

**DO NOT REMOVE**  **DO NOT REMOVE**

# HOWE

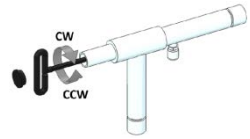
## Large Capacity Flaker

### Start & Adjust “Quick Step Guide”

The following is a “Quick Step Guide” to expedite four (4) *critical adjustments* of the new Howe Ice Flaker. The adjustments *always* need to be done at time of startup. When done properly, these adjustments will insure proper operation of this equipment and minimize costly call backs and optimize equipment up-time.



Refrigerant	Model #	Pressure Setting	Temperature Setting
<b>R-404A</b>	51-101	<b>28 psig</b>	-5°F/ -20°C
<b>R-22</b>	51-101	<b>20 psig</b>	-5F/ -20°C

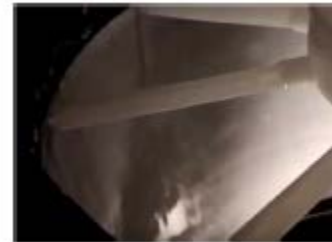


### Evaporator Pressure Regulator Adjustment

Suction temperature should be adjusted with use of an Evaporator Pressure Regulator (EPR). Models 51 - 101 Howe Flakers have an optimum suction temperature setting of between -5°F and -7°F. These optimum suction temperature settings are to be checked and maintained at the flaker evaporator suction connection. They can vary slightly due to the effects of water temperatures, water hardness, ambient air temperatures and ice quality requirements.



*Improperly adjusted TXV*



*Properly adjusted TXV*

### Thermal Expansion Valve Adjustment

Howe Flake Ice Equipment’s Thermal Expansion Valve (TXV) must be adjusted visually (by sight) to assure optimum ice quality and ice harvesting. ***Superheat settings are not a reliable method of adjusting TXV on Howe Flaker.*** Please note how ice appears in photo above for a properly adjusted TXV. An even layer of ice should form completely from top to bottom on the evaporator. If ice on the lower 1” to 4” of the evaporator looks different than the ice above it, this normally indicates the TXV is underfeeding and requires opening. ***Failure to make proper TXV adjustments may cause unwanted ice build-ups on the evaporator. Ice build-ups can lead to the destruction of critical components as well as the ice flaker if left operating incorrectly.***

Models 76 and 101 ice flakers have two (2) TXV’s. **If underfeeding condition referenced in the paragraph above exists on these “double circuit model units”, it is necessary to use two (2) separate refrigeration gauges to balance the TXV’s at the same identical pressure setting.** When one circuit appears to be underfeeding more than the other, it is necessary to open the TXV for

that circuit first, 1/8 – ¼ turn at a time, until it looks like the other circuit. Open both TXV's 1/8 – ¼ turn at a time, **equally and simultaneously**, until evidence of underfeeding evaporator is gone. **It will be necessary to wait 10 -15 minutes between adjustments to ensure that TXV's are balanced properly.** For more details, please refer to Howe's service and installation manual.

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### HEAT EXCHANGER INSTALLATION

Howe Corporation will ship a “loose” suction line heat exchanger with the purchase of your ice flaker. **Installation of this heat exchanger is required.** The heat exchanger should be installed within 4 feet of the flaker per Howe guidelines. Please see Howe installation and service manual for suggested piping diagram.

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230/1/60 Panel



460/3/60 Panel

### Hi-Amperage Overload Adjustment

The proper adjustment of Howe's hi-amperage overload device will ensure proper protection for the ice flaker. To set the overload device correctly, mark the location of the set screw before any adjustment is made. Using a small flathead screwdriver, gently and slowly turn counter-clockwise (left) until overcurrent LED on the control board illuminates. Turn screw clockwise (right) one (1) hash mark and stop. Press the reset button to start the machine again.

The 460V panel has two overload devices. The left device is for the drive motor and the right device is for the water pump. Both should be adjusted according to the full load amperage rating on their respective motors. Notice that the range scale is different for each overload device.




**260/1/60 Panel**



**460/3/60 Panel**

### Off-Delay Timer Adjustment

Under normal conditions (not during cleaning cycle), the off-delay timer should be adjusted to run approximately 4-6 minutes after the solenoid valve shuts off the refrigeration to the ice flaker. For proper adjustment, turn knob counter-clockwise (left) until it stops. Turn clockwise accordingly to desired setting.

For more complete information on how to adjust and maintain your Howe Flaker, please refer to the troubleshooting guide in the installation manual (*included with every ice machine*), or request the most current manual from [service@howecorp.com](mailto:service@howecorp.com) or visit our Howe-To videos at You Tube Link  on the Howe web page [www.howecorp.com](http://www.howecorp.com).