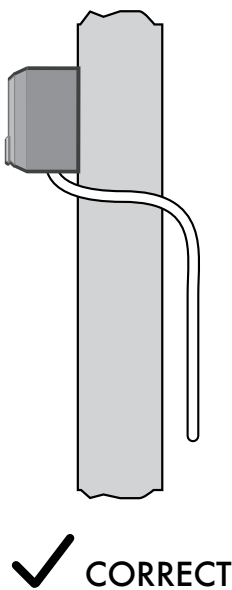
9. Electrical lines will need to be approximately 36 inches long.

Attach lines according to schematic shown.



10. Install drain line fitting & drain line.

Excess moisture in the air will be condensed to liquid form and captured in the base of the evaporator unit. Therefore a drain line will need to be installed in order to effectively remove the excess condensation. The drain fitting is located in the center bottom of the unit. Attach the supplied drain line and route it to a drain. A condensate pump may be required if the drain is not readily available.

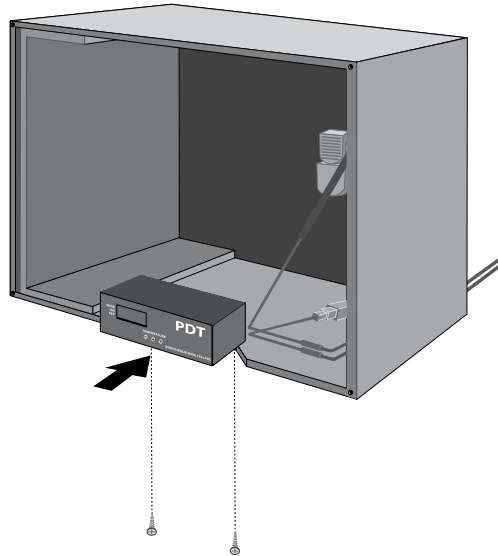


Install the drain line fitting to the bottom of drain pan. The Indoor drain line must slope downward and have no traps. The line cannot run higher than the level of the drop pan and should not have any kinks or blockage.

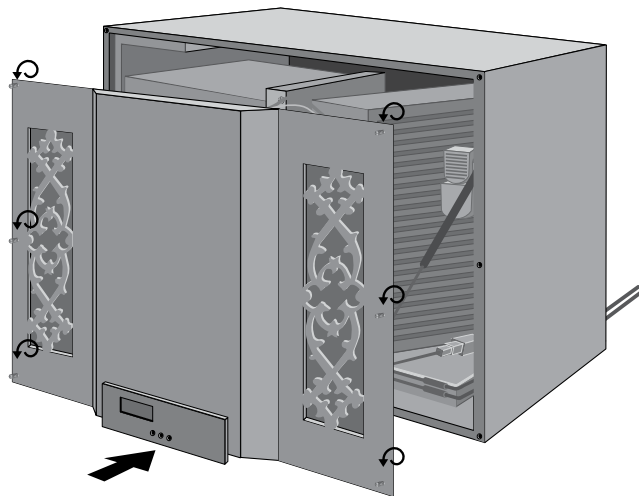


11. Install thermostat.

Thermostat will mount on the bottom front of the unit. Plug electrical outlet to thermostat and mount from underneath with screws supplied.



12. Install front cover.



13. Energize unit.

Note: 5 minute thermostat delay.

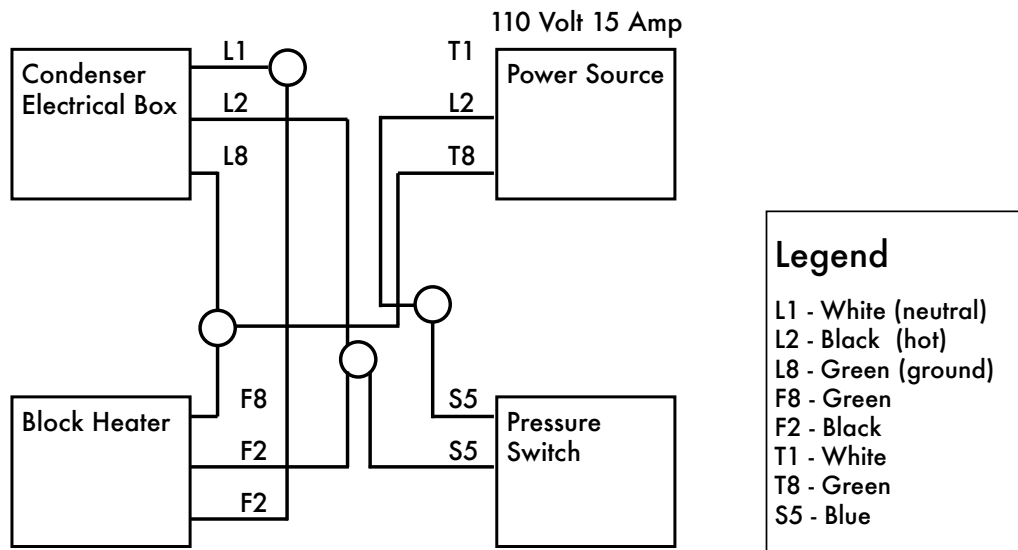
Refrigeration Lines

A 1/4 inch “liquid line copper tubing” and a 3/8 inch “suction line copper tubing” connects the two units. The line set should not have a length longer than 50 feet. For runs greater than 50 feet but less than 100 feet the suction line should be increased to 1/2”. For each line, reduce the line set by 10 feet for every 90 degree bend.

The sight glass and strainer/ dryer should be connected to the condensing units liquid line. Enclose the suction line in a flexible insulation jacket to prevent cold transfer. If the condensing unit is mounted on a higher level than the evaporator unit, a P-trap must be installed in the suction line at the evaporator discharge.

Wiring System

The system uses a pump down controller; therefore, no wiring between the condensing and evaporator unit is necessary. Wire the system in accordance with local codes and the enclosed wiring diagrams (Evaporator wiring, pg12). Electrical connections are made to the terminal strip in the evaporator unit after installing a line voltage thermostat such as the recommended controller and the electrical junction box on the condensing skid. When the evaporator unit is energized either through the controller or directly to the termination strip, the fan will begin operation. This also means the solenoid valve is energized. The evaporator unit requires a standard 20 amp circuit, non-GFI. A dedicated circuit is not mandatory but recommended.



⚠ Charging the System (by Certified HVAC technician)

After all the components have been connected:

- Open both of the service valves on the condensing unit. The unit is blanketed with helium and you should hear the gas being expelled through the service ports.
- With electrical power connected to the evaporator unit energizing the solenoid valve open, pressure test the complete system for a minimum of two hours.
- If no leaks are found, leave the evaporator unit solenoid valve energized, evacuate the system through both the liquid and suction service ports for a minimum of four hours. Then shut down the evacuation pump and confirm that vacuum is maintained for 30 minutes.

- With the electrical power connected to the condensing unit, and the evaporator unit running, slowly feed refrigerant (R134A) into the suction service port. As the suction pressure rises to 25 PSI, the condensing unit will start. Continue feeding refrigerant while maintaining a pressure above 10 PSI to prevent the compressor from short cycling. Feed refrigerant with the compressor running until the sight glass is clear of all bubbles. Do not initially exceed 3.5 lbs of refrigerant.
- Allow the system to operate for one hour and then check the refrigerant level in the sight glass again. Additional refrigerant may be required as the temperature of the enclosure is lowered to approximately 55F or the ambient temperature at the condensing unit rises above the temperature at which the unit was initially charged. Dependant on temperature, the “high side” should be 175 lbs +/- 25 Lbs. The “low side” 25 lbs +/- 5 lbs. It is recommended while charging to use a refrigerant scale for better accuracy to the amount of charge to the unit.

Maintenance

The WhisperKOOL system is designed to operate with very little maintenance required. The only maintenance required is to check the coils on the condenser unit and vacuum them out every three months or so.

TECHNICAL ASSISTANCE

Vinothèque Customer Service is available Monday through Friday from 8:00 a.m. to 4:00 p.m. Pacific Standard Time.

Please make sure that you have the following information available before you call:

- The model and serial number of your WhisperKOOL unit.
- Type of thermostat used with your WhisperKOOL.
- Location and installation details, such as ventilation, construction and size of room.

How To Contact Vinothèque Customer Service

Telephone (209) 466-9463 (800) 343-9463

Fax (209) 466-4606

Web site www.vinotheque.com

Address Vinothèque Wine Cellars
1738 East Alpine Avenue
Stockton, CA 95205

TROUBLE SHOOTING

Fault	Cause	Solution
Unit does not run / power up	<ol style="list-style-type: none"> 1. Blown fuse or circuit breaker 2. Room at set point 3. Thermostat not calling for cooling 4. Faulty thermostat or wiring 	Replace fuse / reset breaker Lower set point Lower set point Call a qualified technician
Unit runs but does not cool	<ol style="list-style-type: none"> 1. Lack of air flow / heat exhaust (outer room) 2. Unit low on charge 3. Crankcase pressure set too high / low 4. Compressor not running 5. Unit undersized 	Make sure fan is unobstructed. Clean evaporator if necessary Call a qualified technician Call a qualified technician Call a qualified technician
Evaporator coil freezes	<ol style="list-style-type: none"> 1. Coil and / or fan wheel dirty 2. Temperature set point too low 3. System low on charge 4. Crankcase pressure regulator faulty or set improperly 	Clean the coil and / or fan wheel Set thermostat to 55" Call a qualified technician Call a qualified technician
Water leaking from unit	<ol style="list-style-type: none"> 1. Condensate drain clogged 2. Evaporator coil frozen 3. Drain line improperly installed 	Clear out drain See above
Evaporator fan runs but compressor does not	<ol style="list-style-type: none"> 1. Compressor and / or starting components faulty 	Call a qualified technician
Compressor runs but evaporator fan motor does not	<ol style="list-style-type: none"> 1. Blown fuse or circuit breaker 2. Faulty fan motor 3. Faulty fan relay 	Replace fuse / reset breaker Call a qualified technician Call a qualified technician
Compressor short cycles	<ol style="list-style-type: none"> 1. Evaporator blows on thermostat 2. Dual pressure control improperly set 3. Unit low on refrigerant charge 4. Condensing fan motor / capacitor faulty 5. Compressor and / or starting components faulty 	Move thermostat Call a qualified technician Call a qualified technician Call a qualified technician Call a qualified technician
Humidity in cellar too low	<ol style="list-style-type: none"> 1. Cellar vapor barrier not sufficient 	Install proper vapor barrier

LIMITED WARRANTY

Vinothèque Wine Cellars (Vinothèque) warrants this product against defects in material or workmanship as follows:

1. **LABOR:** For a period of one year from **the date of purchase**. If this Product is determined to be defective, Vinothèque will repair or replace the Product, at its option, at no charge. After the Warranty Period, the customer is responsible for all labor charges.
2. **PARTS:** Vinothèque will supply, at no charge, new or rebuilt replacements parts in exchange for defective parts for a period of one (1) year. The compressor is warranted for five years.
3. **FREIGHT:** During the first twelve months from **the date of purchase**, Vinothèque will cover freight for the repair of units under warranty to customers within the continental United States. All WhisperKOOL units must be shipped to the factory. Vinothèque will pay to have the unit shipped back to the customer.

This warranty does not cover cosmetic damage caused during installation or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of, or to any part of the Product. This warranty does not cover damage due to improper operation or maintenance, connection to improper voltage supply, or attempted repair by anyone other than Vinothèque to service the Product. This warranty does not cover Products sold AS IS or WITH ALL FAULTS. This warranty is valid only in the United States.

Proof of purchase in the form of a bill of sale or receipted invoice, which is evidence that the unit is within the warranty period, must be presented to obtain warranty service.

This warranty is invalid if the factory-applied serial number has been altered or removed from the Product.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. VINOTHÈQUE SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

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 warranty gives you specific legal rights, and you may have other rights, which vary from state to state.



Vinothèque

WINE CELLARS

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