



HOSHIZAKI CARE TECH-TIPS

Danny Moore
Editor

Hoshizaki America, Inc.
618 Hwy. 74 South
Peachtree City, GA 30269
Care Facsimile: (800) 843-1056

Volume 111
November 10, 1994

Remote Installations

A remote ice machine application offers benefits to the customer of less noise, increased production and reduced heat output at the storage area. An improper installation, however, will have the opposite effect, due to an excessive number of service problems.

It is important to survey the site carefully before installing a remote unit. Find the best location for the remote condenser which provides good air flow and the shortest line run possible. The ideal site will not be visible from the "store front", will have adequate ventilation and hopefully be blocked from prevailing winter winds.

Remote lines have limitations that must be observed. The maximum length is 100 equivalent feet from the unit to the condenser. The maximum height above the unit is 33 feet. The maximum distance with the condenser below the unit is 10 feet. Exceeding these limitations will adversely influence production and could affect the warranty.

Hoshizaki provides 3 lengths of precharged line sets; 20 feet, 35 feet and 55 feet. a quick connect kit is also available if you desire to make your own line set. The kit is Hoshizaki part number (OS Quick) and includes 4 Aeroquip female connectors and various reducer couplings which make it universal. All refrigerant lines must be installed using proper refrigerant piping practices.

When a KM-500, KM-630, or F-1000MRE is installed with a line set in excess of 66 ft. the entire line-set must be increased to a 3/8" liquid line and 1/2" discharge line. In this case you must add 21 oz. of the proper refrigerant plus 1/2 oz. per foot over 66 ft. up to maximum of 100 ft. On other remote units you need only add 1/2 oz. refrigerant per ft. over 66 ft. of line set length.

If you make adjustments to the line set (shorten or lengthen) the process is as follows: Before you connect the Aeroquip fittings, 1. Evacuate(recover) the holding charge. 2. Cut or lengthen as needed and braze connections. 3. Pressurize the lines and leak check all braze joints. 4. Evacuate (recover) and recharge the lines with 15 to 30 psi refrigerant gas pressure. If the lines exceed 66 ft. add the additional refrigerant at this time. Once this process is complete you can tighten the quick connect fittings on to the unit and condenser. To make the Aeroquip connection: 1. Lubricate the threads and O-ring with clean refrigerant oil. 2. Tighten the female connector until it bottoms out. 3. Turn an additional 1/4 turn to assure a good brass to brass seal. 4. Leak check the joints with soap bubbles or an electronic leak detector.

Make sure to mark any additional charge added to the name plate for future reference.

The electrical circuit for the remote condenser fan must be connected to the unit head in the appropriate junction box. It is not acceptable to install a separate 115V circuit to supply power to the condenser.

Some local codes require a disconnect at the condenser. If this is required, the disconnect should be marked to warn against cutting the condenser off while the ice machine is in service.

The condenser should be secured on rooftop installations to a treated, 4X4 or larger, roof curb. Care should also be taken to assure that the exhaust of another unit is not blowing directly into the intake of the URC unit.

Following these recommendations will help to assure proper remote installations.

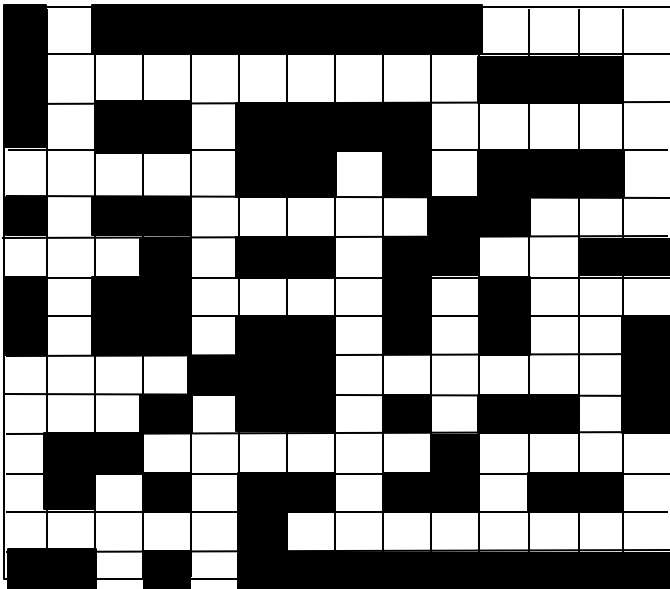
Large Bin Applications

The largest bin produced by Hoshizaki America, Inc. is the B-900. Many high capacity applications require larger bins. These bins are available in various shapes and sizes from other bin manufacturers. We found that under certain situations, a larger bin/cuber application will require different placement of the thermostatic bin control bulbs. This is due to the fact that most larger bins do not have an upper deflector which will direct the ice flow against the control allowing proper shut down of the unit. Also, on KM-2000 or KM-2400 units which drop 46 lbs. of ice, sometimes the last harvest will back-up into the ice drop zone without touching the bin control bulb. This will occur because the height of the ice in the bin before shutoff does not allow space for the 46 lbs. of ice to flow out. In either case the result is a possible freeze-up.

To remedy this situation, we recommend installing a bin control extension bracket (part # 3A0408-01) on all cuber applications with bins larger than the b_900. This bracket extension may also be used in rare cases when stacked units or the KM-2000/2400 is used on a B-900 application, allowing more space for the ice to flow into the bin to eliminate ice back-up.

The extension bracket is available through your local Distribution Parts Department.

Here is a small test to check your Hoshizaki Knowledge.



Across

2. The KM-250 B is a _____ contained cuber.
4. Means "Star Peninsula"
7. A complete sequence of operation.
8. Removes contaminants
10. Thermostatic Expansion _____
12. Ice storage container.
13. KM pump motor wire color used for pump out.
14. Reservoir
16. A National organization which rates refrigeration equipment.
18. The evaporator compartment wall are _____filled.
20. A _____ condenser releases heat outside.
21. The _____ model contains only a fan, coil and CPR.
23. All Km models utilize a voltage protection _____.
24. A _____ pressure switch protects against excessive head pressure.
26. Calcium causes this.
28. KM cube is a _____ shape.

Down

1. The _____ monitors suction line temperature.
 3. Ice form in _____.
 5. Ice falls in _____.
 6. Hard water
 9. Has anti-magnetic freezing surface
 11. The _____ switch initiates harvest.
 15. The KM _____ out cleans the reservoir.
 17. Heat transfer medium (abbreviation).
 18. The F/DCM's utilize _____ for control voltage protection.
 19. KM control voltage is 12V ____ ____.
 22. Can't make ice without it.
 24. R-134A is classified a _____.
 25. The compressor discharge line is _____ during operation.
 27. Modular, air-cooled, self-contained, model (abbreviation).
-
-

Certified Approved

The November 14 deadline is fast approaching.

If you took the initiative to become RSES certified in proper refrigerant usage early in the game, we have good news.

The EPA has agreed to grandfather the early RSES program and approve it for levels I and II which will cover everything except motor vehicles and low-pressure equipment.

A total of 15 voluntary certification programs were grandfathered in. See the November 7 edition of AC, H & R News or contact your certification agency for more information.

COMING NEXT MONTH...

1. Thermistor Mounting ...
2. Non-OEM Condenser Application...
3. Puzzled?? We have the answers!... Volume 111 page 2