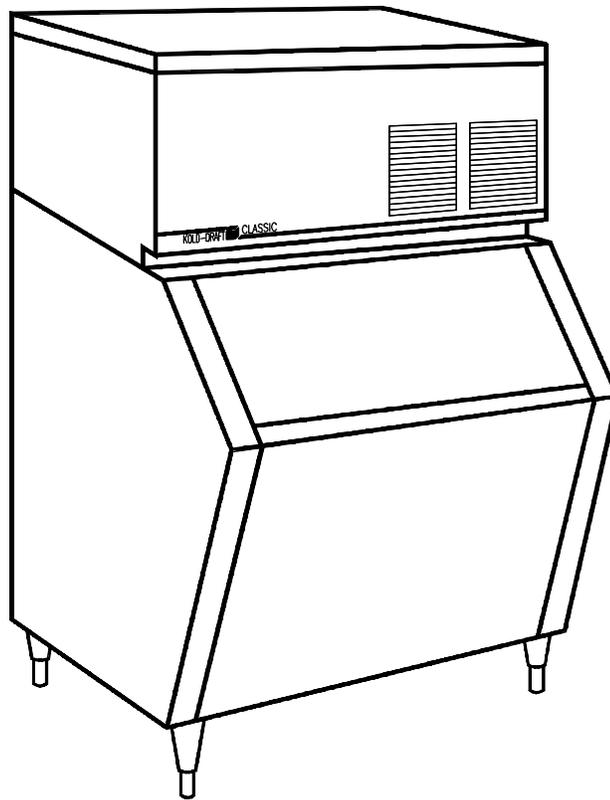


KOLD-DRAFT  **CLASSIC**

**GB450R GT550R
GB650R
GB1250R**

Precharged Remote Air-Cooled Condenser Installation Instructions



® KOLD-DRAFT 
Ice Machine Products

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A Tradition of Excellence In Ice Equipment.

INSTALLATION AND OPERATION INSTRUCTIONS FOR KOLD-DRAFT® CLASSIC® GB SERIES 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.

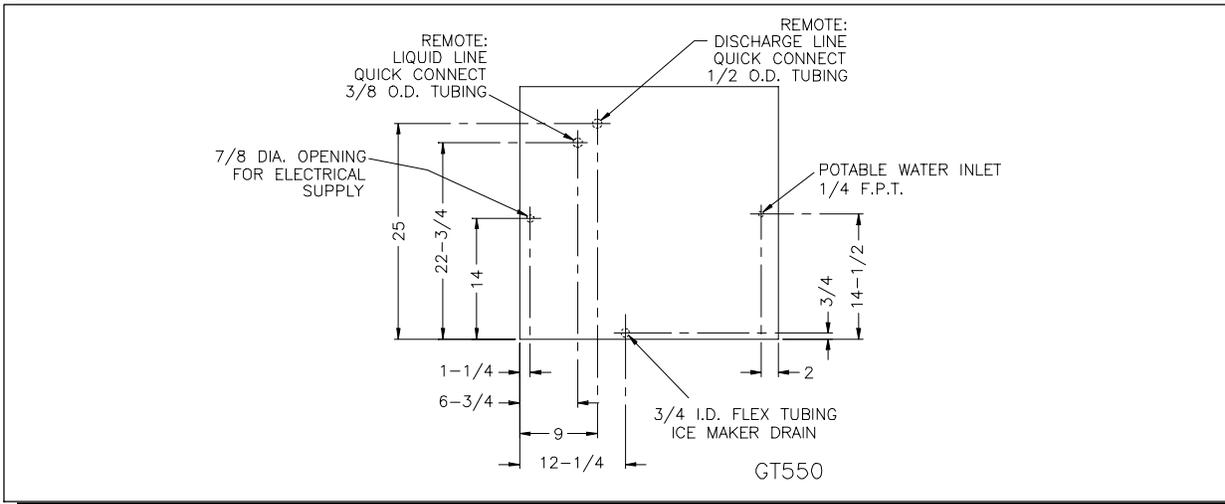
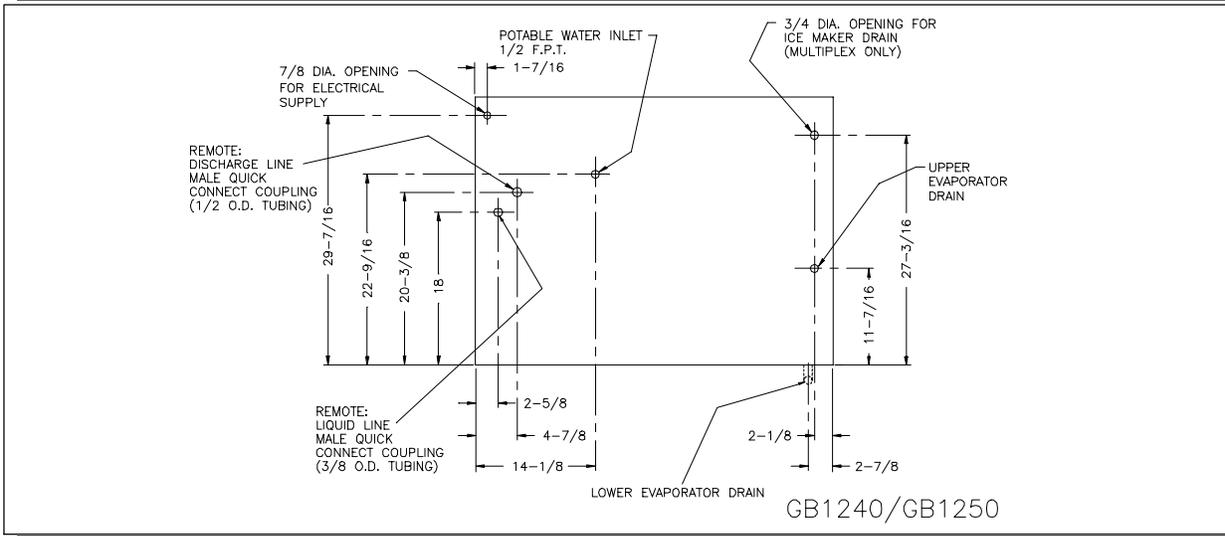
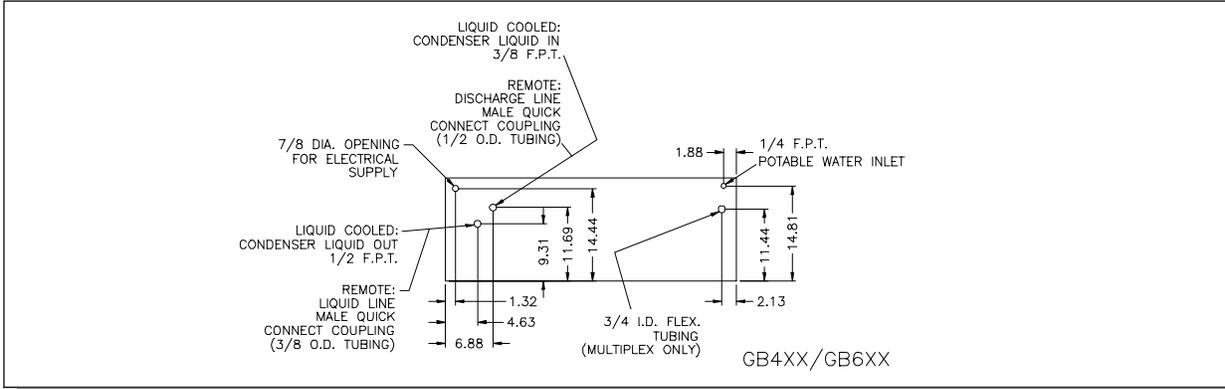
INSTALLATION

1. Uncrate the condenser and install the mounting legs. Be sure to install the leg stabilizer between the 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 the roof or wall 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 a separate 208-230 volt, 60 Hz, single phase power supply which complies with all applicable code requirements. The system is designed for continuous fan motor operation. If desired, a condenser fan cycling control may be installed to stop the fan during cuber off-cycles. Suggested pressure calibrations are approx. 250 psig ON/220 psig OFF. **CAUTION:** For multiple-circuit installations, a separate pressure control must be installed on each circuit, and all of the controls must be parallel-wired so that all controls must be open to stop the fan.

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

In cold weather operation, the liquid return line (3/8") may sweat or frost. If this is objectionable, insulation may be installed on the liquid line inside the building.

INSTALLER NOTE: There is no electrical interconnection provision in "R" Models for the condenser fan.

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 models from the factory carry a minimal charge and will likely require an additional refrigerant charge to accommodate all condenser ambient temperatures and/or the volume potentially contained in refrigerant lines and condensers. There is a label on the receiver that indicates factory charge and the maximum charge, along with a space to write in the total system charge. Ice makers are provided with re-sealable refrigerant line connection couplings.

All 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, and they require a separate electrical supply.

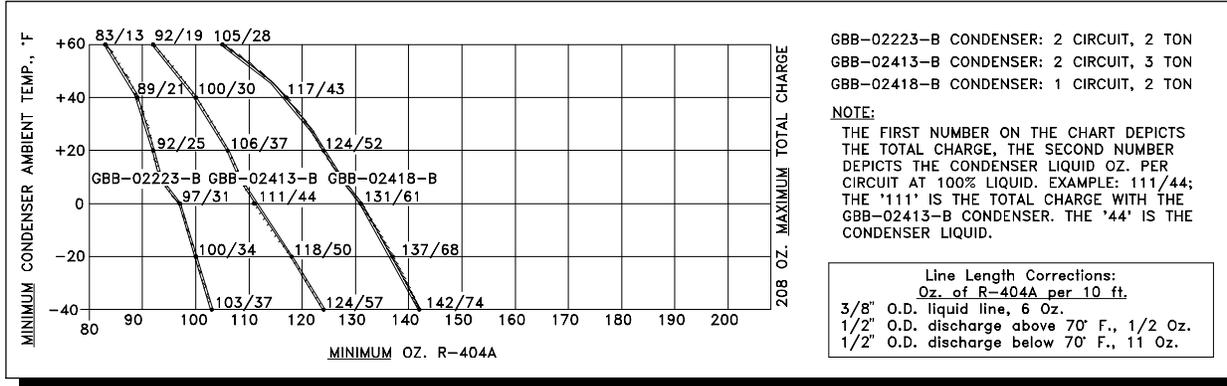
Other operating condition requirements:

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

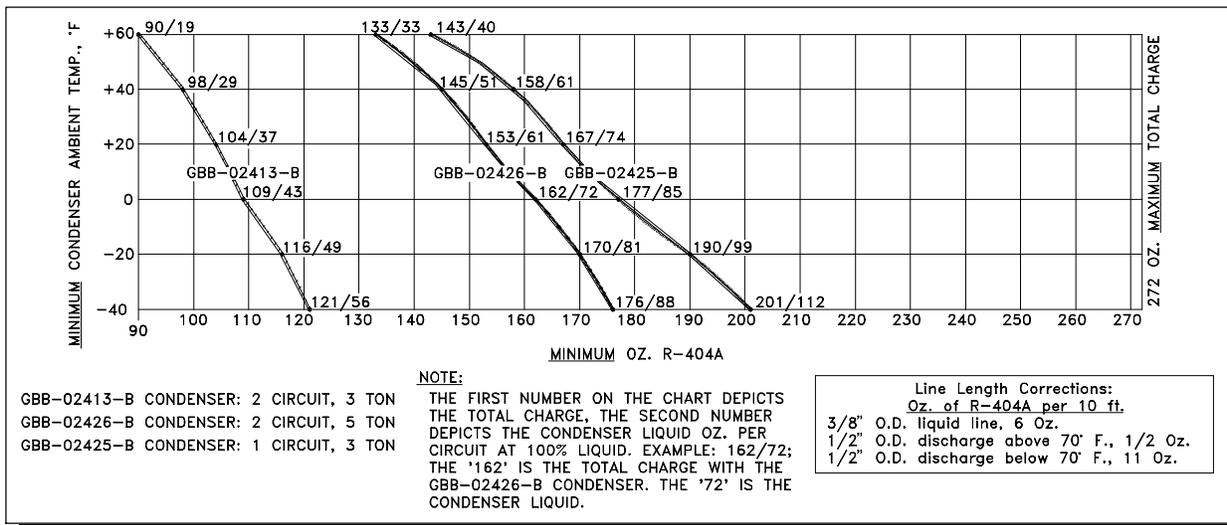
Remote condenser ambient air temperature: SEE CHART BELOW

PART NUMBER	CONFIGURATION	FAN MOTOR RPM, HP, FLA	NORMAL AMBIENT APPLICATION (UNDER 110° F.)	HIGH AMBIENT APPLICATION (OVER 110° F.)
GBB-02223-B	TWO CIRCUIT 2 TON	1075, 1/4, 2	GB454 GT550	
GBB-02413-B	TWO CIRCUIT 3 TON	1075, 1/4, 2	GB650	GB454 GT550 GB650
GBB-02425-B	SINGLE CIRCUIT 3 TON	1075, 1/4, 2		GB1250
GBB-02426-B	TWO CIRCUIT 5 TON	1075, 1/3, 3.5	GB1250	

Kold-Draft® Remote Condenser *Single* Evaporator Cuber Charging Requirements



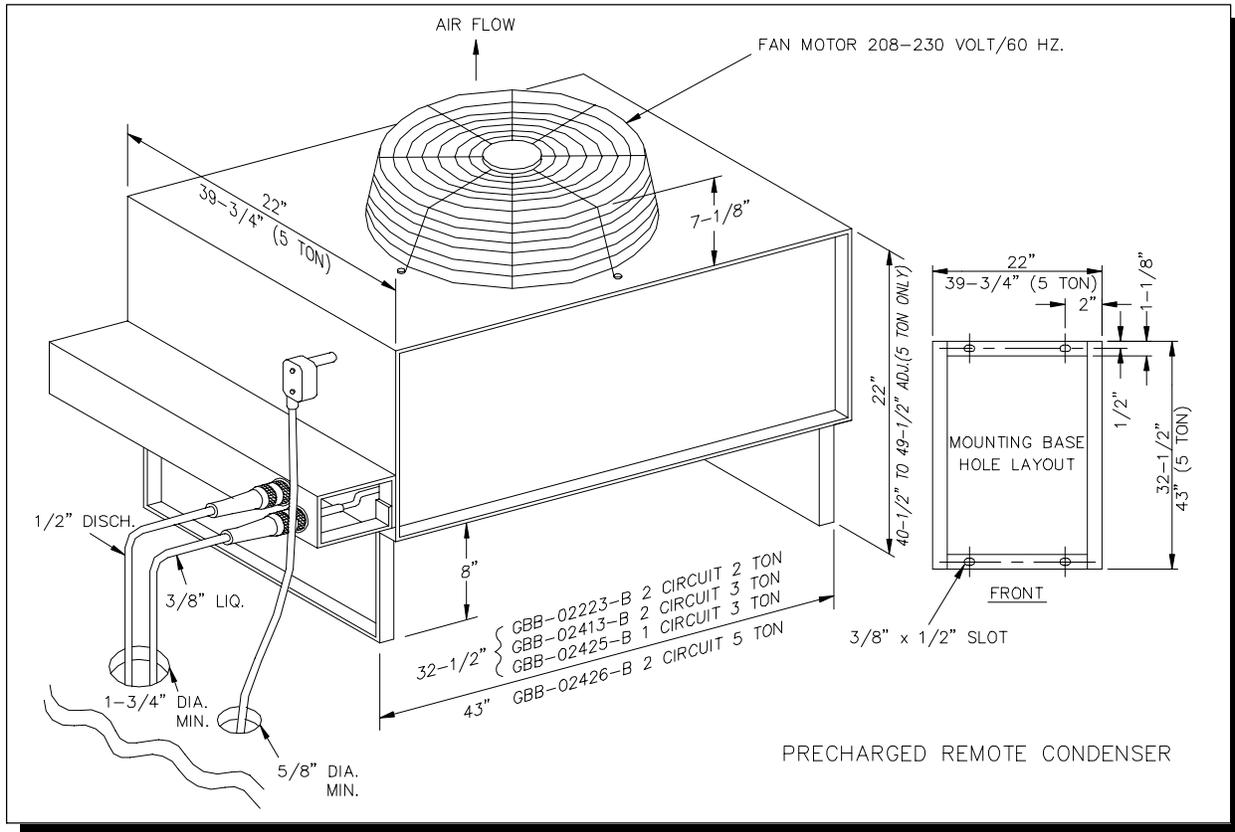
Kold-Draft® Remote Condenser *Dual* Evaporator Cuber Charging Requirements



- ◆ Charts based on 30 ft. of 1/2" O.D. discharge (15 ft. exposed to ambient temperature under 70° F.) and 30 ft. of 3/8" O.D. liquid return lines, at 20° F., T.D.
- ◆ **Lines over 50 ft. are not recommended.**
- ◆ Minimum Condenser Height: Condenser must be installed above refrigerant line quick connects at rear of ice machine. No part of the refrigerant lines, between the cuber and the condenser, should fall below this point except for a trap directly behind cuber.
- ◆ For Condensers other than **Kold-Draft®**, the installer must determine the condenser liquid volume at minimum operating temperature.
 - For *Single* Evaporator Cubers, the basic charge is 1-3/4 lbs. To this add the condenser liquid volume calculation and the line charge calculation from Line Length Correction Chart for the minimum total charge.
 - For *Dual* Evaporator Cubers, the basic charge is 3 lbs. To this add the condenser liquid volume calculation and the line charge calculation from the Line Length Correction Chart for the minimum total charge.

CAUTION:

- ◆ RISK OF PROPERTY DAMAGE, EQUIPMENT FAILURE, OR FIRE.
- ◆ Failure to comply with all installation specifications and instructions may cause erratic operation and the risk of damage or fire.



REFRIGERANT CHARGE, Oz. (R-404A)	MODEL NUMBER			
	GB454R	GB650R	GB1250R	GT550R
Factory:	84	84	112	84
Maximum:	208	208	272	208

CAUTION: REFRIGERANT CHARGES MUST BE ACCURATELY WEIGHED.

NOTE: The compressor will start immediately when power is applied, **regardless of the "ICE-OFF-WASH" switch position**, if the low-side pressure is at or above the pump-down controller cut-in setting. Disconnect the BLUE contactor coil wire for initial warm-up period. 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 will be OFF for extended periods, a crankcase heater must be used (All Models include a Factory-installed crankcase heater).
2. Avoid placing the condenser in the exhaust air stream of other roof-top 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. A 3" pond can cut air flow in half if a curb is not used.