

KOLD-DRAFT®

Pre-charged Remote Air-Cooled Condenser Installation Instructions

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INSTALLATION AND OPERATION INSTRUCTIONS FOR KOLD-DRAFT[®] REMOTE AIR-COOLED CONDENSERS

CHECK FOR FREIGHT DAMAGE BEFORE PROCEEDING: Even though damage to the carton may not have been evident, check for hidden damage and contact freight carrier immediately if necessary to file a claim.

THIS EQUIPMENT MUST BE INSTALLED IN COMPLIANCE WITH THE APPLICABLE FEDERAL, STATE/PROVINCE, AND/OR LOCAL PLUMBING, ELECTRICAL, AND HEALTH/SANITATION CODES AND REQUIREMENTS.

CAUTION:

- ◆ RISK OF PERSONAL INJURY, PROPERTY DAMAGE, EQUIPMENT FAILURE, OR FIRE.
- ◆ Refer all maintenance to qualified personnel.
- ◆ Never operate this equipment with covers, panels, or other parts removed or not properly secured.
- ◆ Warn all users to clean up spillage immediately, keep storage bin doors closed, and report any apparent leakage or unusual sounds to responsible maintenance personnel.
- ◆ If system components are modified or substituted for components not specified by **Kold-Draft[®]**, proper operation can be compromised to the point of system failure.
- ◆ **Kold-Draft[®]** reserves the right to disallow any warranty claims which result from the use of non **Kold-Draft[®]** condensers and/or line sets.

INSTALLATION

1. Unpack the condenser and install the mounting legs.

CAUTION:

- ◆ RISK OF PERSONAL INJURY OR EQUIPMENT DAMAGE.
- ◆ Use a suitable lifting means and be careful of sharp edges.

2. Fasten the condenser to its mounting surface using whatever method will satisfy the building codes in your area. The condenser must **not** be lower than the receiver.
3. The line sets are packed separately, with the quantity and length marked on the carton. Make sure that the lines are correct for your installation.
4. A single circuit condenser installation, which uses one line set, will require a 1-3/4" dia. hole to pass the lines through a ceiling or wall. The lines for a 2 circuit condenser require a 2" dia. hole.
5. Each line set consists of a 3/8" liquid line, and a 1/2" insulated discharge line. Connect the 3/8" line to the lower (liquid) fitting on the condenser, and to the "**Refrigerant In**" on the ice maker. The 1/2" line connects to the upper (inlet) fitting on the condenser, and the "**Refrigerant Out**" on the ice maker.
6. Each fitting on the line sets, condenser and ice maker is self-sealing, and should be tightened 1/4 turn more than hand tight. **Always use a backup wrench to prevent tubing twist when tightening these fittings.**

7. The condenser fan motor requires power supply provisions that comply with all applicable code requirements. The Ice Maker is provided with wire connection pigtails that include an L1 **RED** wire for connection to the fan motor circuit along with L2 and Grounding conductors. **CAUTION:** For multiple-circuit installations fan power must be provided separately by a circuit that will not be interrupted so that the fan motor will run continuously.

8. The refrigerant lines should be routed inside the building or otherwise mechanically protected wherever possible.

Ampacity: Minimum ampacity does not indicate typical running current value. Refer to equipment NAME PLATE data. Use minimum ampacity value for sizing branch circuit conductors up to 25 feet length. For conductor length over 25 feet up to 100 feet, increase 1 AWG size. Over 100 feet requires 2 or more AWG size increase.

Branch circuit protection: Proper protection must be provided by either fuse(s) or HACR type circuit breaker(s). Each ice maker must be provided with a separately protected circuit with no other load(s). A fused disconnect installed adjacent to each ice maker is recommended (must be supplied by the installer), and may be required by local codes. NORMAL protector size is based on rated voltage and operation at lower than extreme temperature limits. When branch circuit conductors are sized to permit, increasing the protector size (up to the specified maximum) may avoid nuisance protector opening under harsh operating conditions.

Remote condenser Ice Maker models from the factory are provided with adequate refrigerant charge to accommodate all acceptable condenser ambient temperatures and up to 50 ft. refrigerant lines. The Ice Maker Nameplate label on the rear of the cabinet indicates the factory charge amount, maximum total charge, and refrigerant type. Ice makers are provided with re-sealable refrigerant line connection couplings.

All Ice Maker models are intended FOR INDOOR USE ONLY with PERMANENT CONNECTION TO THE FIELD ELECTRICAL SUPPLY. The remotely-installed condensers supplied by **Kold-Draft®** may be installed outdoors.

Other operating condition requirements:

Ice maker ambient air temperature: MINIMUM 45°F.; MAXIMUM 90°F.

Remote condenser ambient air temperature: 110° F MAXIMUM.

Remote Pre-Charged Air Cooled Condensers

MODEL NUMBER	VOLTAGE	DESCRIPTION	W" x D" x H"	Gross Wt (Lbs)
RC214APV	208-230/60/1, 0.7 FLA	1 Circuit - 2 Ton - R/404a Precharged Remote Condenser	20-1/8 x 34-3/4 x 30 w/legs & guard	160

CAUTION: REFRIGERANT CHARGES MUST BE ACCURATELY WEIGHED.

The factory charge in dual-evaporator models is 168 oz (10.5 lb) R-404a.
The **MAXIMUM TOTAL** system charge for dual-evaporators is 208 oz (13 lb) R-404a.

Use the following information to calculate the MINIMUM TOTAL charge required:

The basic charge for a dual-evaporator model is 3 lb R-404a.

To determine the total charge add the following to the basic charge above:

1. For each 10 feet of 3/8" O.D. liquid return tubing add 6 oz of R-404a.
2. For each 10 feet of 1/2" O.D. compressor discharge line >70° F add 1/2 oz R-404a.
3. For each 10 feet of 1/2" O.D. compressor discharge line <70° F add 11 oz R-404a (assume that at least 15' will be <70° F if not certain).
4. Use the following amounts of R-404a according to the condenser model and the MINIMUM ambient temperature expected at the condenser:

RC214APV	
+60° F	2.3 lb
+40° F	2.9 lb
+20° F	3.2 lb
0° F	3.3 lb
-20° F	3.5 lb

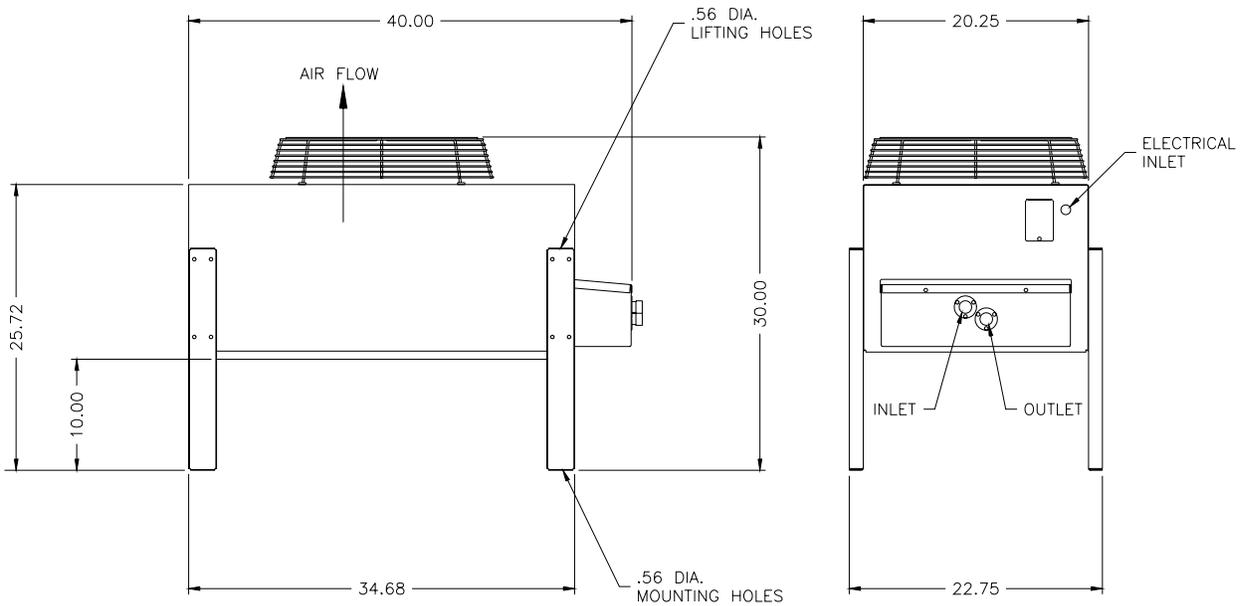
EXAMPLE: Calculate the MINIMUM TOTAL SYSTEM CHARGE for a GB1060R Cuber with an RC214APV (single-circuit, 2-ton) condenser and 30 feet of interconnecting tubing with -20° F minimum condenser ambient temperature.

CALCULATION: (Basic charge) 3 lb + (15' of 1/2" O.D. discharge line at <70° F) 16.5 oz + (15' of 1/2" O.D. discharge line at >70° F) 0.75 oz + (flooded condenser at -20° F) 3.5 lb = 121.25 oz (7.6 lb). The FACTORY CHARGE for GB1060R models is 10.5 lb.

CAUTION: Do not exceed the specified MAXIMUM TOTAL SYSTEM CHARGE.

INTERCONNECTING LINES OVER 50' ARE NOT RECOMMENDED.

Lines must be pitched UPWARD toward the condenser with no "droops" or traps.

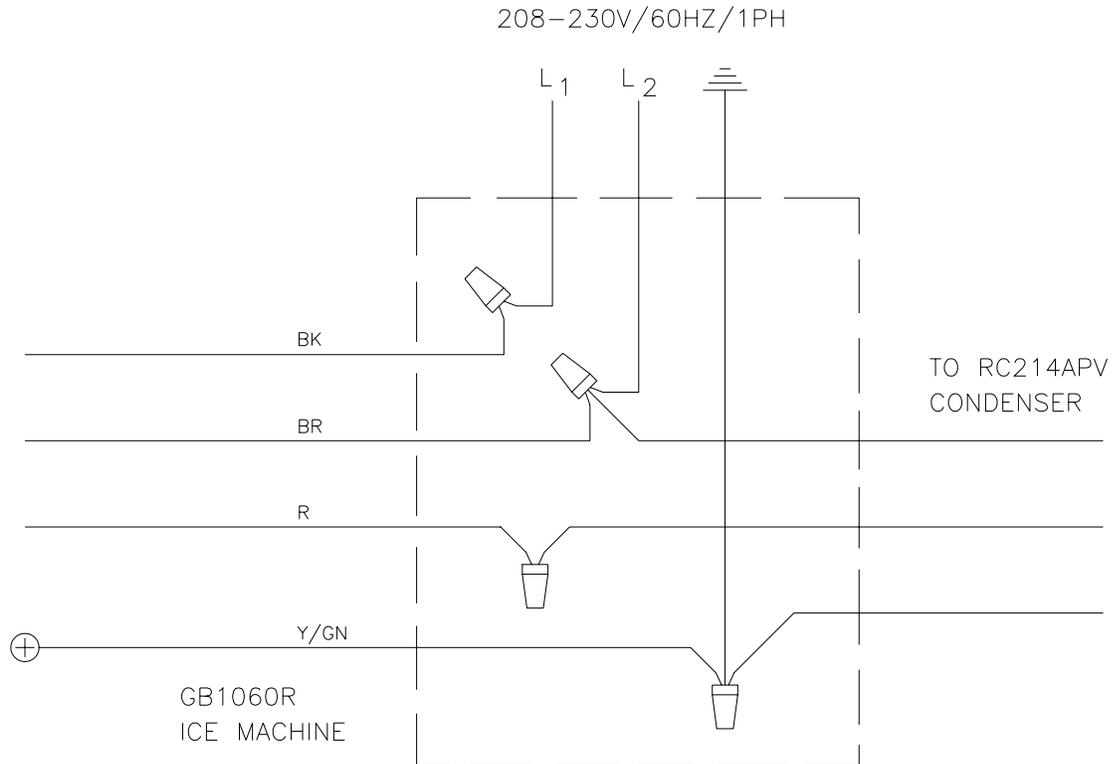


NOTE: The compressor will start immediately when power is applied, **regardless of the "ON-OFF" or the "MAKE ICE-CLEAN" switch positions**, if the low-side pressure is at or above the pump-down controller cut-in setting and the HIGH-PRESSURE CUTOUT is not open. Be sure that the compressor stops when the low-side pressure is between 5 and 15 psig.

CAUTIONS

1. Try to keep the compressor warmer than the condenser. In most installations, the ice maker runs enough so that residual motor heat minimizes liquid migration to the crankcase. If the ice maker is in a cool location, or if it will be OFF for extended periods, a crankcase heater should be installed.
2. Avoid placing the condenser in the exhaust air stream of other equipment or within a distance equal to the width of the condenser from a wall or another piece of equipment. Stay away from kitchen exhaust fans to prevent grease accumulation on the fins. Use a curb, which extends above the deepest expected pond in the condenser area of the roof.

ELECTRICAL INFORMATION



REMOVING FROM SERVICE

When the ICE MAKER is determined to be no longer useable please be sure that it is rendered safe for storage or disposal. All applicable recycling measures should be exercised to avoid injury and harm to the environment.

The manufacturer and/or seller is not responsible for any harm to people, animals, property, and the environment caused by incorrect installation and/or disposal.