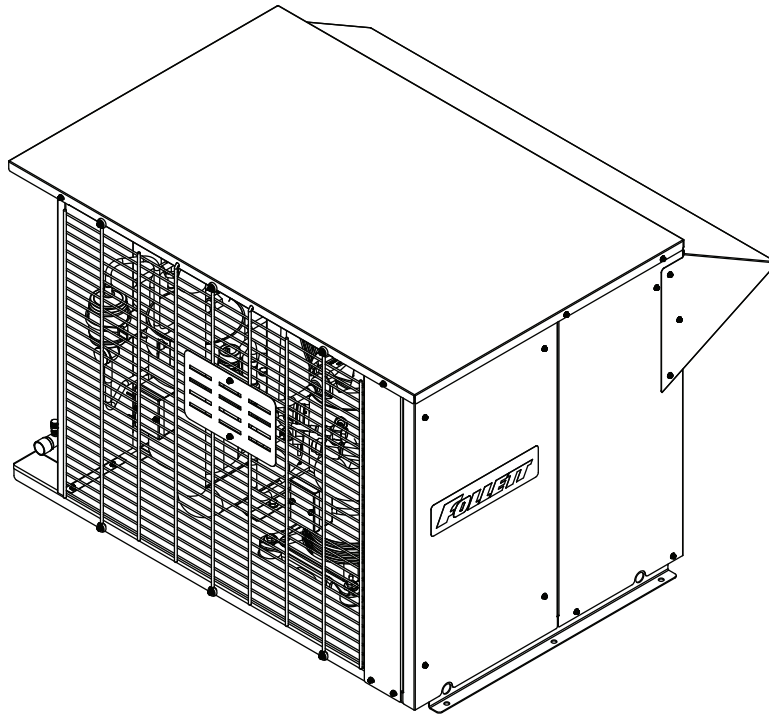
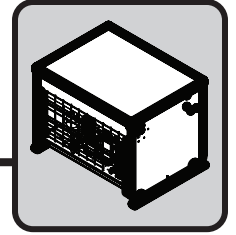


Horizon Elite™ 1012/1412 Ice Machine Installation Instructions for Remote Condensing Unit

C1012CU, F1012CU, C1412CU, F1412CU



801 Church Lane • Easton, PA 18040, USA
Toll free (877) 612-5086 • +1 (610) 252-7301
www.follettice.com

01519131R02

	C1012CU	F1012CU	C1412CU	F1412CU
W1 Width	39.60"	39.60"	39.60"	39.60"
Width (between mounting holes at base)	38.75"	38.75"	38.75"	38.75"
D1 Depth	34.30"	34.30"	34.30"	34.30"
Depth (at base, without hail guard)	25.80"	25.80"	25.80"	25.80"
H1 Height	26.05"	26.05"	26.05"	26.05"
Electrical	208-230/60/1	208-230/60/3	208-230/60/1	208-230/60/3
Minimum circuit ampacity	11A	10 A	13 A	11 A
Maximum overcurrent protection	15 A	15 A	20 A	15 A
Outdoor condensing unit operating limits (air temperature)	-20°F – 120°F	-20°F – 120°F	-20°F – 120°F	-20°F – 120°F
Maximum refrigerant line run length	100'	100'	100'	100'
Maximum line rise above evaporator	35'	35'	35'	35'
Evaporator mounting above condenser	15'	15'	15'	15'
Maximum refrigeration line drop without oil trap	15'	15'	15'	15'
Charge (R449A)	8 lbs	8 lbs	8 lbs	8 lbs
Ship Weight	268 lbs (122 kg)	268 lbs (122 kg)	271 lbs (123 kg)	271 lbs (123 kg)
Net Weight	205 lbs (93 kg)	205 lbs (93 kg)	208 lbs (94 kg)	208 lbs (94 kg)

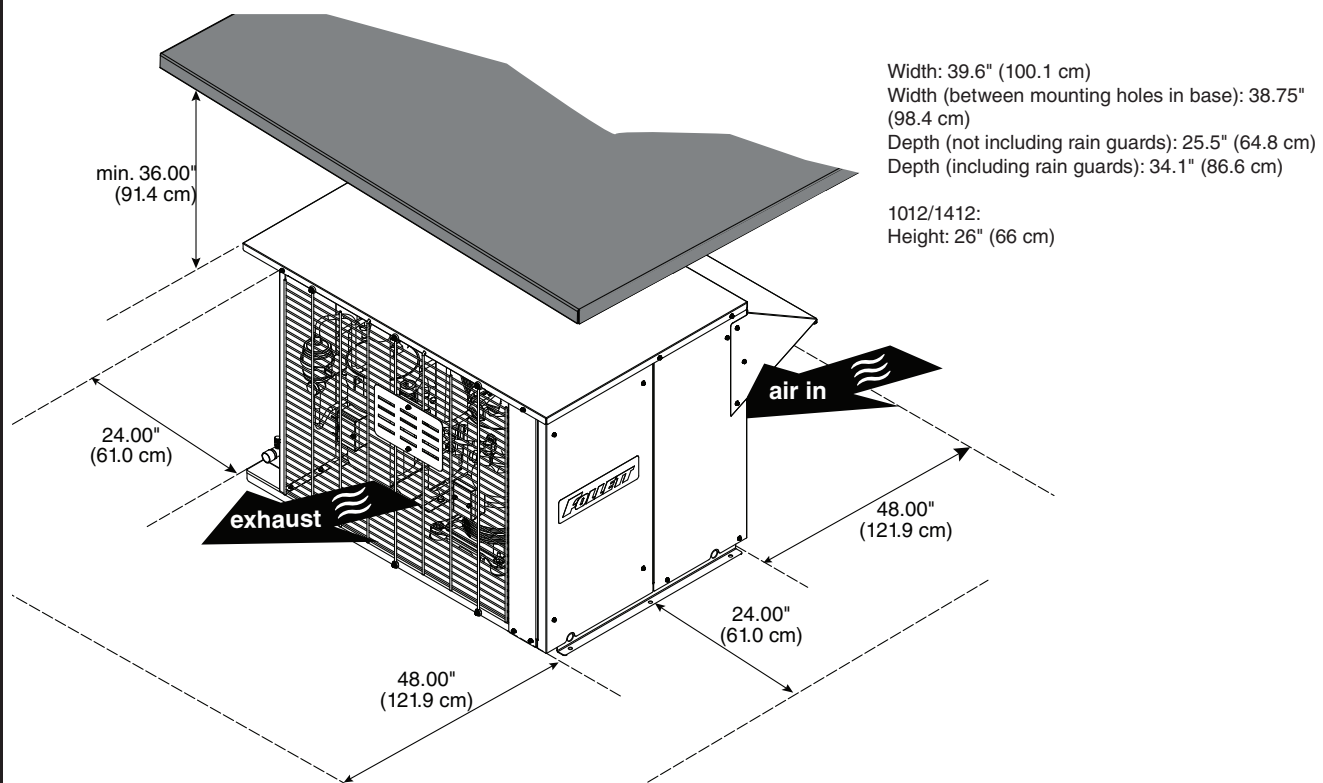
Prior to installation, carefully unpack and inspect the contents of your condensing unit!

Site preparation

1

To ensure proper performance, ease of service and warranty coverage, it is critical that you follow the requirements detailed in this manual. If you cannot meet these requirements or have questions, call our technical service group at 877.612.5086 for installation support.

1.1 Condenser Unit Clearances



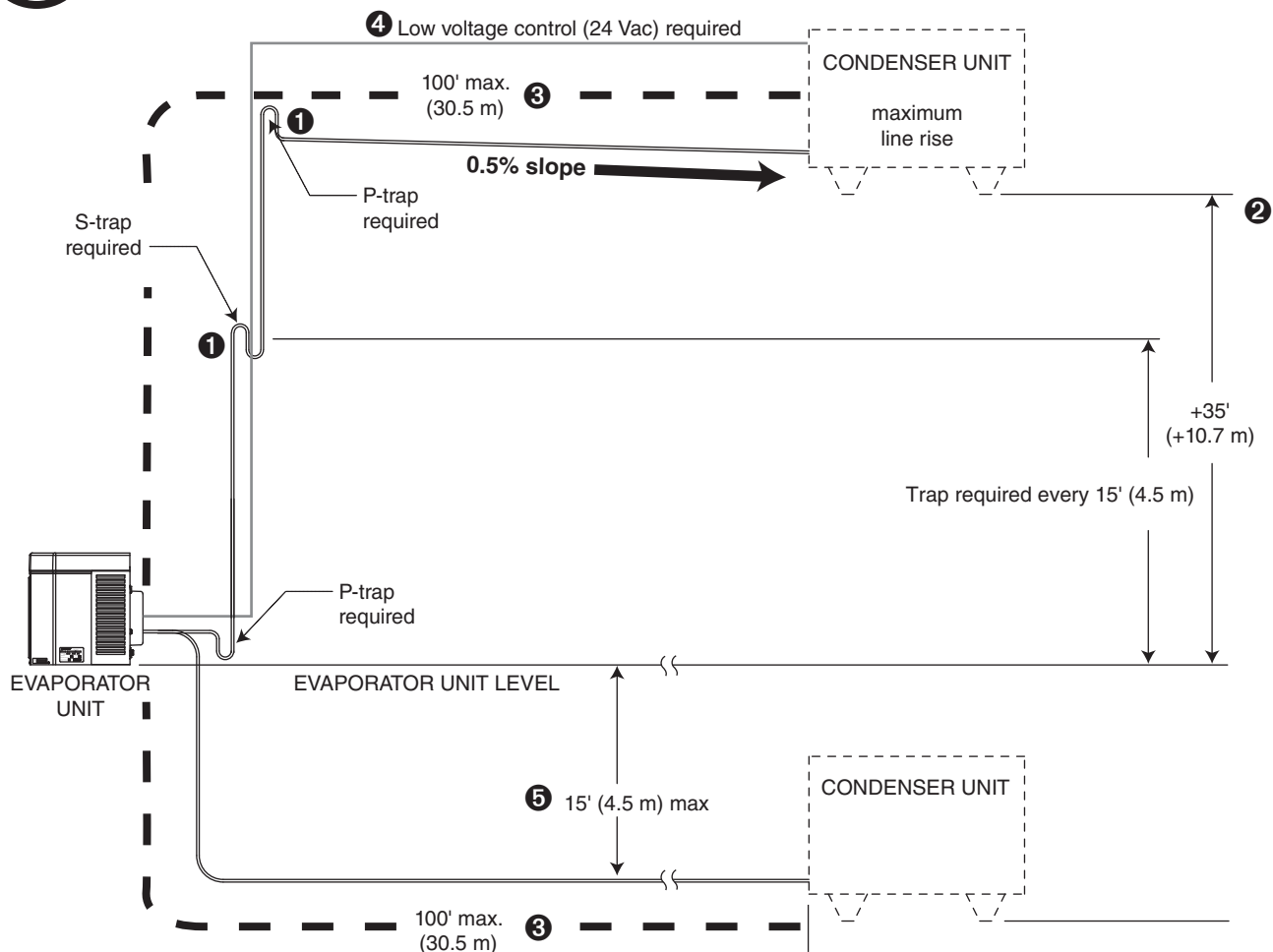
- Position condenser unit as shown.

Required clearances:

- Minimum 48" (121.9 cm) front and back
- Minimum 24" (61.0 cm) left and right
- Minimum 36" (91.4 cm) above

1.2

Condenser installation specifications



Site layout:

- Outdoor ambient temperature range: -20 F to 120 F (-29 C to 49 C)
- Installation with condenser unit elevations above 15' (4.5 m) require an S-trap at the midpoint of the rise and a P-trap at the top of the rise 1
- Maximum line rise must not exceed 35' (10.7 m) 2
- Maximum line set length must not exceed 100' (30.5 m) 3
- Low voltage control (24 Vac signal wire) must be connected 4
- Maximum line drop must not exceed 15' (4.6 m) 5

2.1 Install condensing unit

- Level unit
- Securely attach base of unit using holes found in base plate

2.2 Rack system

- Not compatible with rack system. Consult Technical Service at (877) 612-5086 or (610) 252-7301.

2.3 Electrical requirements



CAUTION

- Electrical disconnects required
- Electrical disconnects installed in accordance with NEC and local electrical codes

	C1012CU single phase	F1012CU 3-phase	C1412CU single phase	F1412CU 3-phase
Electrical	208-230V, 60Hz			
Minimum circuit ampacity	11A	10 A	13 A	11 A
Maximum overcurrent protection	15 A	15 A	20 A	15 A
Outdoor condensing unit operating limits (air temperature)	min -20 F (-29 C) max 120 F (49 C)	min -20 F (-29 C) max 120 F (49 C)	min -20 F (-29 C) max 120 F (49 C)	min -20 F (-29 C) max 120 F (49 C)

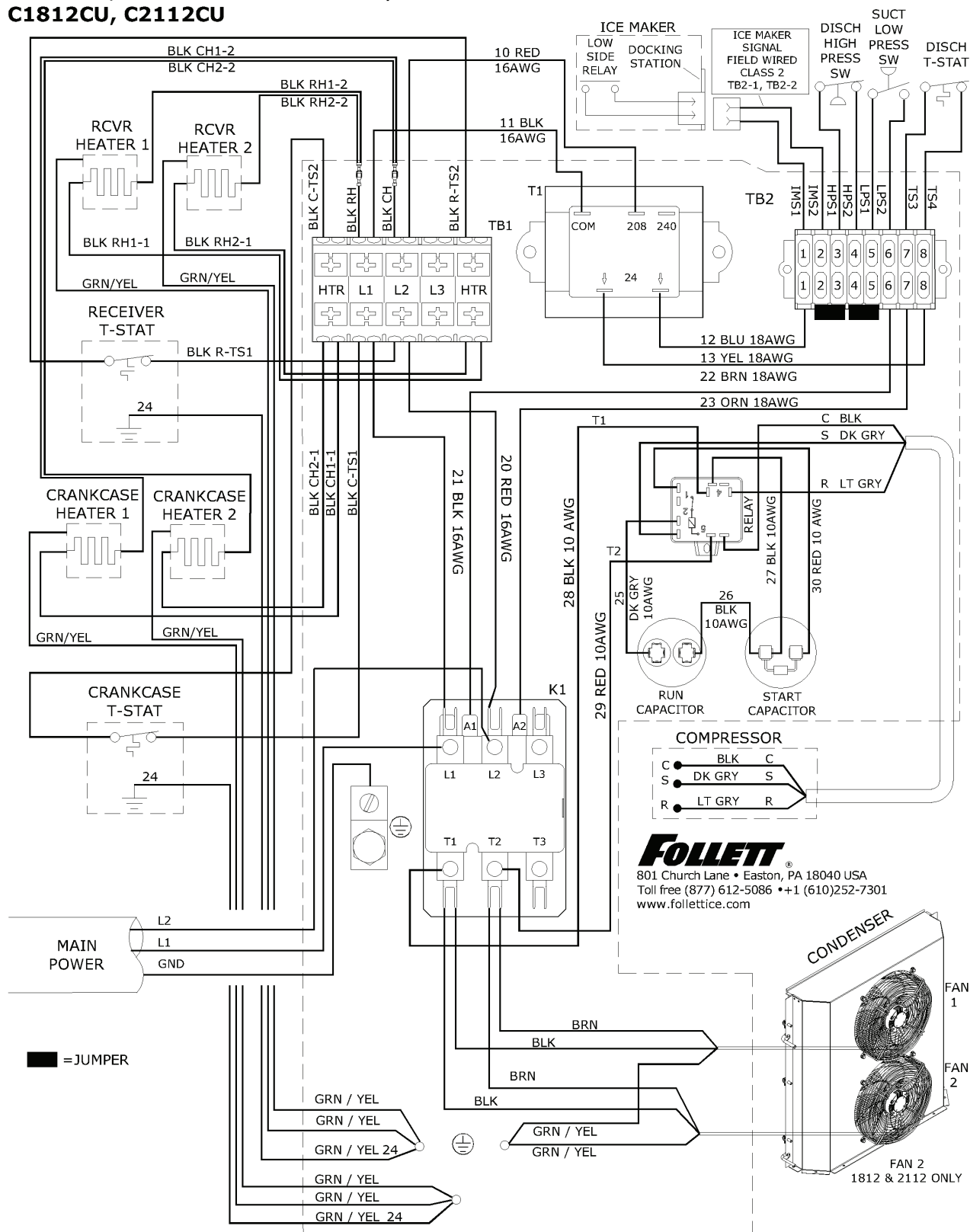
- Refer to wiring schematic located in condenser unit electrical box

2.3 Electrical schematic

**C1012CU, C1412CU
C1812CU, C2112CU**

1-PHASE, 208-230 VAC

OUTDOOR CONDENSING UNIT



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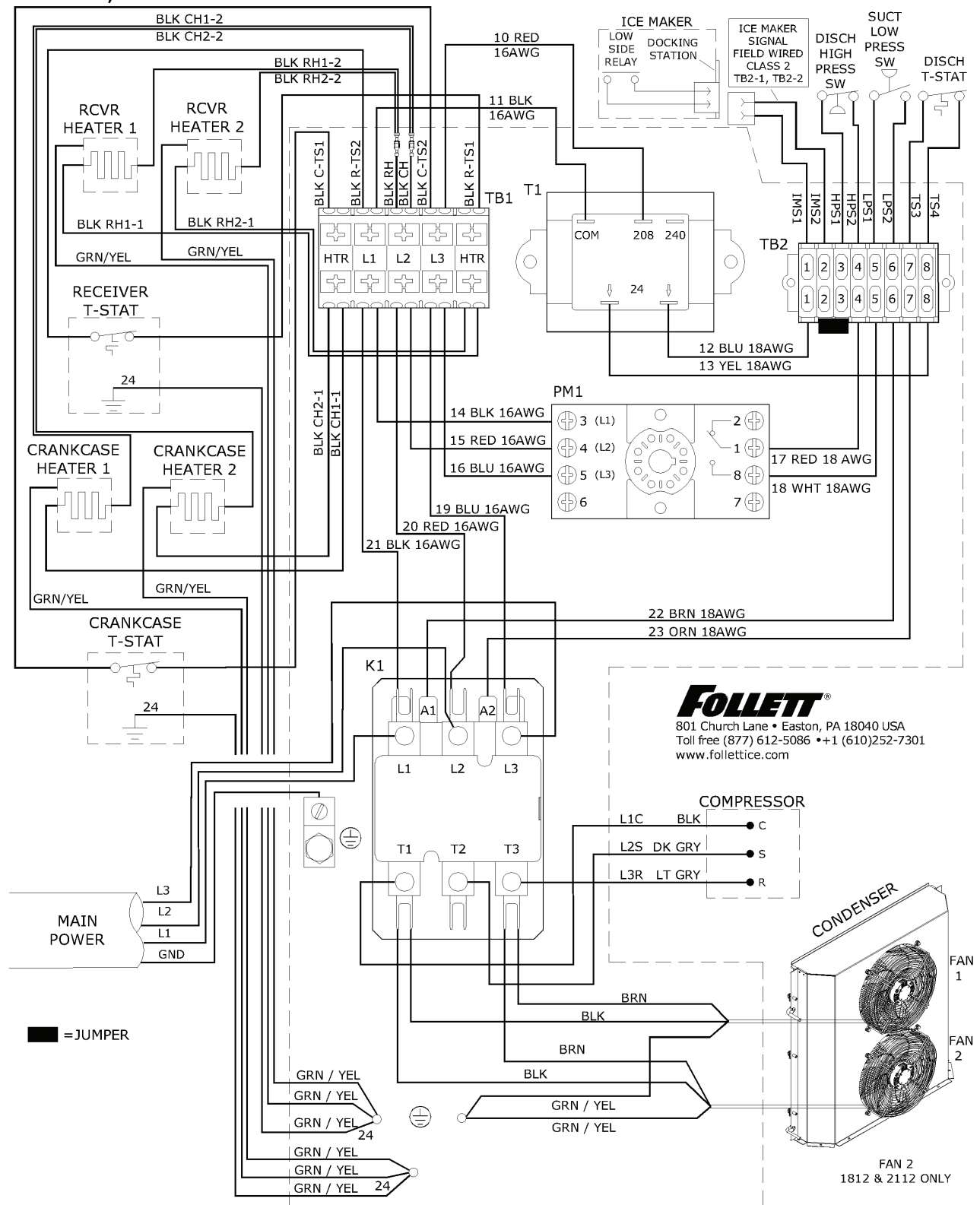
2.3

Electrical schematic

**F1012CU, F1412CU
F1812CU, F2112CU**

3-PHASE, 208-230 VAC

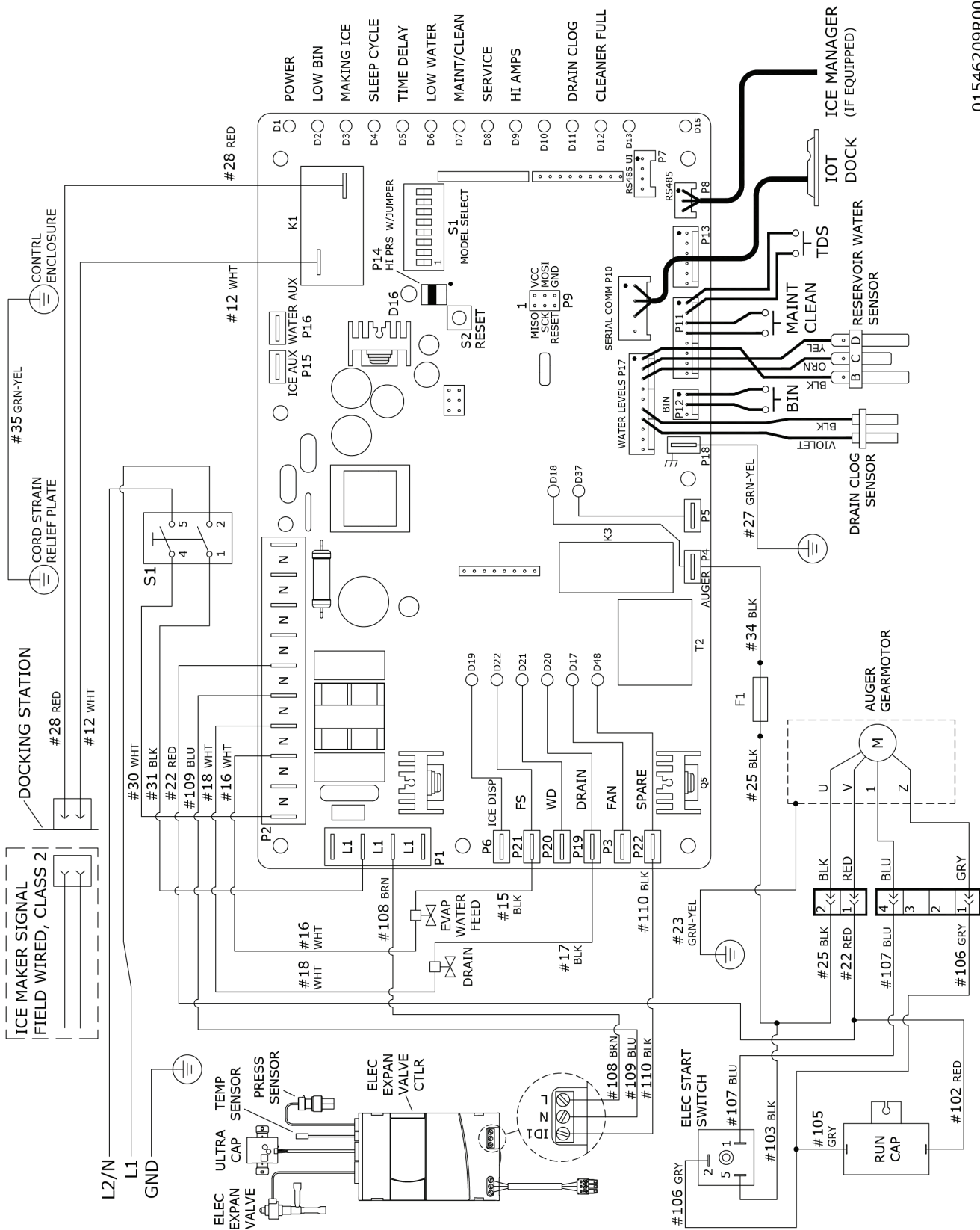
OUTDOOR CONDENSING UNIT



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2.3

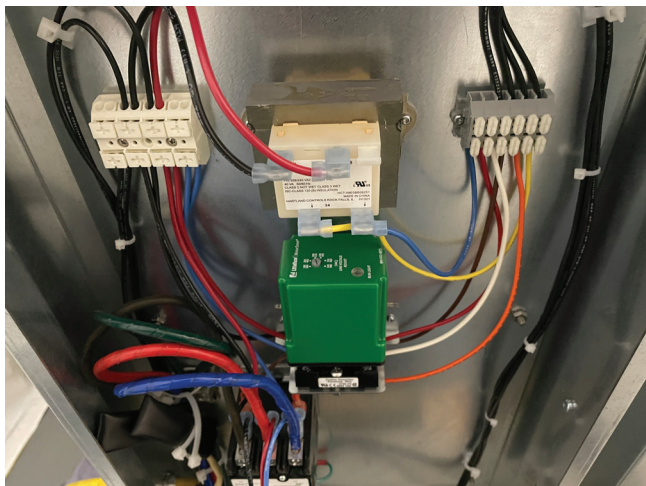
Electrical schematic



01546209R00

2.4

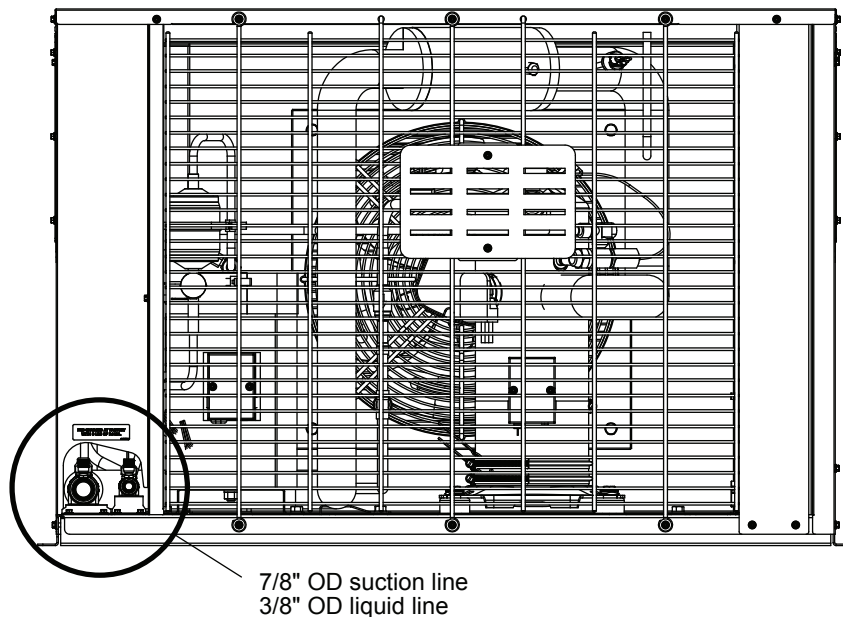
Phase monitor adjustments (if necessary)

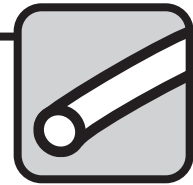


1. The phase monitor is preset to 208 Vac from the factory.
2. If building voltage is less than 208 Vac, consult technical service.
3. See below chart for phase monitor diagnostics.

PLEASE NOTE THAT ANY TIME POWER IS APPLIED TO THE CONDENSING UNIT, OR THE UNIT COMES OUT OF A FAULT STATE, IT WILL TAKE APPROXIMATELY 200 SECONDS FOR THE UNIT TO POWER ON.

INDICATOR LIGHT	STATUS
GREEN	RUN
 GREEN	RESTART DELAY
 RED	REVERSE PHASE
 RED	UNBALANCE / SINGLE PHASE (SEE EXAMPLE BELOW)
RED	LOW VOLTAGE
 RED	HIGH VOLTAGE (201A-9 ONLY)





3.1 Refrigeration line installation: 7/8" OD suction line / 3/8" OD liquid line



CAUTION

- The installer of the refrigeration line set must be USA Government Environmental Protection Agency (EPA) certified in proper refrigeration handling and service procedures
- A qualified person must perform all roof or wall penetration
- Do not form unwanted traps in refrigeration lines. A service loop is not considered an oil trap.
- Never coil excess refrigeration tubing
- The compressor oil rapidly absorbs moisture. Minimize the exposure of the refrigeration system by not releasing the condenser unit or evaporator unit holding charge until all line connections are finished and the system is ready for evacuation.

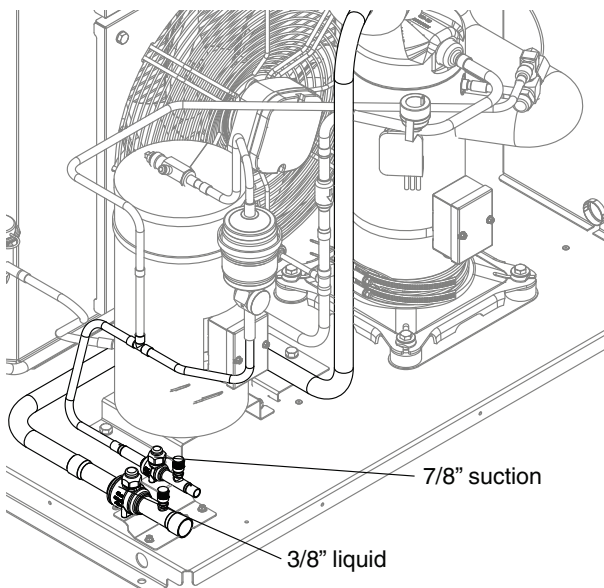


WARNING

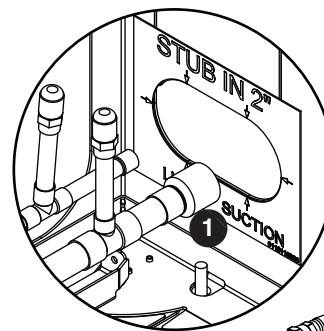
- This unit contains an R449A holding charge

1. Make and connect line set run from the condensing unit to the evaporator unit with all specifications found in the installation specifications section. **DO NOT ATTACH QUICK DISCONNECT CONNECTIONS TO THE EVAPORATOR!** Do not overheat shut off valves on the condenser unit or quick disconnects on evaporator unit.

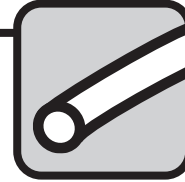
Note: Insulate entire suction line (not the liquid line) including shut off valves to prevent condensation.



- Braze the line set to the suction and liquid lines. Run line set to the docking station and stub in 2"

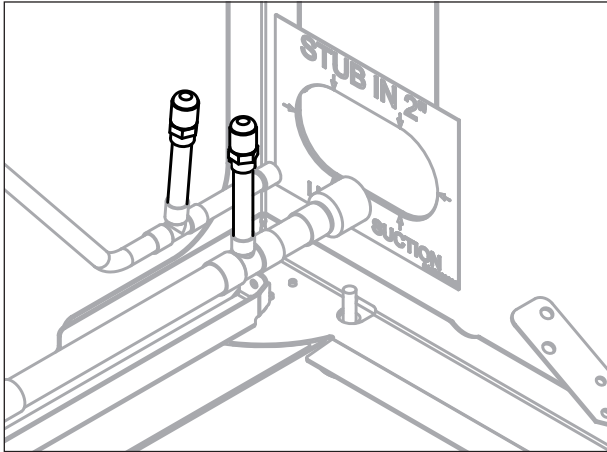


- Braze supplied quick-connect lines onto stub-ins ①. **DO NOT ATTACH QUICK DISCONNECTS TO EVAPORATOR!**

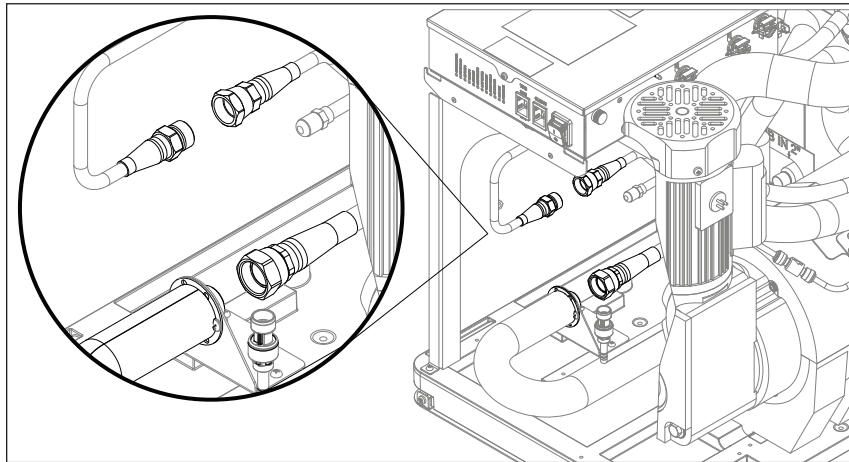


3.2

2. Evacuate both high and low side lines.



3. Open the King valves at the OCU to pressurize the line set.
4. Oil the threads of the quick disconnects. Failure to do so can lead to leaks.
5. Connect the re-useable, self-sealing liquid and suction line quick disconnects to evaporator unit.



6. Turn on power to the OCU

R449A ice machine charge specifications for 1012/1412 models:

Ice machine evaporator holding charge	2 oz
Condensing unit pre-charge	8 lbs (3.63 kg)

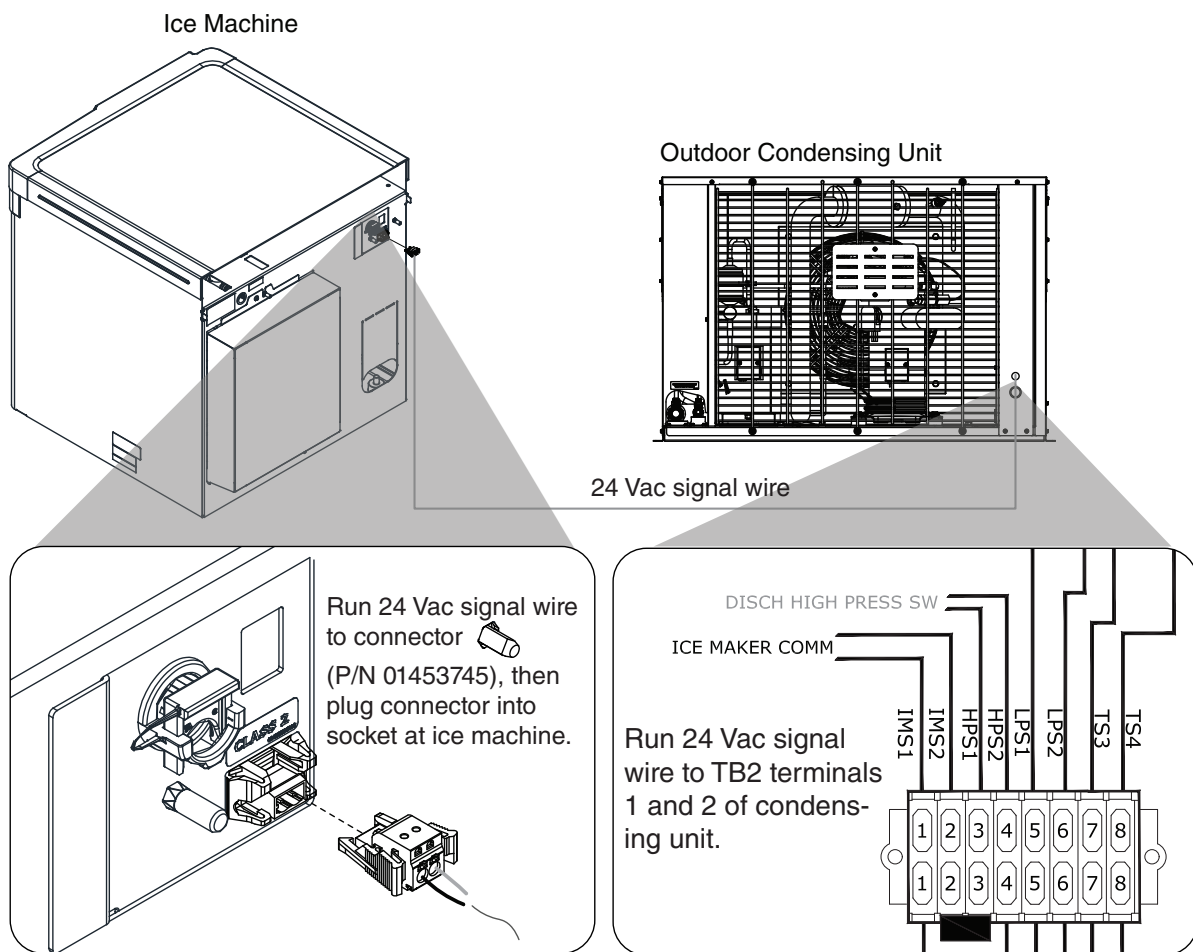
Total charge: 8.125 lbs (3.69 kg)

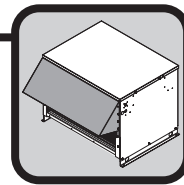
4.1 Low voltage control (24 Vac)

The low voltage control (24 Vac signal wire) must be run and connected at the back of the ice machine and to the condensing unit. Route low voltage wire through the upper knockout at the condensing unit and secure with appropriate connector per NEC.

Follett suggests the following wire for the ice machine signal wire (2 conductor, 18 gauge thermostat wire), but be sure to follow NEC guidelines:

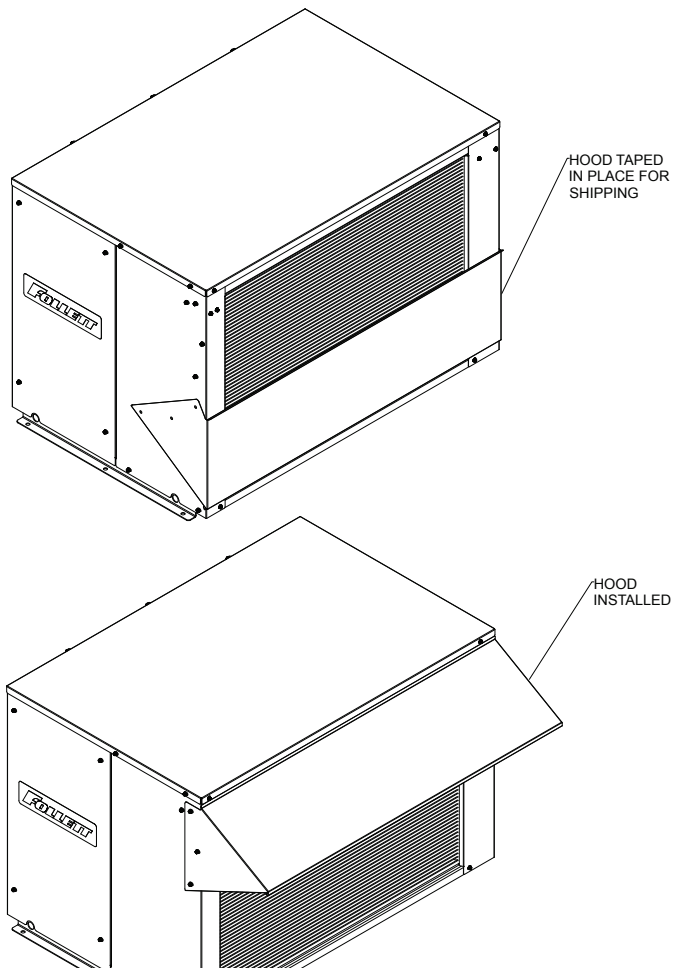
Southwire: 553020507, Johnston Supply: G80-220, United refrigeration: UL1825





5.1 Install hail hood

1. Hail hood is shipped taped to the unit.
2. Install hail hood using enclosed self-tapping screws (attached to underside of hail hood).



NOTICE

Ice machine MUST be cleaned and sanitized prior to operation!

Consult Operation and Service Manual provided with ice machine for cleaning and sanitizing instructions.

**6.1 Verify operation**

- Turn dispenser power ON if applicable
- Scroll compressors will rotate in either direction, depending on power phasing. Prolonged operation in reverse will result in insufficient lubrication. Determine the proper rotation at start up by observing that the suction pressure drops and discharge pressure rises.
- Put a piece of ice on bin thermostat or hold a cup under the shuttle actuator on the bin/dispenser to verify that the evaporator unit shuts OFF.
- After shut off, restart the ice machine

Note: After unit shuts off, pressures will equalize.

Horizon Condenser Unit Compressor Amperage

Ice Machine Model Number	C1012CU single phase	F1012CU 3-phase	C1412CU single phase	F1412 CU 3-phase
Running amps (+/- 10%)	5.5	5.0	6.5	5.5

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