

Instructions

Line Set Routing and Installation

Tubing: The tubing consists of three insulated soft copper tubes. They are: the 3/8" OD liquid tube; the 1/2" OD vapor tube and the 3/4" OD suction tube.

Check head and condensing unit, if neither have quick connects, use tubing as is. If one or both do, obtain kit KTE6 to add quick connects to the line set.

Recommendations: In many cases it is easier to position the tubing inside the building first, then feed the outside portion through the tubing passage (pitch pot). Installation of tubing will be easier if the suction line is run first, followed by the liquid and vapor lines. Use of two persons is suggested to prevent kinking of the tubing, long runs may require three people.

- Allow enough tubing to make large radius bends from the roof passage to the condensing unit.
- Do NOT leave excess tubing on the roof. If a trap must be installed, the suction line tubing must be cut apart to install it.
- Tape the ends of the vapor and liquid line tubes together along with the interconnecting wire. Extend the end of the interconnecting wire about 2 feet beyond the end of the precharged tubes and then tape it back onto the tubes.
- Route the three tubes and the wire from the roof, or other entrance, to the ice making section's planned position. Avoid uncoiling and recoiling the tubing, as that can lead to kinks.
- Support long runs of tubing with hangers.
- Repair any tears in the tubing insulation, especially those on the suction line that are inside the building.
- Excess tubing must be removed from run.
- Installations with greater than 20 feet of vertical lift between ice machine and the compressor require a suction line trap.

Important: The suction line requires careful handling and large radius bends to prevent kinking. Extreme care is required if pitch pocket size requires tight tube bends.

Connect Refrigeration

Requires brazing, steps must be performed by an EPA certified type II or higher technician.

At Head:

1. Remove protective plugs from all three connections and vent the nitrogen from the ice machine.
2. Route each of the three tubes to its connection.
3. Attach a refrigeration hose to the vapor line access valve so the valve is OPEN.
4. Clean tubing ends and position into the couplings.

At Condensing Unit

1. Confirm ball valves are fully **closed**.
2. Remove protective plugs from all three connections.
3. Remove caps from access valve connections.
4. Remove valve cores from all 3 access valves.
5. Connect refrigeration hoses to access valves.

6. Connect dry nitrogen source to liquid and vapor connections.
7. After shortening tubing to correct length, clean ends and insert them into valve stubs.

Note: Be sure tube and stubs are round, dress with swage tool if needed.

8. Add heat sink material to brass part of ball valve.
9. Open nitrogen and flow 1 psi nitrogen into liquid line tube and braze the liquid line, vapor line and suction line tubes to the valve stubs.

At Head

1. With nitrogen flowing from condensing unit, braze the liquid, vapor and suction line connections.
2. Remove refrigeration hose from head.

At Condensing Unit

1. Shut off nitrogen and disconnect from system.
2. Reinstall valve cores in all 3 access valves.
3. Connect vacuum pump to all three access valves and evacuate the tubing and head to at least a 300 micron level.
4. Remove vacuum pump and add R-404A vapor to all three tubes to provide a positive pressure.
5. Leak check the braze connections and repair any leaks.
6. Remove refrigeration hoses and return valve caps to valves.
7. Open all three ball valves to full open.
8. Remove heat sink material.

Note: The full refrigerant charge is contained in the receiver.

Wrap insulation around suction line tubing at head. Be sure there are no air gaps in the insulation and the tube is fully covered up to the head.

