



Large Capacity Flaker Start & Adjust “Quick Step Guide”

The following is a “quick step guide” to expedite four (4) critical adjustments of your new Howe Ice Flaker. When done properly, these adjustments will insure proper operation of this equipment and minimize costly callbacks and or warranty claims.



EPR set too low

| Refrig. | Optimum Evaporator Pressure Settings | Temp. |
|---------|--------------------------------------|-------|
| R-404A | 51-201 MODELS 24 PSI | -10°F |
| R-22 | 51-201 MODELS 16.4 PSI | -10°F |

Above photos of gauges are examples based on R-404A refrigerant.



EPR set properly

Evaporator Pressure Regulator Adjustment

Suction temperature should be adjusted with use of an Evaporator Pressure Regulator (EPR). Models 51 - 201 Howe Flakers have an optimum suction temperature setting of between -7°F and -12°F. These optimum suction temperature settings are to be checked and maintained at the flaker evaporator suction connection(s). They can vary slightly due to the effects of water temperatures, water hardness, ambient air temperatures and ice quality requirements.



Improperly adjusted TXV

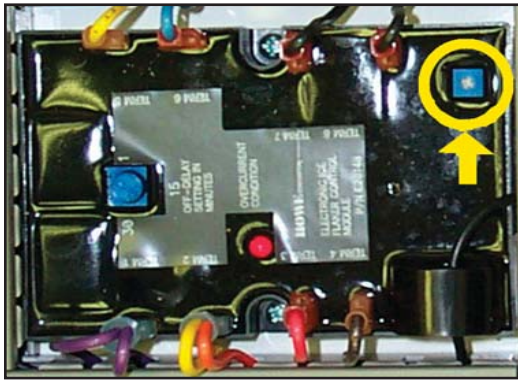


Properly adjusted TXV

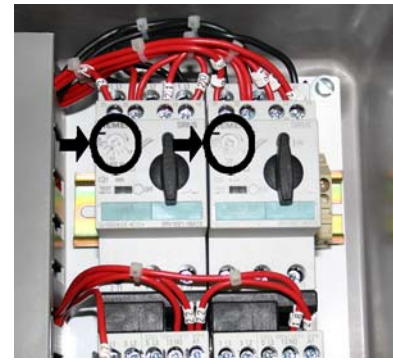
Thermal Expansion Valve Adjustment

Howe Flake Ice Equipment's Thermal Expansion Valves(s) (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 photos above for a properly adjusted TXV. An even layer of ice should form completely from top to bottom of the evaporator circuit(s) as shown in photo on right. If ice on the lower 1" - 8" of evaporator circuit(s) looks different than 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 in evaporator, damaging component parts, and void warranty.**

Models 76, 101 and 201 Flakers all have two (2) circuits and two (2) TXVs. However, most of these units are connected to one (1) condensing unit. **If underfeeding condition referenced in paragraph above exists on these "double circuit model units", it is necessary to use two (2) separate refrigeration gauges to balance the TXVs 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 - 1/4 turn at a time, until it looks like the other circuit. Then open both TXVs 1/8 - 1/4 turn at a time, **equally and simultaneously,** until evidence of underfeeding refrigerant is gone from the evaporator. **It is necessary to wait as much as 10 - 15 minutes between opening adjustments, to make sure TXVs are balanced properly.** For more complete details, please refer to section 11 of Howe's Service and Installation Manual.



control board in 230/1/60 panels

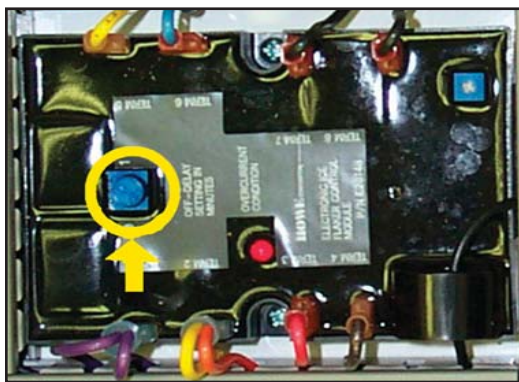


Overloads in 460/3/60 panel

Hi-Amperage Overload Adjustment

The proper adjustment of Howe's hi-amperage overload device will insure proper protection for the machine and help avoid nuisance service calls. To set the overload device correctly, mark location of the setscrew before adjustment is made, as a point of reference. Place a small Phillips head screwdriver in adjustment screw and slowly turn counter-clockwise (left) until overcurrent LED on control board illuminates. Then turn screw clockwise (right) 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, the right device is for the water pump. Both should be adjusted according to the full load amperage rating on their respective motors. *Notice the range scale is different for each overload device.*



control board in 230/1/60 panels



Timer in 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 2 minutes after solenoid valve shuts off the refrigeration to the ice flaker. For proper adjustment, turn knob counter-clockwise (left) all the way until it stops. Then turn clockwise (right) 1/8 turn and stop. *(30 minute setting is for clean cycle only).*

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 download the most current manual from our web site at www.howecorp.com (follow the link for parts & service).