



HOSHIZAKI TECHNICAL SUPPORT TECH -TIPS

Danny Moore
Writer/Editor

Hoshizaki America, Inc.
618 Hwy. 74 South
Peachtree City, GA 30269

Volume 154
August 25, 1998

Ph: (800) 233-1940 Fax: (800) 843-1056 E-mail: techsupport@hoshizaki.com

YEAR 2000 (Y2K) MILLENNIUM BUG

Good news!! If you own or service a Hoshizaki ice machine, you have no need to worry about Y2K as far as your Hoshizaki is concerned. The control board micro-chip does not contain date codes that will be effected by the coming of the year 2000.

As for the factory, our computer guru's are working feverishly to assure that no problems occur with any of our computer systems. So far, so good. We will definitely be open for business on Monday morning January 3, 2000.

WHY START THE COMP. IN HARVEST?

Over the years, you may have heard ice machine manufacturers say that you should never start a compressor in the harvest cycle. They say you could damage a compressor by dumping hot gas into the suction line on startup. At Hoshizaki, we have proved that statement to be a myth. For over thirty years, Hoshizaki has produced cuber ice makers that start in the harvest cycle. We started this practice on our first "IM" style cubers. Not only does it work, it provides us with big benefits.

By starting the compressor with the hot gas valve open, we get a "no-load" startup. This provides quick and easy starting of the compressor because it eliminates the stress of starting against high head pressures. The result is less starting amperage, better efficiency, and longer life out of the compressor.

If you think about how a CSCR motor starts, this

makes perfect sense. At start up, a CSCR motor will pull high starting amps until it reaches about 80% of it's running speed. At that point, the start relay is energized due to the back EMF produced by the start winding. When the start relay drops out the start capacitor, the amp draw drops considerably. If the compressor motor reaches speed quicker due to no load, the starting efficiency is increased.

Starting the compressor in the harvest cycle also allows us to clear the evaporator surface of any ice left from the previous cycle. This eliminates the possibility of a freeze up if someone shuts the unit off and back on quickly. It also allows time to refill the water reservoir for the next freeze cycle. If the reservoir is already full, the overflow flush will help to remove additional minerals from the reservoir. These benefits add up to provide increased product value.

You may have noticed that some of our competitors are now starting the compressor with the hot gas valve open. Could this be because they have recognized these important benefits?

COUNTERTOP DISPENSER APPLICATIONS.

Hoshizaki has one model of counter top ice dispenser in the product lineup. The model DM-180A is a 30 inch wide counter top, manual fill, ice dispenser. An optional top kit is available to allow an ice maker to be installed for automatic refill of the DM-180A. There are two different top kits. One is

designed for use when mounting the 30" KML. The other, allows mounting of any 22" KM model. Of course, mounting a unit on top eliminates the access for manually filling the dispenser. A standard ABS top cover comes with the DM-180A to cover the storage bin if it is used in a manual fill application.

The dispenser was designed to dispense ice only. It has an approximate storage capacity of 180 lbs. A cold plate is not included and it is not adaptable for a fountain drink system. There is however, an optional water valve kit which can be installed next to the spout for drinking water.

The DM-180A was engineered specifically to dispense the Hoshizaki KM cube. It will easily dispense our competitors cubes as well. There is a flow restrictor installed in the spout. This restrictor reduces the dispense rate for smaller cubes or for filling smaller cups. To increase the dispense rate for filling pitchers, carafes, or large cups, remove the flow restrictor. It is important to remember that this dispenser is not designed to dispense cubelet or nugget style ice. This type of ice tends to hug the bin liner walls and not move easily to the dispense spout.

A front mounted, push-button controls the dispenser. The auger gear-drive assembly is similar to that of the DB hotel dispenser. This assembly has proven to be reliable under any load conditions. The drive chain requires minimal maintenance. Once a year, simply add a few drops of oil to the chain and adjust the tension to approximately 3/8th inch deflection.

The DM-180A operates on a 115volt circuit. The amp draw is 1.5 amps. This should be a separate circuit from the ice machine. A separate drain is also recommended to assure proper drainage.

SERVICE Q & A

Question: Recently, I was advised to install a bin control bracket extension on an S model application. What is the purpose of this extension?

Answer: by Danny Moore

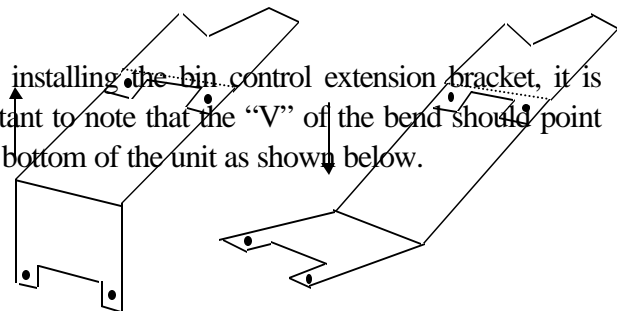
A bin control bracket extension is included in the accessory bag for every "S" model. This piece is designed to lower the bin control bulb or bulbs in the case of two stacked units, down into the bin approximately 5 inches. This part serves a specific purpose.

At first thought, it seems that the extension bracket lowers the storage capacity in the ice bin. What is actually occurring is that you are lowering the cut off point for the ice machine. This lowers the ice pyramid in the bin which is where ice contact with the bin control bulb occurs. Most of the time, when the unit shuts down, the ice on the evaporators will continue to fill the storage bin. This brings the ice level back up in the bin.

If you consider the ice drop weight per harvest of the "S" models, you will note that we produce a considerable amount of ice. The KM-1200 & 1600 models drop 30.9 lbs. per drop. The KM-2000 & 2400 models produce 46 lbs. per drop. If two units are stacked, the total ice drop weight could be either 61.8 lbs., 76.9 lbs., or 92 lbs.. This will depend on which model combination is stacked together.

Without the extension bracket this ice may back up into the ice drop zone and possibly cause a freeze up condition. By adding the extension bracket, you allow room for this large amount of ice to flow down into the bin.

When installing the bin control extension bracket, it is important to note that the "V" of the bend should point to the bottom of the unit as shown below.



Right.
Ice slides off easily.

Wrong.
Ice hangs up.

COMING NEXT MONTH...

1. KM-1300 M_F
2. Flaker Improvements
3. Control Board Tester
4. Service Q & A

Volume 154 Page 2