CellarPro

Control the Elements

QuickConnect Split Refrigeration Systems

Owner's Manual

V3.15.22

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C O N G R A T U L A T I O N S !

Thank you for purchasing a new CellarPro cooling system. Please take a minute to read this Owner's Manual before you unpack, install and turn on your Cooling Unit.

STEP 1:
Please look through the boxes to make sure you have received all of the components that you ordered with your system, and that everything is functioning properly.

STEP 2:

To register the warranty on a self-contained cooling unit, visit www.cellarprocoolingsystems.com/register, or scan the QR code at right. The serial number can be found on the printed label on your cooling unit. We recommend recording the serial number below for future reference:

Serial Number: _____

STEP 3:
If you still have questions, please don't hesitate to contact your dealer, or reach us directly at:

CellarPro Cooling Systems
1445 N. McDowell Blvd
Petaluma, CA 94954
707.794.8000 x3
Email: info@cellarprocoolingsystems.com
Website: www.cellarprocoolingsystems.com

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Table of Contents

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I. Package Contents

BOX 1:

DESCRIPTION	3000Sqc-EC 4000Sqc-EC QTY	3000Shqc-EC 4000Shqc-EC QTY
Evaporator	1	1
Side Mounting Bracket (attached to unit)	2	n/a
Wall Bracket Horizontal	n/a	2
Hole Plug 1" Horizontal	n/a	2
Locknut Serated Horizontal	n/a	2
Wall Mounting Screws	10	6
Drain Tubing (attached to unit)	10 ft.	10 ft.
Power Cord (attached to unit)	8 ft.	8 ft.
Owners Manual	1	1
4" insulation sleeve	1	1
Butyl	18 in	n/a
Adhesive backed foam strips: (1) x 9.25"x1.5"x1.5" and (1) x 3.75"x1.5"x1.5"	n/a	1 Set
Large tie wraps	2	2
Remote Display Kit	1 (optional)	1 (optional)
Bottle Probe	1 (optional)	1 (optional)
Bottle Probe Extension Cord	1 (optional)	1 (optional)

BOX 2:

DESCRIPTION	QTY	QTY
Condensing Unit w/Outdoor Hood Assembled	1	1
Power Cord (attached to unit)	8 ft.	8 ft.
QuickConnect Line Set	1 Set	1 Set

BOX 3 (Optional):

DESCRIPTION	QTY	QTY
Front Duct Hood Low RH	1 Set (Optional)	1 Set (Optional)
Front Duct Hood High RH w/Insulation	1 Set (Optional)	1 Set (Optional)
Ducting	1 Set (Optional)	1 Set (Optional)

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II. Specifications and Cut Sheets

| Model | Evaporator | | | |
	Dimensions W x D x H (inches)	Weight (lbs.)	MCA	System Running Amps (with fan on "high")
3000Sqc-EC	16.6 x 12.6 x 22.1 (incl. mounting brackets)	40	1.10	6.1
4000Sqc-EC	16.6 x 12.6 x 22.1 (incl. mounting brackets)	42	1.10	8.4
3000Shqc-EC	30.4 x 14.4 x 13.2 (incl. mounting bracket)	63	0.50	5.6
4000Shqc-EC	30.4 x 14.4 x 13.2 (incl. mounting bracket)	65	0.50	7.9

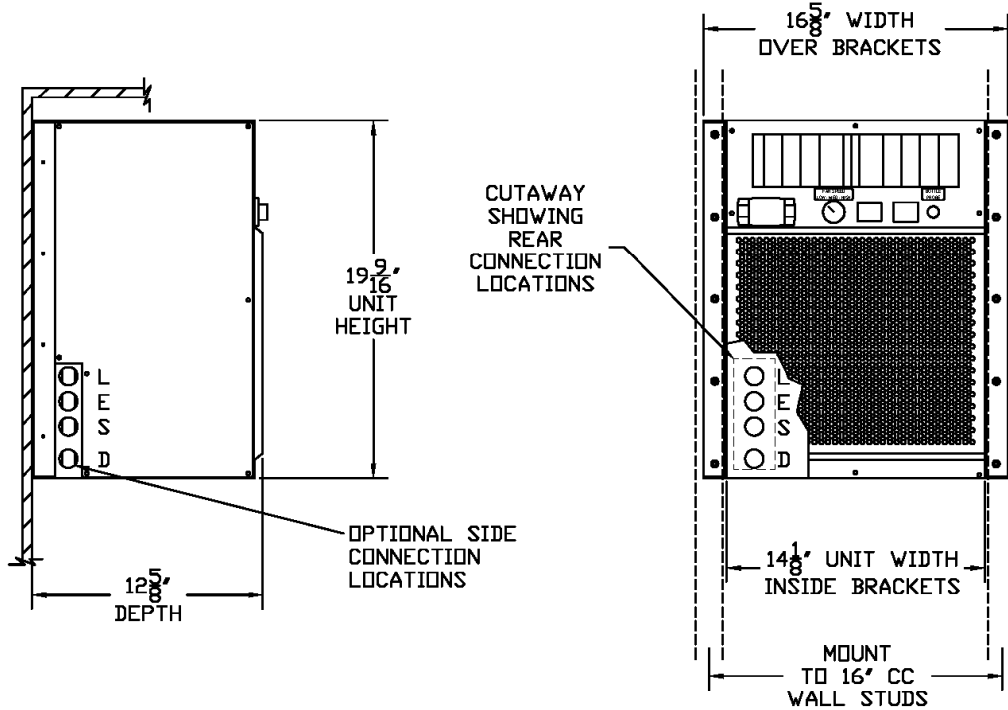| Model | Condensing Unit with Hood | | |
	Dimensions W x D x H (inches)	Weight (lbs.)	MCA
3000Sqc/Shqc-EC	19.4 x 23.3 x 18.8 (with cover)	73	6.33
4000Sqc/Shqc-EC		76	9.20

Notes

1) Separate 115V / 60HZ power supplies are required for the Evaporator and the Condensing Unit.

2) A 15 amp circuit breaker is recommended for all Evaporator models.

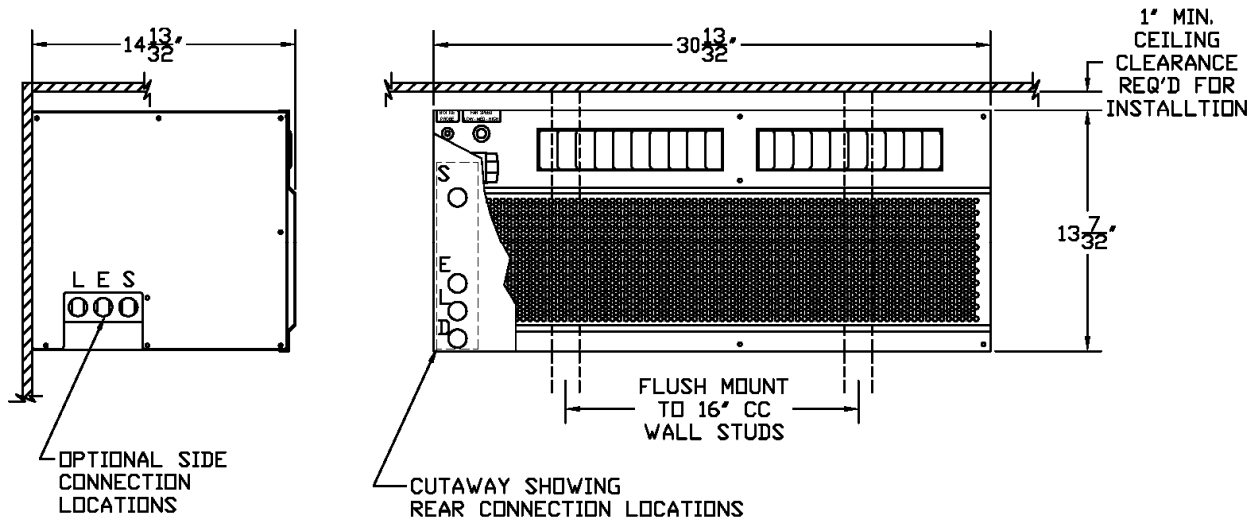3) A 15 amp dedicated circuit breaker (non GFI) is recommended for all Condensing Units models.

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Evaporator Cut Sheets

CONNECTION LEGEND:
L = LIQUID LINE (RED COLOR CODE)
S = SUCTION LINE (BLUE COLOR CODE)
E = ELECTRICAL POWER CORD
D = DRAIN LINE

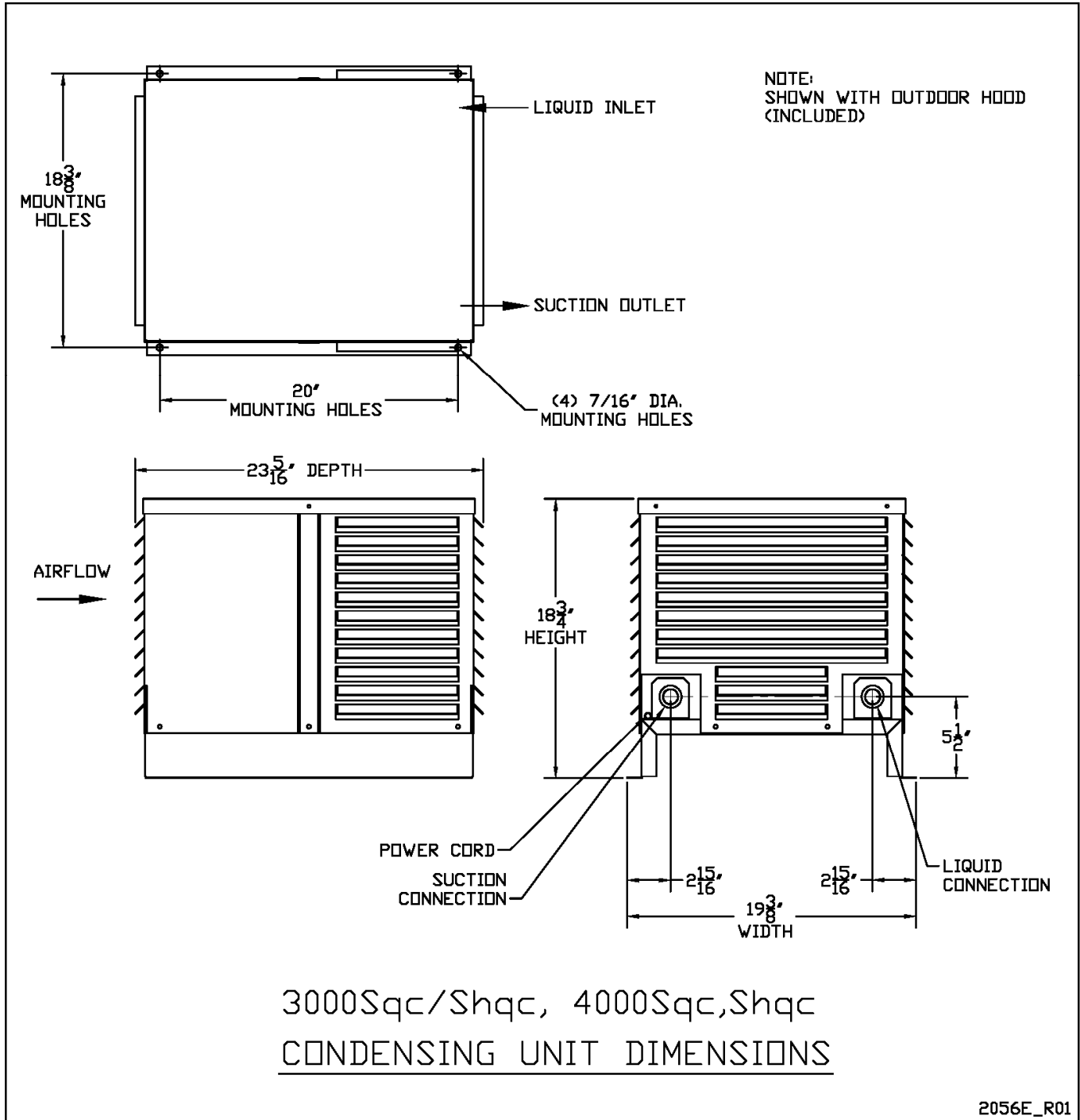16$\frac{5}{8}$" WIDTH
OVER BRACKETS

CUTAWAY
SHOWING
REAR
CONNECTION
LOCATIONS

19$\frac{9}{16}$"
UNIT
HEIGHT

L
E
S
D

OPTIONAL SIDE
CONNECTION
LOCATIONS

12$\frac{5}{8}$"
DEPTH

14$\frac{1}{8}$" UNIT WIDTH
INSIDE BRACKETS

MOUNT
TO 16" CC
WALL STUDS

3000Sqc / 4000Sqc EVAPORATOR DIMENSIONS

14$\frac{13}{32}$"

30$\frac{13}{32}$"

1" MIN.
CEILING
CLEARANCE
REQ'D FOR
INSTALLTION

L E S

S
O

E
L
D

13$\frac{7}{32}$"

OPTIONAL SIDE
CONNECTION
LOCATIONS

CUTAWAY SHOWING
REAR CONNECTION LOCATIONS

FLUSH MOUNT
TO 16" CC
WALL STUDS

3000Shqc / 4000Shqc EVAPORATOR DIMENSIONS

2056A_R01

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Condensing Unit Cut Sheet

LIQUID INLET

NOTE:
SHOWN WITH OUTDOOR HOOD
(INCLUDED)

$18\frac{3}{8}''$
MOUNTING
HOLES

SUCTION OUTLET

$20''$
MOUNTING HOLES

(4) 7/16" DIA.
MOUNTING HOLES

$23\frac{5}{16}''$ DEPTH

AIRFLOW

$18\frac{3}{4}''$
HEIGHT

POWER CORD

SUCTION
CONNECTION

$2\frac{15}{16}''$ $2\frac{15}{16}''$

$19\frac{3}{8}''$
WIDTH

$5\frac{1}{2}''$

LIQUID
CONNECTION

3000Sqc/Shqc, 4000Sqc,Shqc
CONDENSING UNIT DIMENSIONS

2056E_R01

Insulation

CellarPro cooling units are designed to be installed inside wine cellars that have proper insulation, moisture barriers and an airtight seal from the environment outside the cellar. Interior walls and floor should have a minimum of R-11 insulation, and a vapor barrier on the warm side of the insulation. The ceiling should have a minimum of R-19 insulation and a vapor barrier on the warm side of the insulation. Doors also should be insulated and tightly sealed with weather stripping around the perimeter of the door. Surface-mounted fixtures are recommended over recessed lighting, which can allow air to leak into the cellar.

It is important that all walls, joints, doors and windows, electrical outlets and/or switches, pipes, vents and light fixtures be sealed to prevent air and moisture from entering the cellar. If there is a leak in the cellar, the cooling unit will build up excess condensation.

The drain line (shipped loose with the cooling unit) must be connected to the drain pan (as shown in the installation section).

Fan Speeds

Your fan speed setting will depend on the thermal load on the wine cellar, and the resulting BTU that is required to cool and maintain your wine cellar at the desired temperature. If the unit is ducted, the high fan speed always should be used.

Ventilation

Adequate ventilation is critically important for the proper operation of your CellarPro cooling unit.

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Outside the Cellar

Condensing unit Air Exhaust. Condensing units create significant hot air which must be exhausted into an appropriately-sized space in order for the heat to dissipate. If the space is constrained and/or too small, the heat will not dissipate. In this event, the cooling unit will be forced to re-circulate its hot air exhaust and/or the static pressure will back up the cooling unit. If this happens, the cooling unit's ability to create cold air inside the cellar will be compromised.

Condenser Air Intake. The condenser coils require access to cool air in order for the cooling unit to produce cold air. In addition, the cooling unit must be installed so that, after its installation, the condenser coils are accessible for periodic cleaning.

The Condensing unit cannot be ducted.

Inside the Cellar

Evaporator Air Intake. When the warm air passes across the evaporator coils, heat is removed from the air, and the resulting cold air is exhausted into the cellar. To ensure proper airflow, minimum clearance of 12" is required in front of the cooling unit.

Evaporator Air Exhaust. Cold air is exhausted at the top front of the cooling unit. Because CellarPro cooling units are located at the highest point inside wine cellars, the cold air exhaust eventually will drop to the bottom of the cellar. To ensure proper airflow and reduce temperature stratification inside the cellar, the space in front of the cold air discharge should be clear of any obstructions, including wine bottles, wine racks, etc.

Ducting For the Evaporator (3000Sqc-EC/4000Sqc-EC Models). Cold air exhaust and return (from the evaporator) can be ducted with our front duct hood up to 100 equivalent feet of total ductwork, or 50 equivalent feet for both the discharge and return ducting, using 8" diameter insulated ducting. Our front duct kit is compatible exclusively with our 3000Sqc-EC and 4000Sqc-EC cooling units. If you'd like to duct one of our larger cooling units, please consider our AH6500 and AH8500 cooling units.

Before attaching the front duct hoods, remove the front grill (if present) from the front of cooling unit.

Front duct kits should be paired with our remote control panel, which allows the digital display to be installed remotely from the cooling unit, either inside or outside the cellar. The remote comes standard with 10' of wiring, and offer additional wiring upon request.   Front duct kits also should be used with our remote thermostat (aka bottle probe), which comes standard with a 10 foot cord that can be plugged into the cooling unit, and terminate inside the cellar to measure either air or liquid temperature. Please note that the HY setting should be changed from the 4 to 1 if the bottle probe will be inserted in liquid (see Advanced Operation for more information).

Condensing Unit Installation

The Condensing Unit is designed to operate **outside the cellar** in temperatures ranging from 20°F to 110°F.   With the addition of a fan cycling control (sold separately), the unit can operate in temperatures ranging from 0°F to 110°F.

Indoor Installation
If the Condensing Unit is installed indoors:
- The area must have suitable ventilation to maintain an ambient temperature of 110°F or less at the face of the coils.
- If the area does not have adequate ventilation, a vent fan should be added to supply fresh air to the space (suggested 600CFM).
- A minimum of 12" of open air space around the perimeter of the condensing unit is required.

Outdoor Installation:
If the Condensing Unit is installed outdoors:
- Condensing units must be installed with the outdoor hood if the unit will be located outdoors. **PLEASE NOTE:** Our units were not designed for, and our warranty does not cover damage from, marine exposure (within 5 miles of the ocean). In these environments, you will need an applied coating, such as Insitu®, to protect against corrosion that is common in coastal regions.
- A minimum of 12" of open air space around the perimeter of the outdoor hood is required.

Evaporator Unit Installation

As warm air rises to the top of the cellar, the cooling unit pulls the warm air through the evaporator coil and removes the heat from the warm air. Once cooled, the cold air is discharged from the front of the cooling unit and circulates through the cellar. Therefore, we recommend mounting the evaporator as close to the ceiling as possible inside the cellar, so that cold air can drop down into the cellar, and the cooling unit catches warm air as it rises to the ceiling.

To attach the evaporator to the wall, we provide the necessary hardware, which differs based on the unit purchased.
- Our 3000Sqc-EC and 4000Sqc-EC evaporators use side mounting brackets,
- Our 3000Shqc-EC and 40000Shqc-EC evaporators use wall hangers

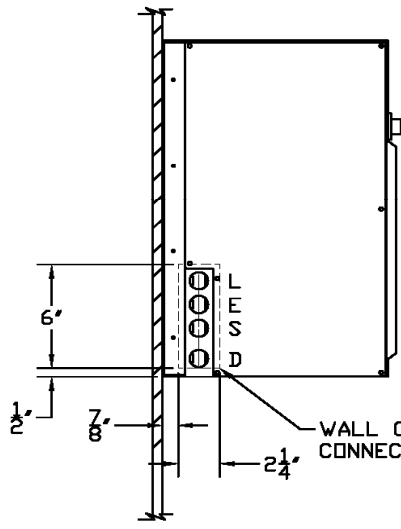Specific instructions for each mounting method are as follow:

Evaporator Connection Locations - 3000Sqc-EC and 4000Sqc-EC

Connection locations are specified when ordering the equipment and are available in the following options:
- Refrigerant connections rear or left side
- Power cord rear or left side
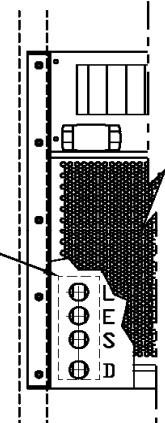- Drain line rear, left side, or bottom.

CONNECTION LEGEND:
L = LIQUID LINE (RED COLOR CODE)
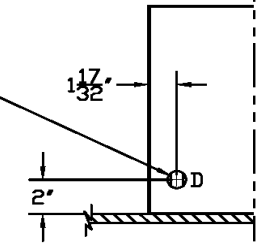S = SUCTION LINE (BLUE COLOR CODE)
E = ELECTRICAL POWER CORD
D = DRAIN LINE

WALL CUTOUT FOR REAR CONNECTIONS. NOTE: THIS IS THE STANDARD CONFIGURATION UNLESS OTHERWISE SPECIFIED ON SALES ORDER. SEE EVAPORATOR MOUNTING DRAWING FOR REAR CONNECTION WALL CUTOUT DIMENSIONS AND INSTRUCTIONS.
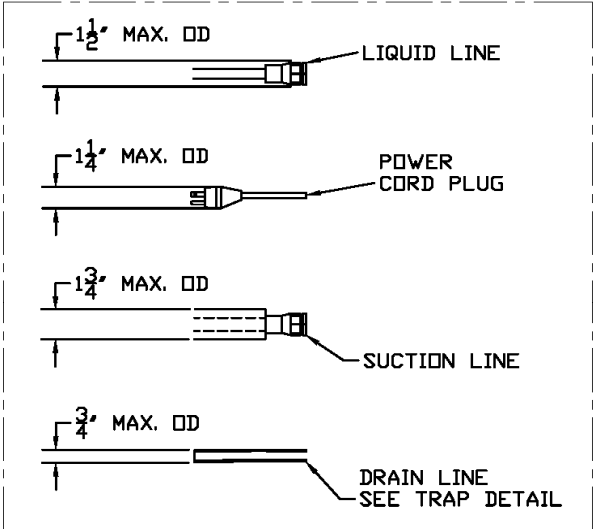
FRONT VIEW SHOWING REAR CUTOUT

WALL CUTOUT FOR LEFT CONNECTIONS (OPTIONAL).

LEFT SIDE VIEW

BOTTOM DRAIN LOCATION (OPTIONAL)

BOTTOM VIEW

$1\frac{1}{2}$" MAX. OD — LIQUID LINE

$1\frac{1}{4}$" MAX. OD — POWER CORD PLUG

$1\frac{3}{4}$" MAX. OD — SUCTION LINE

$\frac{3}{4}$" MAX. OD — DRAIN LINE — SEE TRAP DETAIL

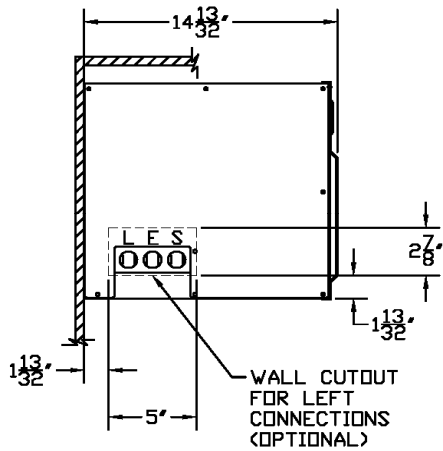3000Sqc / 4000Sqc EVAPORATOR
CONNECTION LOCATIONS

2056B_R01

Evaporator Connection Locations - 3000Shqc-EC and 4000Shqc-EC

Connection locations are specified when ordering the equipment and are available in the following options:
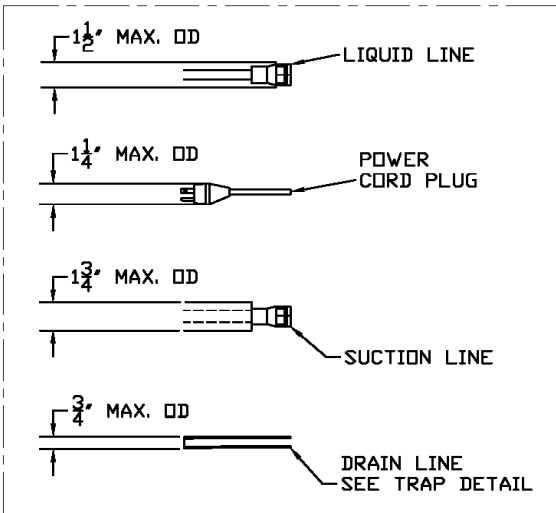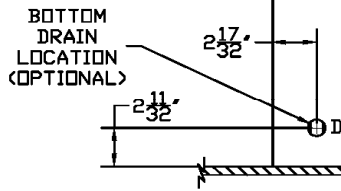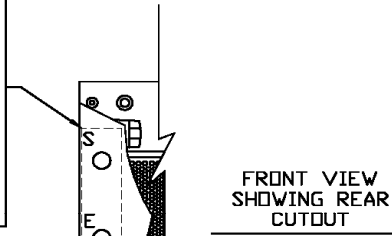
- Refrigerant connections rear or left side
- Power cord rear or left side
- Drain line rear, or bottom (cannot exit the side).

CONNECTION LEGEND:
L = LIQUID LINE (RED COLOR CODE)
S = SUCTION LINE (BLUE COLOR CODE)
E = ELECTRICAL POWER CORD
D = DRAIN LINE

WALL CUTOUT FOR REAR CONNECTIONS. NOTE: THIS IS THE STANDARD CONFIGURATION UNLESS OTHERWISE SPECIFIED ON SALES ORDER. SEE EVAPORATOR MOUNTING DRAWING FOR REAR CONNECTION WALL CUTOUT DIMENSIONS AND INSTRUCTIONS.

FRONT VIEW SHOWING REAR CUTOUT

$14\frac{13}{32}$"

$2\frac{7}{8}$"

$1\frac{13}{32}$"

$1\frac{13}{32}$"

WALL CUTOUT FOR LEFT CONNECTIONS (OPTIONAL)

5"

LEFT SIDE VIEW

BOTTOM DRAIN LOCATION (OPTIONAL)

$2\frac{17}{32}$"

$2\frac{11}{32}$"

BOTTOM VIEW

$1\frac{1}{2}$" MAX. OD — LIQUID LINE

$1\frac{1}{4}$" MAX. OD — POWER CORD PLUG

$1\frac{3}{4}$" MAX. OD — SUCTION LINE
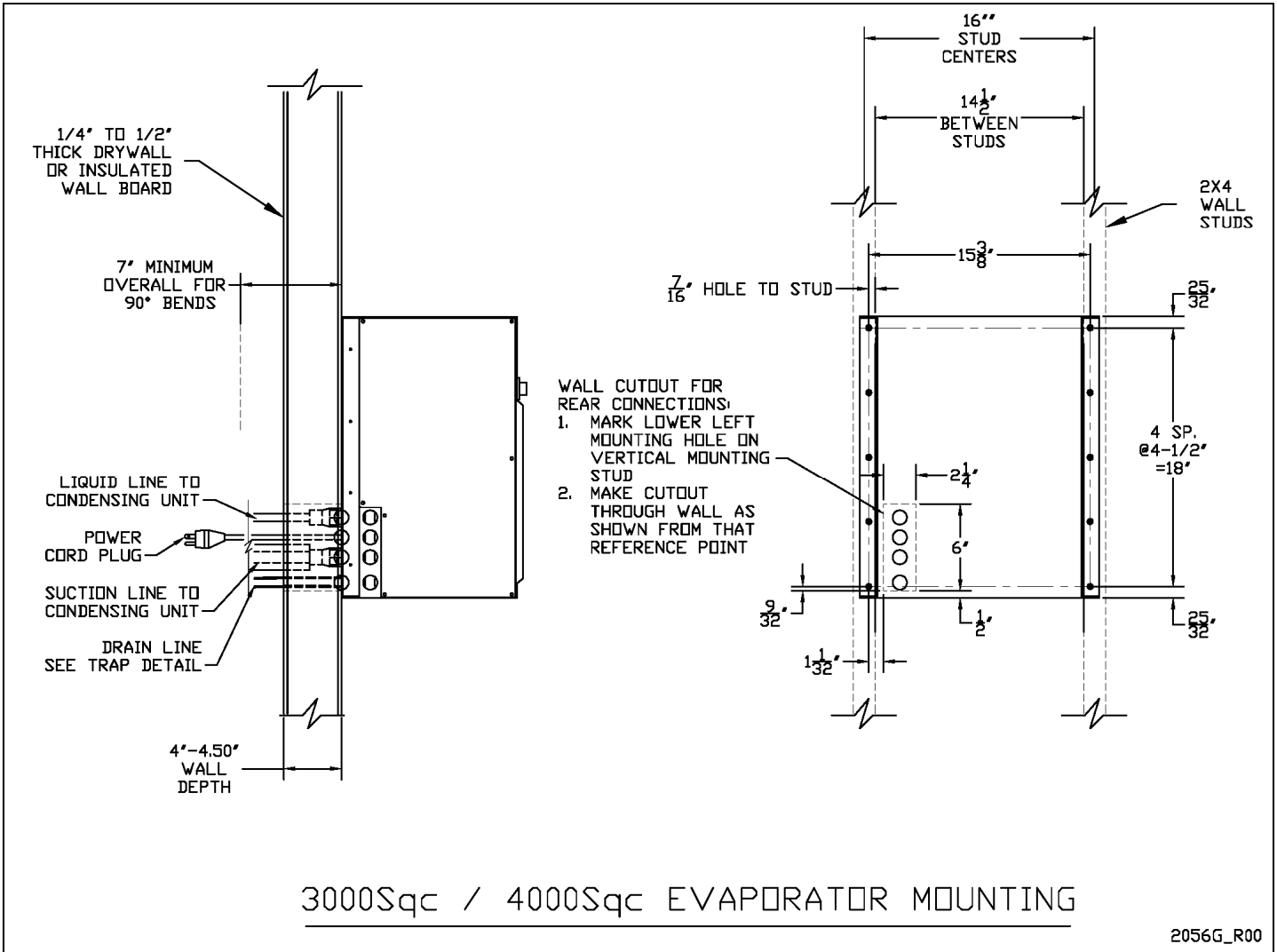
$\frac{3}{4}$" MAX. OD — DRAIN LINE SEE TRAP DETAIL

3000Shqc / 4000Shqc EVAPORATOR CONNECTION LOCATIONS

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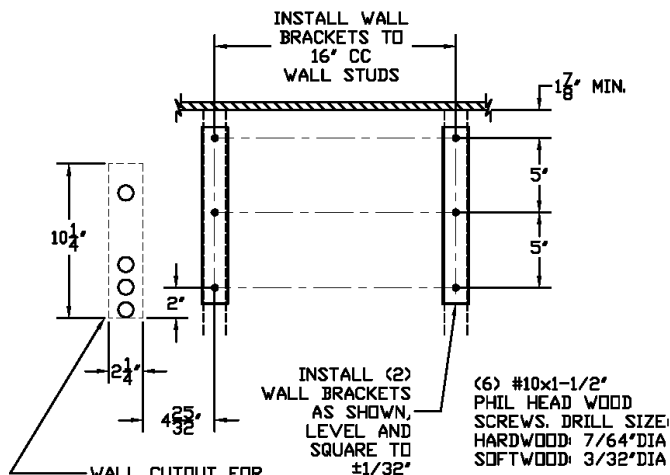## Evaporator Mounting Instructions - 3000Sqc-EC and 4000Sqc-EC

Mounting brackets, which attach to the sides of the evaporator, are provided to mount the evaporator flush to a wall inside the cellar.

1/4″ TO 1/2″ THICK DRYWALL OR INSULATED WALL BOARD

7″ MINIMUM OVERALL FOR 90° BENDS

LIQUID LINE TO CONDENSING UNIT

POWER CORD PLUG

SUCTION LINE TO CONDENSING UNIT

DRAIN LINE SEE TRAP DETAIL

4″-4.50″ WALL DEPTH

16″ STUD CENTERS

$14\frac{1}{2}$″ BETWEEN STUDS

2X4 WALL STUDS

$\frac{7}{16}$″ HOLE TO STUD

$15\frac{3}{8}$″

$\frac{25}{32}$″

WALL CUTOUT FOR REAR CONNECTIONS:
1. MARK LOWER LEFT MOUNTING HOLE ON VERTICAL MOUNTING STUD
2. MAKE CUTOUT THROUGH WALL AS SHOWN FROM THAT REFERENCE POINT

$2\frac{1}{4}$″

6″

4 SP. @4-1/2″ =18″

$\frac{9}{32}$″

$\frac{1}{2}$″

$\frac{25}{32}$″

$1\frac{1}{32}$″

3000Sqc / 4000Sqc EVAPORATOR MOUNTING

2056G_R00

Evaporator Mounting Instructions – 3000Shqc-EC and 4000Shqc-EC

A wall hanger, which attaches to the wall behind the evaporator, is provided to mount the evaporators to the wall inside the cellar. First, the wall bracket is attached to the wall, and then the evaporator slides onto the bracket. After the evaporator is installed, two bottom nuts must be installed on the recessed anchor studs.

STEP #1

INSTALL WALL BRACKETS TO 16" CC WALL STUDS

1⅞" MIN.

5"

5"

10¼"

2"

2¼"

4²⁵⁄₃₂"

INSTALL (2) WALL BRACKETS AS SHOWN, LEVEL AND SQUARE TO ±1/32"

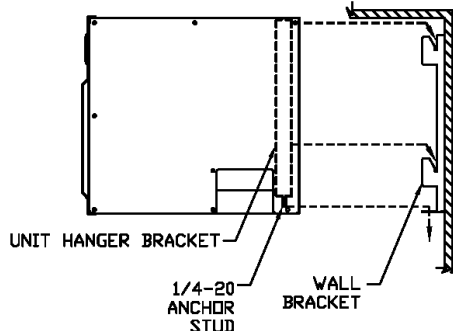(6) #10x1-1/2" PHIL HEAD WOOD SCREWS. DRILL SIZE: HARDWOOD: 7/64"DIA SOFTWOOD: 3/32"DIA
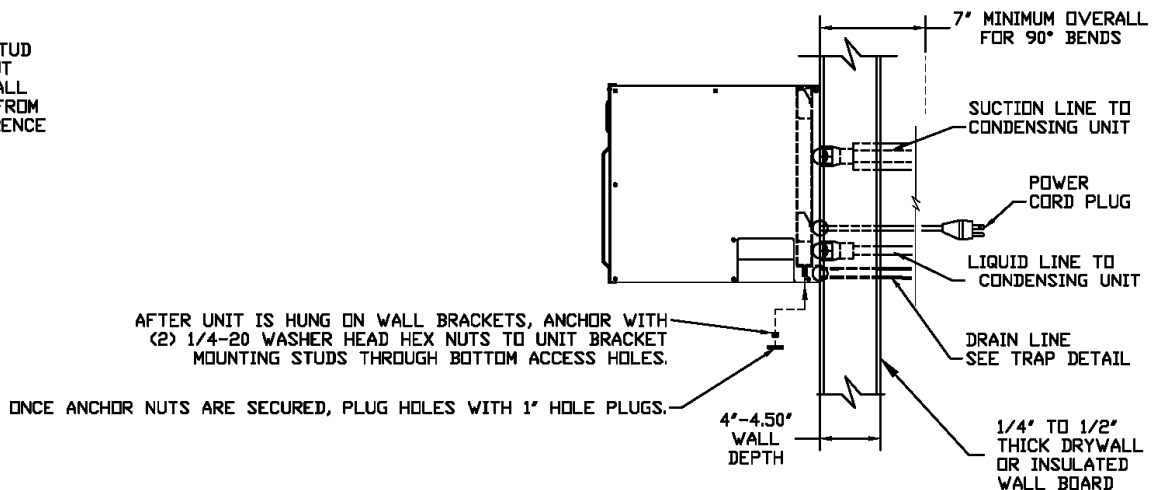
WALL CUTOUT FOR REAR CONNECTIONS:
1. MARK LOWER LEFT MOUNTING HOLE ON VERTICAL MOUNTING STUD
2. MAKE CUTOUT THROUGH WALL AS SHOWN FROM THAT REFERENCE POINT

STEP #2

1. (REAR CONNECTION ONLY) PULL REFRIGERANT LINES THROUGH CUTOUT AND CONNECT TO EVAPORATOR.
2. (REAR CONNECTION ONLY) RUN DRAIN LINE AND POWER CORD THROUGH CUTOUT.
3. SLIDE UNIT OVER WALL MOUNTING BRACKETS, ALIGNING SQUARE CUTOUT IN UNIT HANGERS WITH WALL BRACKET TABS. ONCE POSITIONED, ALLOW THE UNIT TO DROP INTO PLACE ON THE WALL BRACKETS, WITH ANCHOR SCREWS PASSING THROUGH THE WALL BRACKET BOTTOM HOLES.
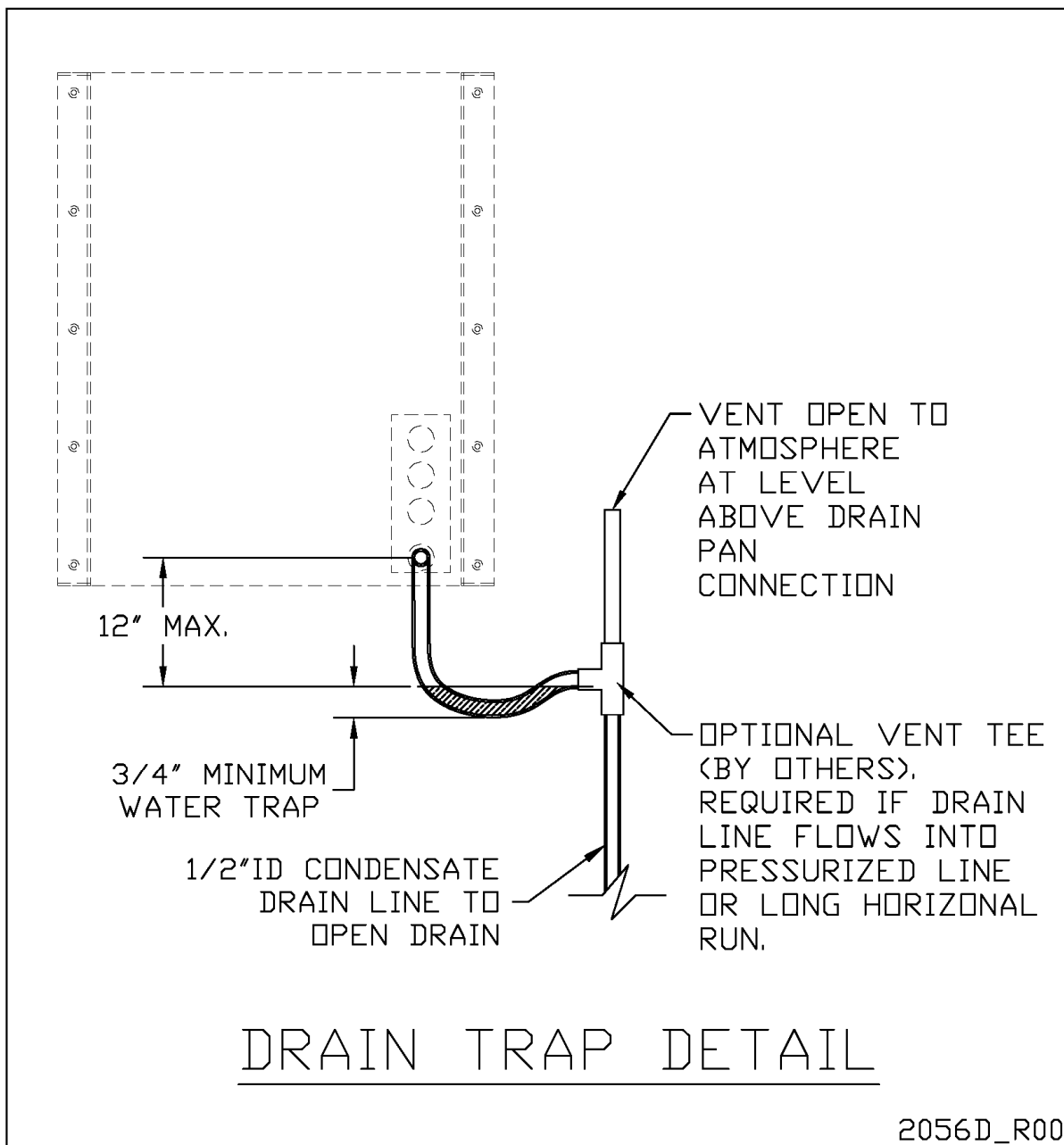
UNIT HANGER BRACKET

1/4-20 ANCHOR STUD

WALL BRACKET

STEP #3

7" MINIMUM OVERALL FOR 90° BENDS

SUCTION LINE TO CONDENSING UNIT

POWER CORD PLUG

LIQUID LINE TO CONDENSING UNIT

DRAIN LINE SEE TRAP DETAIL

1/4" TO 1/2" THICK DRYWALL OR INSULATED WALL BOARD

4"-4.50" WALL DEPTH

AFTER UNIT IS HUNG ON WALL BRACKETS, ANCHOR WITH (2) 1/4-20 WASHER HEAD HEX NUTS TO UNIT BRACKET MOUNTING STUDS THROUGH BOTTOM ACCESS HOLES.

ONCE ANCHOR NUTS ARE SECURED, PLUG HOLES WITH 1" HOLE PLUGS.

3000Shqc / 4000Shqc EVAPORATOR MOUNTING

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Condensate Drain Line

The condensate drain line should drop, then rise (but stay below the height of the fitting), and then drop again into an open drain. Then, fill the trap with water. The condensate trap will allow any excess moisture inside the Evaporator to overcome the static pressure and flow out of the drain line. Before putting the unit into service, test for positive drainage by pouring water into the drain pan and observing flow through to the final drain.

VENT OPEN TO ATMOSPHERE AT LEVEL ABOVE DRAIN PAN CONNECTION

12" MAX.

3/4" MINIMUM WATER TRAP

1/2"ID CONDENSATE DRAIN LINE TO OPEN DRAIN

OPTIONAL VENT TEE (BY OTHERS). REQUIRED IF DRAIN LINE FLOWS INTO PRESSURIZED LINE OR LONG HORIZONAL RUN.

DRAIN TRAP DETAIL
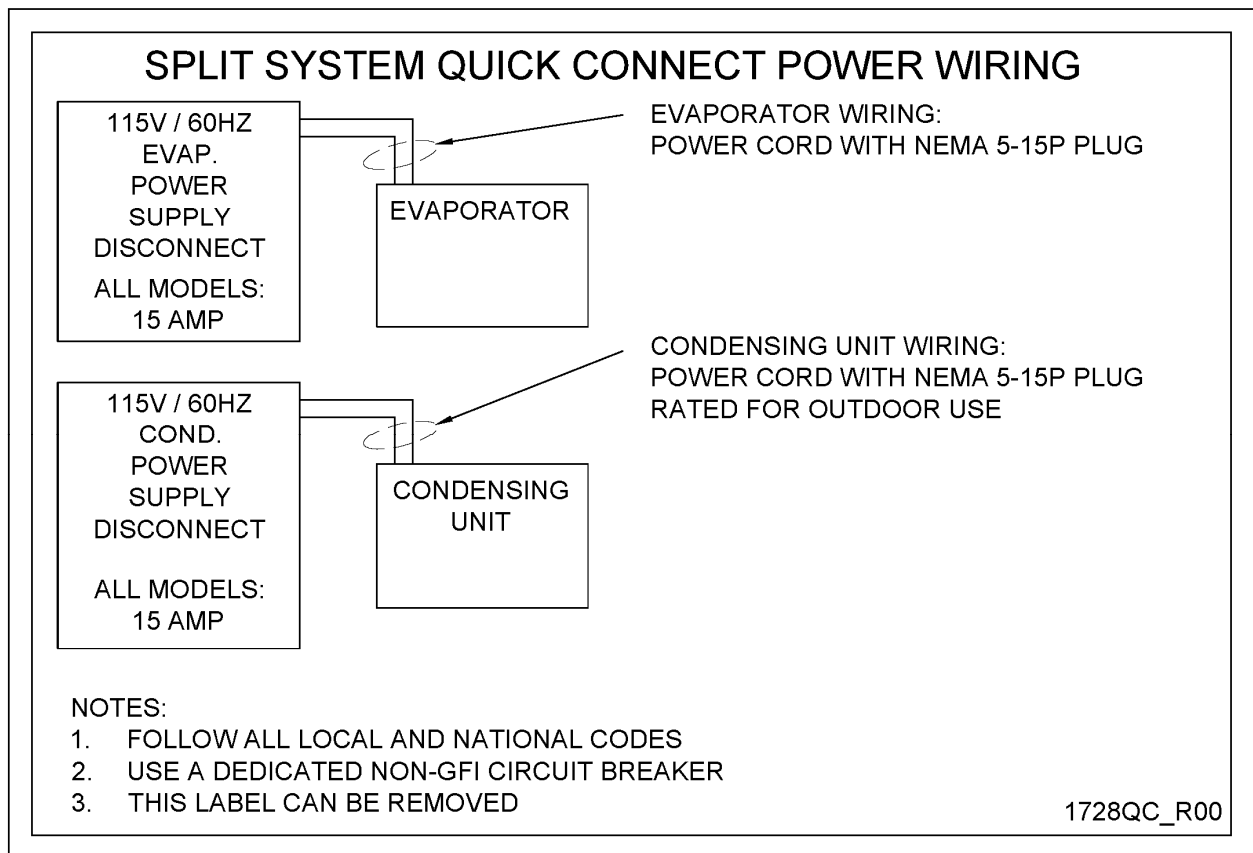
2056D_R00

Power Supply

The Evaporator and Condensing units are separately powered with 8' power cords and grounded plugs. No interconnecting wiring is needed between the Evaporator and Condensing unit.

Evaporator Power:
- Plug in the Nema 5-15P plug to a shared or dedicated 15 amp receptacle
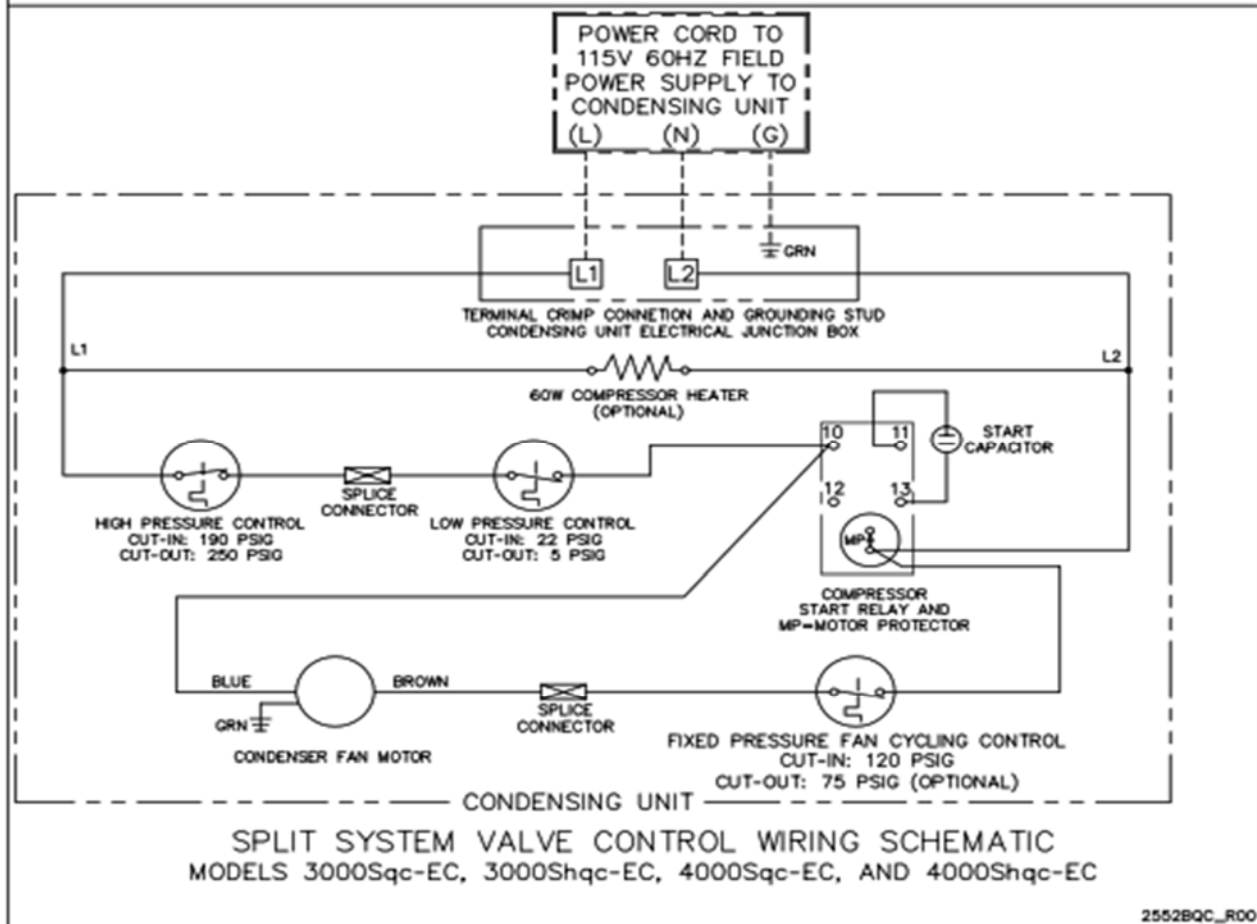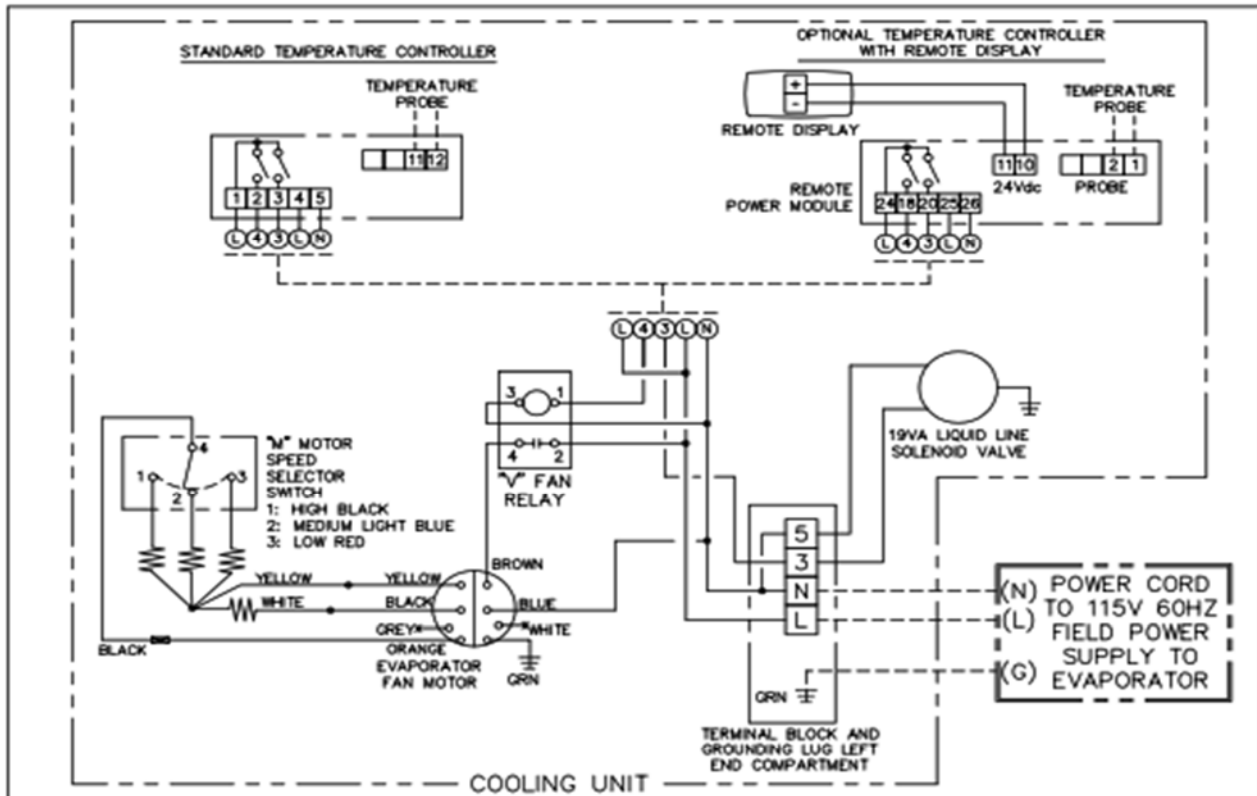
Condensing Unit Power:
- Plug in the Nema 5-15P plug to a **dedicated** non-GFI 15 amp receptacle.

SPLIT SYSTEM QUICK CONNECT POWER WIRING

```
115V / 60HZ
EVAP.
POWER
SUPPLY
DISCONNECT

ALL MODELS:
15 AMP
```

EVAPORATOR

EVAPORATOR WIRING:
POWER CORD WITH NEMA 5-15P PLUG

```
115V / 60HZ
COND.
POWER
SUPPLY
DISCONNECT

ALL MODELS:
15 AMP
```

CONDENSING UNIT

CONDENSING UNIT WIRING:
POWER CORD WITH NEMA 5-15P PLUG
RATED FOR OUTDOOR USE

NOTES:
1. FOLLOW ALL LOCAL AND NATIONAL CODES
2. USE A DEDICATED NON-GFI CIRCUIT BREAKER
3. THIS LABEL CAN BE REMOVED

1728QC_R00

The Evaporator turns on and off based on the digital display controls, and the Condensing Unit turns on and off based on suction pressure, as follows:

- The Evaporator includes a factory installed liquid line solenoid valve (LLSV), which is controlled by the Evaporator temperature controller. The Condensing unit is controlled by a low pressure switch which reacts to the suction pressure and senses whether the LLSV is open or closed.

- When the Evaporator temperature set-point is reached and the Evaporator turns off, the LLSV closes, causing the system to pump down until the low pressure switch shuts off the Condensing unit.

- When the Evaporator turns on, the LLSV opens, causing the suction pressure to rise and activate the Condensing unit.

Wiring Diagram

STANDARD TEMPERATURE CONTROLLER

TEMPERATURE PROBE

OPTIONAL TEMPERATURE CONTROLLER WITH REMOTE DISPLAY

REMOTE DISPLAY

TEMPERATURE PROBE

REMOTE POWER MODULE

24Vdc

PROBE

"M" MOTOR SPEED SELECTOR SWITCH
1: HIGH BLACK
2: MEDIUM LIGHT BLUE
3: LOW RED

"V" FAN RELAY

19VA LIQUID LINE SOLENOID VALVE

(N) POWER CORD TO 115V 60HZ
(L) FIELD POWER SUPPLY TO
(G) EVAPORATOR

EVAPORATOR FAN MOTOR

TERMINAL BLOCK AND GROUNDING LUG LEFT END COMPARTMENT

— COOLING UNIT —

POWER CORD TO 115V 60HZ FIELD POWER SUPPLY TO CONDENSING UNIT
(L)   (N)   (G)

GRN

TERMINAL CRIMP CONNETION AND GROUNDING STUD
CONDENSING UNIT ELECTRICAL JUNCTION BOX

L1

L2

60W COMPRESSOR HEATER (OPTIONAL)

START CAPACITOR

HIGH PRESSURE CONTROL
CUT-IN: 190 PSIG
CUT-OUT: 250 PSIG

SPLICE CONNECTOR

LOW PRESSURE CONTROL
CUT-IN: 22 PSIG
CUT-OUT: 5 PSIG

COMPRESSOR START RELAY AND MP-MOTOR PROTECTOR

BLUE   BROWN

GRN

CONDENSER FAN MOTOR

SPLICE CONNECTOR

FIXED PRESSURE FAN CYCLING CONTROL
CUT-IN: 120 PSIG
CUT-OUT: 75 PSIG (OPTIONAL)

— CONDENSING UNIT —

SPLIT SYSTEM VALVE CONTROL WIRING SCHEMATIC
MODELS 3000Sqc-EC, 3000Shqc-EC, 4000Sqc-EC, AND 4000Shqc-EC

2552BQC_R00

QuickConnect Line Set

The Evaporator, Condensing Unit, Liquid Line and Insulated Suction Line (together the Line Sets) are factory charged and shipped with R-134a refrigerant. **The components must be installed together as a complete CellarPro system.** Do not substitute components or use these components in a different split system. If any damage to the components occurs that causes a loss of refrigerant, only a qualified HVACR service technician certified to handle R-134a can perform the repairs.

Follow the installation instructions in sequence to ensure proper system operation:

1. Determine the final locations where the Evaporator and Condensing units will be mounted, and verify that the QuickConnect Line Set has sufficient length to interconnect the two units. If the line set is not long enough, **do not proceed.** Contact CellarPro for immediate assistance.
2. Reference the **Evaporator Mounting** and **Evaporator Connection** diagrams for the model being installed. For rear connection configurations it is important to properly locate the wall cutouts using the locating hole for the mounting bracket as dimensioned on the diagrams. The diagrams also provide maximum outer diameter dimensions for planning wall cutouts for side or bottom connection configurations.
3. Make the connection cutout through the wall, and pull the Line Set through the cutout into the cellar. If the drain line and/or power cord are configured out the rear, feed these through the cutout from the evaporator to the outside of the cellar.
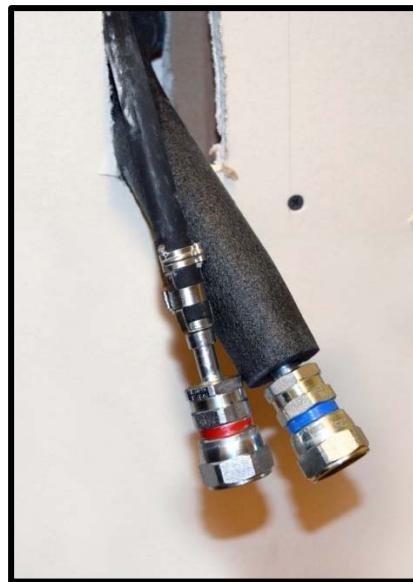

4. Locate the 4" tube insulation sleeve and long wire ties included in the parts kit.

5. Identify the insulated Suction line (marked BLUE on the female connector) and slide the 4" tube insulation sleeve over the Suction line on the side where it will connect to the evaporator.

6. Identify the male Suction line connection on the rear or optional left side of the evaporator (marked BLUE on the male connector), and attach the female Suction line connection to the male connection. **STOP AND MAKE SURE YOU ARE ATTACHING BLUE TO BLUE.** Hand thread at first to get the threads started without cross threading. Once it is too hard to turn by hand, use a crescent wrench until the connection stops tight - do not apply so much force that the male connection starts to turn. Note that it is only necessary to apply the wrench to the female connector, the male connector is locked in place and should not be adjusted.
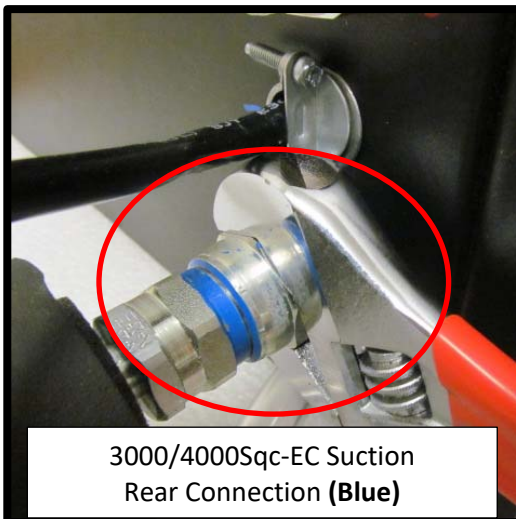
3000/4000Sqc-EC Suction Rear Connection **(Blue)**

3000/4000Shqc-EC Suction Rear Connection **(Blue)**

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7. Once the Suction line is attached to the evaporator, slide the 4" tube insulation sleeve so that it covers the metal connections that were just installed and one end is flush to the unit housing. Use two tie wraps to secure the insulation in place. If you forgot to pre-install the insulation sleeve before making the suction line connection to the evaporator, it is acceptable to slit the insulation and wrap around the coupling, provided that the seam is sealed tight. Insulating the suction connection is essential to avoid condensation issues.

8. Identify the Liquid line (marked RED on the female connector). This line is not insulated.
9. Identify the male Liquid line connection on the rear or optional left side of the evaporator (marked RED on the male connector), and attach the female Liquid line connection. To the male connection. **STOP AND MAKE SURE YOU ARE ATTACHING RED TO RED.** Follow the same process to tighten the connection.

3000/4000Sqc-EC Liquid Rear Connection **(Red)**


3000/4000Shqc-EC Liquid Rear Connection **(Red)**

10.   Feed the drain line and power cord through the wall cutout (rear connections only). **It is important to keep the drain line level or below the point where it exits the evaporator as it passes through the cutout.**
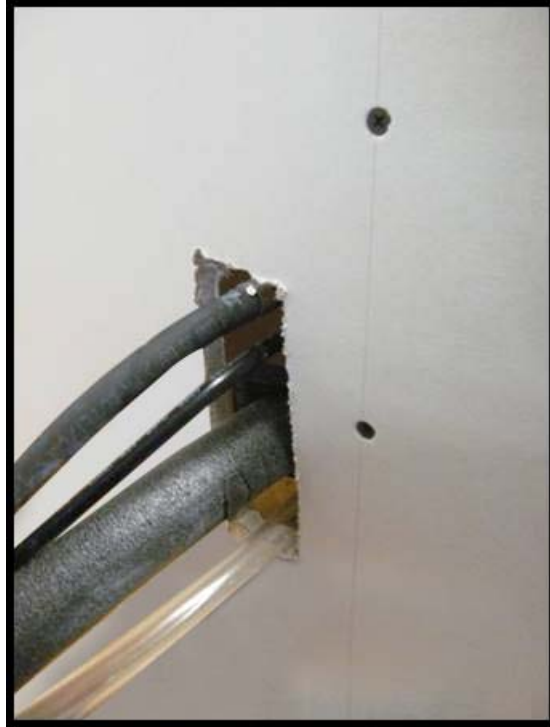

11.   3000Sqc-EC/4000Sqc-EC systems (rear connections only): Apply butyl tape around the perimeter of the wall cutout on the interior cellar wall.

12. 3000Shqc-EC/4000Shqc-EC systems (rear connections only): Attach adhesive backed insulation strips by removing the white backing and securing to the evaporator back panel. The foam should form a box around the connections as shown:
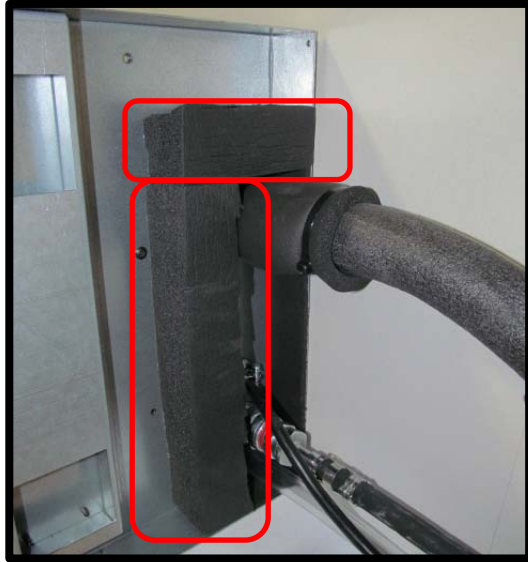

13. Move the evaporator into position and secure to the interior cellar wall.
14. **DO NOT PLUG IN THE EVAPORATOR POWER CORD AT THIS TIME.**
15. From the exterior cellar wall, pack loose insulation into the wall cutout, and drywall trim around the connections as desired. For serviceability, do not use spray foam to insulate around the metal QuickConnect fittings.
16. Route the drain line, installing a trap as shown on the "Drain Trap Detail" drawing.
17. Place the condensing unit in a location that has sufficient ventilation per the guidance provided in Section IV.
18. Route the Liquid and Suction lines to the condensing unit. Coil any slack line at ground level near or under the condensing unit base.
19. Locate the male Line Set connections on the Condensing Unit.

Blue suction connection

Red liquid connection

Condensing Unit power cord
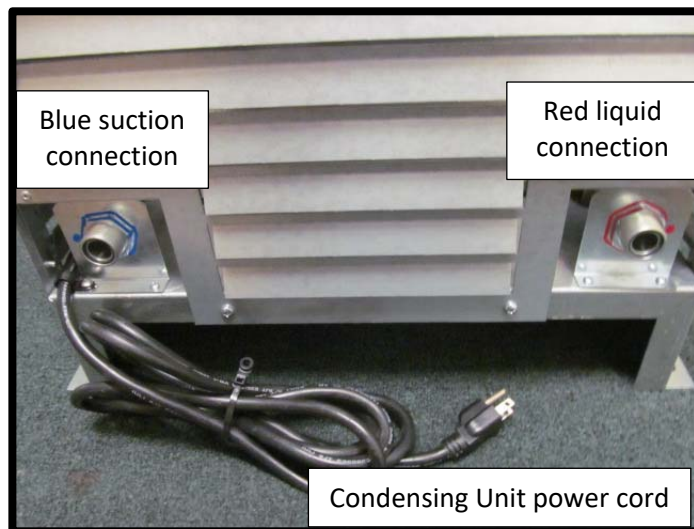
20. Identify the insulated Suction line (marked BLUE on the female connector).
21. Identify the male Suction connection on the left side of the Condensing Unit (marked BLUE on the male connection) and attach the female Suction line connection to the male connection. **STOP AND MAKE SURE YOU ARE ATTACHING BLUE TO BLUE.** Follow the previous process to tighten the connection.
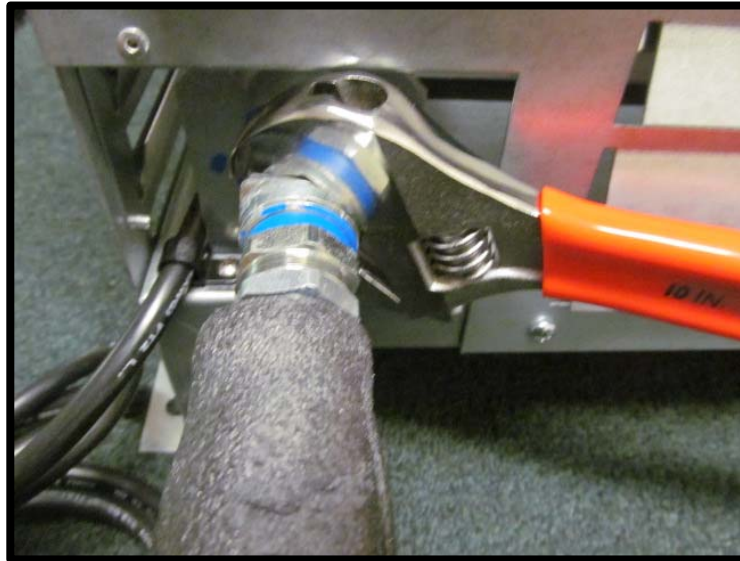
22. Identify the Liquid line (marked RED on the female connector).
23. Identify the male Liquid line connection on the right side of the Condensing Unit (marked RED on the male connection) and attach the female Liquid connection to the male connection. **STOP AND MAKE SURE YOU ARE ATTACHING RED TO RED.** Follow the previous process to tighten the connection.
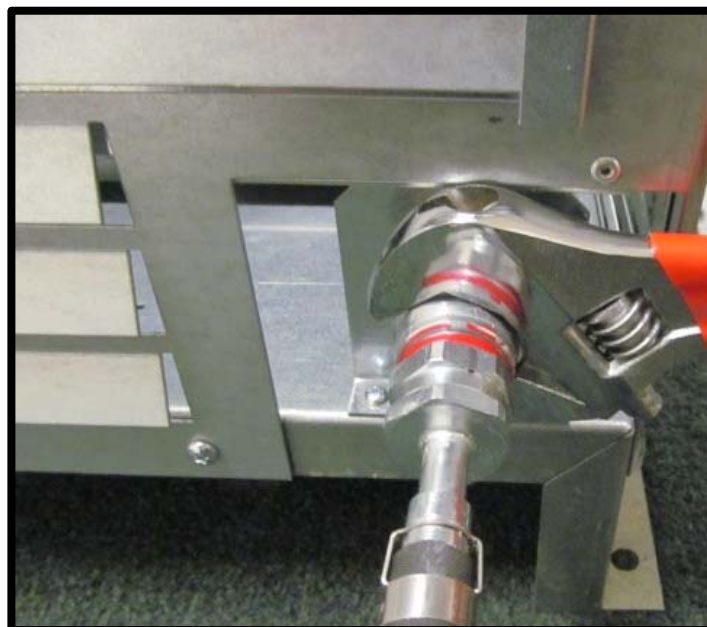
24. Plug in the Condensing Unit. The Condensing Unit should turn on for a brief period, and then shut off.
25. Plug in the Evaporator. The controller should light up. Turn the controller on so that a temperature value is displayed. There is a 3 minute delay at start up indicated by a blinking snowflake icon on the display. After 3 minutes, a snowflake and fan icon should appear on the display, lit solid. The system is now in cooling mode. Verify that the Condensing Unit has turned on, and that the Evaporator is producing cold air.

Installation Tips and Guidelines

- Make sure you attach the line set hoses in the sequence described in the instructions
- Make sure to plug in power cords in the sequence described in the instructions
- Before attaching each connection, STOP and double-check that BLUE and RED female connections are attached to corresponding BLUE and RED male connections
- Inspect Evaporator and Condensing unit fans to confirm airflow. There shouldn't be any excessive vibration, noise or obstructions to airflow.
- Do not leave the system unattended until it has reached normal operating conditions, and the system has been observed properly cycling on/off to the desired set point and differential.

Summary

Keep in mind the following guidelines before purchasing a wine cooling unit from CellarPro:

- If the cellar is too large for the cooling unit, the cooling unit will be unable to maintain proper, even temperatures inside the cellar.

- Without proper insulation and an airtight environment, the cooling unit effectively will become a de-humidifier and potentially will produce buckets of water.

- If the condensing unit does not have access to cool air, either because of improper ventilation or because the environments is too hot, the cooling unit will be unable to maintain proper temperatures inside the cellar.

Under any of the above conditions, the unit's internal components may become damaged, the expected useful life of the wine cooling unit may be adversely affected, and the product's warranty may become null and void.

V.   Operating Instructions

Overview

CellarPro cooling units are designed to maintain optimal conditions for wine storage and aging. These conditions include steady, cool temperatures, high humidity, minimal vibration and light, and clean air.

The settings on your CellarPro cooling unit have been preset and optimized by the factory. Before changing any settings below, we recommend waiting 14 days to allow the cooling unit to "break in."

The cooling unit is designed to cool the cellar gently without stripping moisture out of the cellar environment. Therefore, it is not uncommon for the cooling unit to run nonstop for up to a week initially, depending on the temperature inside the cellar, the size of the cellar, and the temperature of the ambient environment. Once the cellar has reached equilibrium, it is normal for the cooling unit to run as much as 75 percent of the time.

CellarPro cooling units are designed to maintain optimal temperatures for *storing and aging* fine wine. CellarPro cooling units are not designed to maintain temperatures for *serving* wine, which tend to be much colder than storage temperatures, especially serving temperatures for white and sparkling wines.

CellarPro cooling units must be used, stored, moved and/or shipped in the upright position. Be careful when turning the unit on its side. The unit NEVER should be turned upside down.

Temperature Control

CellarPro cooling units are designed to turn "on" when the air temperature passing over the evaporator coils inside the cellar exceeds the **Minimum Set Point** plus the **Temperature Differential,** and turn "off" when the temperature drops below the **Minimum Set Point**. For example, if the Minimum Set Point is 58°F and the Temperature Differential is 4°F, the cooling unit will turn on when the temperature rises above 62°F inside the cellar, and it will turn off when the temperature falls below 58°F. In this example, the average temperature inside the cellar will be 60°F.

Basic Operation

The cooling system is programmed with a **3-Minute Delay at Startup** to protect its internal components. The temperature inside the cellar can be increased or decreased by changing the Minimum Set Point as summarized below, and detailed later in this chapter.

- Press the "Set" button for three seconds until °F" blinks
- Press "Up" or "Down" button
- Press "Set" button to confirm

If the cooling unit runs too much, you can raise the Minimum Set Point to reduce the cycle "on" time. Most wine collectors store their wine in the range of 55 - 60°F.

CellarPro cooling units are designed to maintain appropriate levels of humidity, ranging from 50 to 70 percent, inside wine cellars. In order to increase or decrease humidity inside the cellar, the **Fon** setting can be changed as described in the "Advanced Operation" section later in this chapter.

Switch Instructions
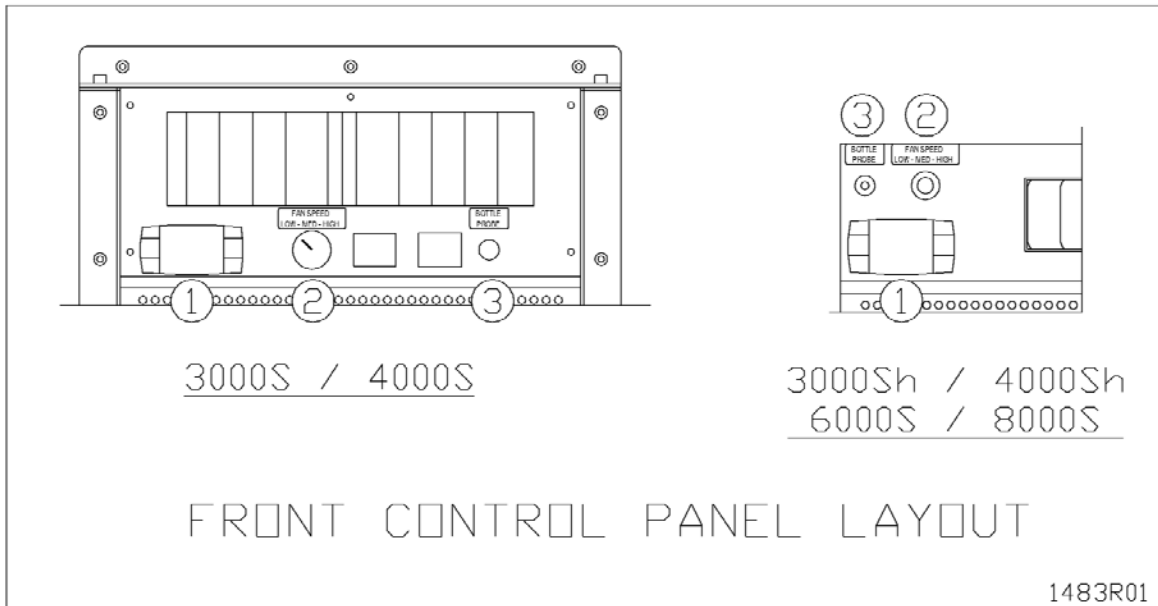
(1) Control Panel: Maintains desired cellar environment. Factory settings are optimized for peak performance. Controller is described in detail in the following section.

(2) Fan Speed Selector Switch (Low/Med/High): The cooling unit fans operate on 3 speed settings: Low, Medium, and High. For optimum sound and energy efficiency, select the lowest fan speed that will maintain the desired cellar temperature. High speed is recommended for initial cellar pull down, extreme temperature conditions and ducted installations.

(3) Bottle Probe Jack (Bottle Probe): Plug in the remote bottle probe (sold separately) to control the cellar by liquid temperature rather than air temperature inside the cellar. Disconnecting the probe will automatically return the control to air temperature. When using a bottle probe, the **Temperature Differential** will need to be adjusted to 1 as shown in the "Advanced Operation" instructions below.

Control Panel Instructions*
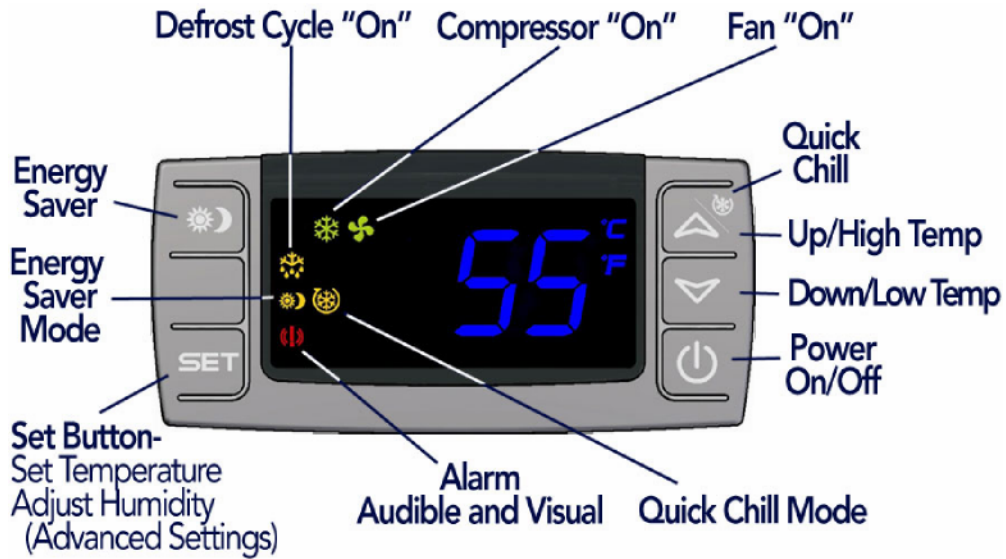
Digital Display

The temperature displayed on the control indicates the real-time air temperature as measured by Probe 1 (P1) located behind the front grill of the cooling unit.

Power "On" / "Off"

Press "Power On/Off" to turn the unit on and off.

When the "Compressor On" indicator light is on, the Compressor is running.

When the "Fan On" indicator light is on, the Fan is running.

The cooling system is programmed with a **3-Minute Delay at Startup** to protect its internal components.

* Remote display/control instructions are included following this section.

Up and Down Buttons

To view the "**High Temp**" recorded by the cooling unit, press the "Up" button once.

To view the "**Low Temp**" recorded by the cooling unit, press the "Down" button once.

To **reset** the "High Temp" or "Low Temp", press the "Set" button for three seconds while "Hi" or "Lo" is displayed. "RST" will blink three times to indicate confirmation.

Set Button

The cooling unit is factory preset with a Minimum Set Point of 58°F and a Temperature Differential of 4°F. This means that the cooling unit will turn on when the display rises above 62°F (58°F + 4°F), and turn off when the display falls below 58°F. In this example, the average temperature inside the cellar will be 60°F.

To view the Minimum Set Point, press the "Set" button for one second.

To change the Minimum Set Point,
- Press the "Set" button for three seconds until °F" blinks
- Press "Up" or "Down" button
- Press "Set" button to confirm

The "Set" temperature will blink three times to indicate confirmation

The recommended Minimum Set Point range is 53 - 60°F. To change the Temperature Differential, see "Advanced Operation" later in this chapter.

Energy Saver Button

To activate and deactivate the "Energy Saver" mode, press the "Energy Saver" button.

The "Energy Saver" indicator light will turn on when the cooling unit is in "Energy Saver" mode.

In "Energy Saver" mode, the Minimum Set Point increases 4°F and the Temperature Differential is unchanged.

Quick Chill Button

To activate the "Quick Chill" mode, press the "Up" / "Quick Chill" button for three seconds.

To deactivate "Quick Chill", press "Quick Chill" button for three seconds again.

The "Quick Chill" indicator light will turn on when the cooling unit is in "Quick Chill" mode.

In the "Quick Chill" mode, the cooling unit will run continuously for 6 hours (or until the intake temperature registers 50°F). This mode is useful after loading "warm" bottles in a cellar

Remote Control / Display Instructions

Digital Display
The temperature displayed on the control is red instead of blue.

Set Button
The cooling unit is factory preset with a Minimum Set Point of 58°F and a Temperature Differential of 4°F.

This means that the cooling unit will turn on when the display rises above 62°F (58°F + 4°F), and turn off when the display falls below 58°F. In this example, the average temperature inside the cellar will be 60°F. To view the Minimum Set Point, press the "Set" button for one second.

To change the Minimum Set Point,
- Press the "Set" button for three seconds until °F" blinks
- Press "Up" or "Down" button
- Press "Set" button to confirm

The "Set" temperature will blink three times to indicate confirmation

The recommended Minimum Set Point range is 53 - 60°F. To change the Temperature Differential, see "Advanced Operation" later in this chapter.

Quick Chill Button
To activate the "Quick Chill" mode, press the "Up" button for 3 seconds

To deactivate "Quick Chill", press the "Up" button for 3 seconds again

Button
The "Quick Chill" indicator (Row 3) light will turn on when the cooling unit is in "Quick Chill" mode,

Icon
In the "Quick Chill" mode, the cooling unit will run continuously for 6 hours (or until the unit reaches set point.). This mode is useful after loading "warm" bottles in the cabinet.

Auto Defrost Mode
The cooling unit has a factory default defrost cycle that initiates every 16 hours for 20 minutes. When the cooling unit is in auto-defrost mode, the "Defrost" Indicator light (Top row) will turn on, and the evaporator fan will run.

Manual Defrost
Hold the defrost button in for 3 seconds to initiate a manual defrost. The "Defrost" Indicator light (Top row) will turn on for a 20 minute defrost cycle.

Light
The light button function is disabled, however pressing it will turn on/off the light indicator on the display (2nd row).

Energy Saver
The remote display is not configured with an Energy Saver mode. The set point can be raised manually for periods where energy savings is desired.

Advanced Operation

CellarPro cooling systems can be programmed with advanced settings to achieve more control over conditions inside the cellar. Conditions like humidity, the Temperature Differential, and alarm settings all can be modified for custom applications. To access the advanced settings, do the following:

Press the "Set" button and the "Down" button together at the same time, and hold for three seconds. Then, use the "Up" or "Down" button to scroll to the following screen:

HUMIDITY: The factory preset for this setting is "3".

If the humidity inside the cellar is too low, press the "Set" button, then use the "Up" button until the desired setting is reached. The recommended range for this setting is 0-6.

TEMPERATURE DIFFERENTIAL: The factory preset for this setting is "4".

This setting determines the Temperature Differential and therefore the temperature at which the cooling unit will cycle on. The recommended range for this setting is 4 or 5.

HIGH TEMPERATURE ALARM: The factory preset for this setting is "70".

This setting designates the High temperature inside the cellar at which the alarm is triggered. We recommend leaving this setting at the factory preset.

LOW TEMPERATURE ALARM: The factory preset for this setting is "45".

This setting designates the Low temperature inside the cellar at which the alarm is triggered. We recommend leaving this setting at the factory preset.

ENERGY SAVINGS MODE DIFFERENTIAL: The factory preset for this setting is "4".

This setting controls the Temperature Differential for the Energy Savings Mode. The recommended range for this setting is 2-4.

Improper installation, inadequate insulation, or a cellar that is too large will cause the cooling unit to run continuously and be difficult to troubleshoot.

The cooling unit is designed to turn on when the air temperature in the cellar rises ABOVE the Minimum Set Point + Temperature Differential, and turn off when the air temperature falls below the Minimum Set Point. For example, if the Minimum Set Point is 58°F and the Temperature Differential is 4°F, the cooling unit will turn above 62°F and turn off below 58° F. In this example, the average temperature inside the cellar will be 60°F.

Cooling Unit Runs Constantly

When bottles are first loaded in the cellar, the cooling unit will run continuously (even up to a week) until the temperature inside the cellar falls below the Set Point.

Hot weather conditions, insufficient ventilation and/or dirty condenser filters may cause the cooling unit to run continuously. To reduce cycle times,

1. Remove any obstructions to air flow to or from the unit
2. Check to make sure the condenser filter is clean
3. Increase the supply of cool air to the space outside the condenser coils, using a fan, ducting or an exhaust system to remove heat from the space.
4. Raise the Minimum Set Point on the cooling unit

Cooling Unit Is Dripping

The cooling unit is designed to remove excess moisture from inside the cellar, which collects in the drip pan of the cooling unit and is evaporated by the condensate heater. Excess moisture can occur when the cooling unit runs constantly, when the Minimum Set Point is too low and/or when the cellar doesn't have a good seal from the outside environment. To eliminate overflow, do the following:

1. Ensure the condensate overflow drain line is not blocked, that the drain line is trapped and the trap is filled with water.
2. Ensure there is a downward pitch in the drain line from the outlet at the unit drain pan to the final drain. It may be necessary to install a trap vent as detailed in the Condensate Drain Line installation section.
3. Check that the cellar has airtight seals, including the door(s), light fixtures, and all walls, ceiling and floor.
4. Raise the Minimum Set Point of the cooling unit.

The Cooling Unit Won't Turn On

The cooling system is programmed with a **3-Minute Delay at Startup** to protect its internal components.

Other Troubleshooting Issues

Issue	Possible Causes	Potential Solutions
No cooling: no refrigerant flow. If the "snowflake" icon is illuminated on the temperature display control, the compressor should be running.	Electronic Control: No power to evaporator Valve control: no power to liquid solenoid valve coil	Power supply to Evaporator interrupted. Restore power.
		(Valve control only) Power supply to solenoid coil interrupted: loose wire. Inspect for loose fan wiring and reconnect.
	Solenoid coil failure (Valve control option only)	When the Evaporator is powered on and off, a distinct "click" should be heard indicating the opening/closing of the solenoid valve. If not, the solenoid coil may need to be replaced. Consult factory.
	No power to compressor	Power supply to Condensing Unit interrupted. Restore power.
		Check for loose wires and reconnect.
		Low pressure switch is open: On Valve control systems, make sure solenoid is energized. Jumper out switch to check for a faulty switch, and replace if necessary. Note that in installations below 0°F this switch may remain open. Consult factory.
		High pressure switch is open: refer to the "High Pressure Safety Shutdown" section.
	High pressure safety shutdown / high discharge pressure	Locate and correct source of high condensing head pressure:
		Refrigeration line blockage
		Condenser fan not operating in ambient temperatures above 90°F. Ensure that there is power to the Condensing Unit and verify the fan cycling control settings. Replace condenser fan and fan cycling control if necessary.
		Insufficient ventilation: reference Condensing Unit installation guidelines for proper placement and ambient temperature requirements. Correct to ensure adequate air ventilation to and from the Condensing Unit.
		Improper refrigerant charge: inspect for over-charged system or non-condensables in system.

Issues	Possible Causes	Potential Solutions
(Cont.) No cooling: no refrigerant flow. If the "snowflake" icon is illuminated on the temperature display control, the compressor should be running.	(Cont.) High pressure safety shutdown / high discharge pressure	Dirty or obstructed condenser coil: clean and remove all obstructions to airflow.
	Intermittent power to compressor	Check for loose wires and secure.
		Compressor cycling on internal thermal overload protection. Replace start capacitor/relay assembly
		Compressor cycling on high pressure - see "High pressure safety shutdown" section.
		Faulty compressor. Consult factory.
No cooling: Evaporator fan not blowing. If the "fan" icon is illuminated on the temperature display control, the fan should be blowing air.	No power to fan(s)	Power supply to Evaporator interrupted. Restore power.
		Power supply to fan interrupted: loose wire. Inspect for loose fan wiring and reconnect.
		Fan capacitor: check for loose wires or out of spec capacitance. Reconnect loose wires or replace capacitor(s).
	Fan obstructed	With power to unit disconnected, check the rotation of the blower fan. If fan does not spin freely, inspect for and remove obstructions. If no obstructions are found, the fan may need to be replaced. Consult factory.
	Fan running but not drawing air through coil.	Fan short cycling: Make sure all housing panels are attached to the unit. Replace missing panels.
		Coil is blocked with ice. Refer to the "Iced coil" section.
Iced coil	Temperature displayed is higher than actual cellar temperature	If using a bottle probe, check placement and compare to actually cellar temp. Relocate probe if necessary to better correlate to actual cellar temperature. Probe fault: check for loose connections if splices were added in the field. Moisture in bottle probe jack: Can cause high readings, consult factory for solution.

Issues	Possible Causes	Possible Solutions
(Cont.) Iced Coil	Low refrigerant charge	System charged incorrectly. Review process and correct.
		Leak in system. Find and repair leak, recharge system.
	Mal-functioning thermostatic expansion valve.	Incorrect superheat setting: determine superheat and adjust. If expansion valve is faulty, replace.
		Expansion valve bulb not located correctly - review installation instructions and correct.
		Liquid flashing at the expansion valve inlet. See "High liquid line pressure drop" section.
	Condensing unit never shuts off	System is wired incorrectly. Locate correct wiring diagram for "Electronic" or "Valve" controlled system, trace wiring and correct.
		If a "Valve" control system, the low pressure switch may have failed closed. Check switch and replace if necessary.
	No airflow	See "Evaporator fan not blowing" section
Insufficient liquid sub-cooling	Low refrigerant charge	System charged incorrectly. Review process and correct.
		Leak in system. Find and repair leak, recharge system.
	High liquid line pressure drop	Check for plugged filter drier and replace if necessary.
		Inspect pipe routing for proper piping practices and correct.
		Liquid line picking up too much ambient heat - may need to insulate.

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Maintenance

The condenser coils on the Condensing unit will collect dust, dirt and lint over time. If the condenser coils become clogged, the cooling unit will not have proper airflow and its performance and longevity will be compromised. The condenser coils themselves also can be cleaned with a vacuum cleaner – ideally with a brush attachment to loosen dust caught between the fins.

Alarms

The cooling unit has both an audible notification and a visual alarm indicator (shown in "red" on the control panel) that are activated when an alarm is triggered. **Please note**: the temperature alarms (HA and LA) are disabled during the first 23 hours of operation after the cooling unit is plugged in and/or turned on.

The control panel also will flash a code for each alarm, as follows:

Alarm	What it means	What to do
P1	Probe 1, which senses the temperature inside the cellar and controls the on/off cycles of the cooling unit, has failed	The cooling unit enters a timed auto-cycle mode until Probe 1 is repaired or replaced. In this mode, the cooling unit will turn on for 12 minutes and off for 8 minutes. Please call CellarPro at 877.726.8496 to repair or replace Probe 1
HA	The temperature inside the cellar is too warm (above 70°F for more than 1 hour)	Check if the cellar has a leak Check if door was left open Lower the ambient temperatures
LA	The temperature of the cellar is too cold (below 45°F)	Raise the Minimum Set Point to 60°F Raise the ambient temperature

VII. Limited Warranty

For five years from the date of original delivery, your CellarPro warranty covers the internal compressor if it proves to be defective in materials or workmanship. In addition, for two years from the date of original delivery, your CellarPro warranty covers all parts and labor to repair or replace any components in the wine cooling unit that prove to be defective in materials or workmanship. The warranty period starts from the time of purchase, regardless of the time of activation.

Under the terms of this warranty, CellarPro will repair or replace the original cooling unit with a new or refurbished cooling unit and, once replaced, the original cooling unit must be returned to CellarPro.

All service provided by CellarPro under the above warranty must be performed by a designated repair center, unless otherwise specified by CellarPro. Purchaser is responsible for shipping the cooling unit to and from CellarPro or to and from a designated repair facility, and for removing and reinstalling the cooling unit from the wine cellar.

The limited warranty applies only to cooling units purchased from the factory or an authorized dealer. Damage caused by others or by any cause beyond the control of CellarPro, shall not be considered defects in material or workmanship and are not covered by the warranty. The limited warranty does not cover any parts or labor to correct any defect caused by negligence, commercial use, accident, or improper use, maintenance, installation, service or repair.

THE REMEDIES DESCRIBED ABOVE FOR EACH WARRANTY ARE THE ONLY ONES, WHICH CELLARPRO WILL PROVIDE, EITHER UNDER THESE WARRANTIES OR UNDER ANY WARRANTY ARISING BY OPERATION OF LAW. CELLARPRO WILL NOT BE RESPONSIBLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM THE BREACH OF THESE WARRANTIES OR ANY OTHER WARRANTIES, WHETHER EXPRES, IMPLIED OR STATUTORY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other legal rights, which vary from state to state.

To receive parts and/or service and the name of a CellarPro designated repair facility nearest you, contact your CellarPro dealer. You may also contact CellarPro directly by calling us at 1.877.726.8496.

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