



HOSHIZAKI TECHNICAL SUPPORT TECH -TIPS

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KM-MODEL NUMBER NOMENCLATURE

Hoshizaki is in the process of introducing many new models. I thought this would be a good time for us to review our model number nomenclature. The nameplates can be found on the rear left corner of the machine and also to the left of the compressor in the compressor compartment. The following chart will help you understand what each letter or number in our ice machine model numbers mean.

UNIT TYPE	KM	1300	S	A	F	-E
<ul style="list-style-type: none"> KML - Low Profile Crescent Cuber KM - Crescent Cuber F - Flaker DCM - Dispenser Cubelet Maker DB - Dispenser Bin B - Bin DM - Countertop Dispenser IM - Square Cuber 						
PRODUCTION Approximate production/24 Hours @70°F Air/50°F Water						
UNIT STYLE <ul style="list-style-type: none"> M - Modular S - Stackable B - Self contained with bin N - Narrow style 						
CONDENSER STYLE <ul style="list-style-type: none"> A - Air cooled W - Water-cooled R - Remote air cooled L - Low side 						
GENERATION <ul style="list-style-type: none"> B - R-502 refrigerant unit (except KM-2400SRB3 R-22) E - R-22 refrigerant unit (F-250BAE / IM-51BAE R-134a) F - R-404a refrigerant unit H - Curved front exterior panels (R-404a) 						
SPECIAL MODEL DESIGNATION -E - European						

-22- R-22 version of F generation
-50 – 50 Hz.

KM-1300NRF

Last month we introduced the KM-1300NRF with a capacitive proximity sensor. This model is designed to fit and operate on the larger multi-head drink dispensers.

The “N” series is only manufactured in a remote system and uses the same water circuit and refrigeration circuit as the KM-1300SRF. Other than the 42-inch width and the new style of bin control you will not see much difference in these two units.

WATER REGULATING VALVES

In Volume 166 we discussed water-cooled machines and their operation.

We have now changed suppliers of the water-regulating valve on our water-cooled machines. The valve we are now using is made by Johnson Controls. The major difference in the two valves is the way they are adjusted.

To properly adjust the valve we want to set the outlet water temp around 105°. (Reference the adjustment chart in the Tech Specs for exact settings.) This allows us to set the head pressure without installing a gauge on the high side of the system. Water-cooled machines have small critical charges so any loss of refrigerant, such as when a high-side hose is removed, can have a large effect on the operation of the unit.

To determine the adjustment direction, we must first identify the valve type.

The previous valve (old style) is not painted but the top portion of the valve is gold. The new valve is gray on the top half and has a sticker identifying it as a Johnson Control valve.

With the old style valve, when you turn the adjustment screw clockwise (CW) this will reduce the water flow, raising the head pressure and outlet water temperature. counter-clockwise (CCW) would reduce the head pressure and outlet water temperature.

To adjust the new valve, you turn the screw CCW to reduce water flow, which will raise the head pressure and water temperature and CW will increase water flow. This in turn reduces head pressure and water temperature.

SERVICE Q & A

Question: I have a KM ice machine that has formed large blocks of ice in the Evaporator. What is the best way to clear the ice?

Answer by Rodd Burger: Our old friend Barney Fife, would take a great big ax or ice pick, and go POW, POW, POW. We have even seen situations where a hammer and screwdriver were used. Obviously these are not good methods to thaw an evaporator. Though they can be effective in removing ice, these methods usually result in serious damage to the evaporator and loss of refrigerant.

Now that we have talked about ways ***not*** to clear a freeze up, lets look at a couple of less destructive ways to accomplish this task.

The best method will depend on what you have at your disposal. One of the best ways is if you have access to a hot water supply. You will find a mop sink is an excellent source for hot water. Attach a hose to the water supply and run water directly into the reservoir. You can then put the machine in the wash position and let the pump run. It will be necessary to adjust the flow

of water coming into the sump so as not to overflow hot water into the bin. The constant flow of hot water in the sump will insure that the sump stays full of water as well as preventing the sump water from becoming chilled. Using this method you may be able to run another service call while the machine is being defrosted.

You can also remove the ice by just spraying hot water directly onto the frozen portions of the evaporator. This method requires that you remain in front of the machine the entire time, but usually is a little quicker since you can spray the water directly to the areas needed.

You can also turn the machine into wash and let the pump re-circulate water over the frozen evaporator. I would not recommend this however, if you plan to leave the location. There are a couple of concerns. The worst problem could be that the sump tank could run dry due to water being diverted into the bin by the ice build up. This could result in damage to the pump. You will also find that the water will become extremely cold, reducing the effectiveness.

Be careful when using any of these methods to prevent large chunks of ice from falling on and damaging the cube guides.

As you know our machine starts in the harvest cycle. I have seen technicians turning the machine on and off to try and clear the ice. We do not recommend that the unit be continually recycled to try and clear the ice. This method is not as effective as the others, and could cause problems with the compressor.

The most important thing, now that the ice is thawed, is to find the cause of the freeze up. You can learn more about freeze ups in previous volumes of the Tech Tips 103 and 128. You will also find useful information including a freeze up checklist under “Diagnosing water problems” in the Tech Specs. Following the checklist will help you pinpoint the cause of most freeze-up problems.

COMING NEXT MONTH...

1. Introducing the KM-1800SAH1/3

2. Reach-In Nomenclature

3. Service Q & A

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