



HOSHIZAKI TECHNICAL SUPPORT TECH-TIPS

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THE 100th EDITION OF TECH TIPS

It is with great pleasure that we announce the 100th issue of the Hoshizaki Technical support Tech Tips. Since 1994 the monthly Tech Tip newsletter has provided updates, technical information and new product information. To “celebrate” this milestone in the next few months we will bring back some of the older articles, update and revise them and include them in future Tech Tip volumes. This will be an excellent opportunity to review some of the basic information. For a look at the available Tech Tip Volumes please visit our website at www.hoshizaki.com and choose Tech Tips / [Index of Tech Tip Issues](#). While at the site, if you are not registered, sign up for Hosi+plus.

REMOTE UNIT INSTALLATION

A remote ice machine application offers benefits to the end user, less noise, increased production and reduction of heat into the working environment. In this article, you will find tips for proper remote installation.

First, find the best location for the remote condenser which provides good air flow and the shortest line run possible. Assure that wherever the condenser is placed, it is not in an area with poor airflow or where another condenser may be blowing directly into it. Hoshizaki has specifications that must be observed in order for the unit to operate properly. The maximum line set length is 100 feet from the unit to the condenser. The maximum height that is allowed vertically is 33 feet. The maximum distance the condenser may be located below the unit is 10 feet. Not following

these guidelines can cause problems such as low production, and premature component failure. These failures would not be covered under warranty.

Hoshizaki currently has 3 lengths of pre-charged line sets; 20 feet, 35 feet and 55 feet. We also have a kit, which can be used when making your own line sets in the field. The kit is Hoshizaki part number (OS-Quick) and includes 4 Aeroquip female connectors and reducing couplings which make it universal. All refrigerant lines should be installed using proper refrigerant piping practices. Each line of the line set should be individually insulated through out the length of the line set. This will reduce heat transfer from the discharge & liquid lines as well as the ambient around the lines.

When a KM-500, KM-630, or F-1001MRF/H 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 16.5 oz. of R-404a plus .4 oz. per foot over 66 ft. up to maximum of 100 ft. On other remote units you need only add .4 oz. refrigerant per ft. over 66 ft. of line set length. (If you are dealing with an older R-502 or R-22 machine then see the appropriate Tech Spec for the amounts of refrigerants to be added as well as the additional amounts per foot).

When making 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 and recharge the lines with 15 to 30 psi refrigerant gas pressure. Once this process is complete you can tighten the quick connect fittings on to the unit and condenser using the procedure below. If the lines exceed 66 ft. add the additional refrigerant at this time.

To make the Aero-quip connection:

1. Lubricate the threads and O-ring with clean dry refrigerant oil.
2. Tighten the female connector until it bottoms out.
3. Turn an additional 1/4 to 1/2 turn to assure a good brass to brass seal. You should use a back up wrench when possible to avoid twisting the copper tubing
4. Leak check the joints with soap bubbles or an electronic leak detector. Make sure to mark any additional charge that was added (for longer line sets) to the nameplate 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. Treated, 4X4's or a roof curb should be used to mount the condenser securely on rooftop installations.

WARRANTY LABOR CLAIM FORMS

We have found a couple of instances where the warranty labor claim form number does not match the number on the parts tags at the bottom of the

claim form. It is important that these two numbers are the same so that our Quality Assurance department can track and analyze warranty repairs and match parts. When filling out warranty claim forms please make sure that the printed number at the top right hand corner of the claim matches the number on all four parts tags. If you find the claim form is printed incorrectly please destroy that claim and use the next one in the book.

Also when completing multiple claims at one time make sure that the parts tags are not crossed from one claim form to the other. This may result in a delayed payment for the labor claim as well as the parts credit. The correct parts and tags must match the claim.

In the rare event that you have more than four parts replaced at one time simply use a second claim form noting in the body of the primary claim that a second claim form is being used. Use the 1st consecutive number as the primary reference, mark out the claim number on the second page, and write the primary number in its place as well as in the body of the second claim form as a note. You will also need to change the numbers on the part tags at the bottom of the second claim form to match the primary number and replace the A,B,C,D tag reference with E,F,G,H respectively.

For more information on completing Warranty Labor Claim Forms see Tech Tip Vol. 189. If you need additional forms please contact your local distributor.

COMING NEXT MONTH...

1. Moving a Remote Unit