



Crysalli

Beverage Systems

Technical Publications

Ice Bank Control (IBC) Conversion

CR082021

Ice Bank Control (IBC) Conversion

Removal of original mechanical Ice Bank Control (IBC)

1. Shut off water, power and CO2 to the Crysalli system
2. Remove lid from chiller
3. Remove white pipe stem to drain the water bath
4. Allow the ice bank to defrost completely
 - a. Defrosting the ice bank can take ~24 hours. Shut the power off the day before service
 - b. Warm water can be poured over ice bank to speed up the melting process or you can use a hairdryer to melt the ice bank.
 - c. **Do not use screwdriver, pick or sharp object to break ice bank**
5. Remove the screws and move the front/bulkhead panel to access electrical board. Remove the cover plate for the electrical box.
6. Next, remove the side panel to access existing ice bank control
 - a. For the CR-2 & CR-UCM2 series units you will access the electrical board through the rear panel or panel on the opposite side of the bulkhead panel.
7. Using needle nose pliers, remove terminal plugs from IBC1 (Fig 1.1 item a) & IBC2 (Fig 1.1 item b) (sparkling water systems)
 - a. For "still water only chillers" remove terminal plugs from A6 (Fig 1.2 item a) and D5 (Fig 1.2 item b)



Figure 1.1 S0068-U Control Board, new style

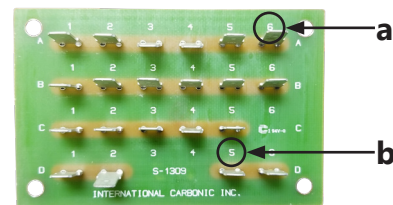


Figure 1.2 Control Board, still water only

8. Remove the ice bank control from mounting bracket
9. When the ice is completely melted from the evaporator, remove the ice bank bulb and bracket (Fig 1.3)
10. Now you can completely remove the ice bank control assembly from the Crysalli system



Figure 1.3 S0513-A Ice bank control, old style

Installation of new electronic Ice Bank Control (IBC)

1. The electronic ice bank control is programmed by Crysalli to the settings designed for the Crysalli water chiller systems
 - a. **Do not substitute for other IBC models**
2. Attach the WHITE thermal control sensor & bracket to the evaporator coil in the water bath
 - a. **Each Crysalli model has a specific location for mounting the sensor bracket to the evaporator to maintain a uniform ice block formation**

- b. **See pictures (Fig 3.1-3.5) of the different models and locations and cross reference it to the model you are working on**
 - c. **After identifying the correct location secure the sensor bracket to the evaporator coil using the supplied zip tie**
3. Use the zip ties provided to secure the white thermal control sensor wire to the water coil (Fig 3.1-3.5)
4. Do not leave slack in the control sensor wire and make sure the wire is secured to water coil away from where the ice bank will form
 - a. ***NOTE: If the thermal control sensor wire freezes within the ice bank it will send false readings back to the electronic controller cycling the compressor off prematurely**
5. Route the thermal control sensor wire back to the electronic controller and plug the terminal connector into the thermal control box
6. Attach the electronic IBC control box to the same mounting bracket where the original ice bank control was located
7. Zip tie any slack wire keeping it clean and away from any moving parts within the condensing system
8. Route the brown, black and white wires from the IBC control box to the Crysalli circuit board

Sparkling water system wiring

1. Connect the **BLACK** wire to terminal **IBC1** (Fig 2.1 item a)
2. Connect the **BROWN** wire to terminal **IBC2** (Fig 2.1 item b)
3. Connect the **WHITE** wire to terminal **W4** (Fig 2.1 item c)

Still water system wiring

1. Connect the **BLACK** wire to terminal **A6** (Fig 2.2 item a)
2. Connect the **BROWN** wire to terminal **D5** (Fig 2.2 item c)
3. Connect the **WHITE** wire to terminal **B5** (Fig 2.2 item b)

***NOTE: If the unit has a different circuit board than what is shown, call the Crysalli service manager for wiring details**

Start up system

1. Reinstall the white pipe stem
2. Reinstall and secure all panels that were removed
3. Fill the water bath to 1/4" below the top of the white pipe stem
4. Turn on the water, power and CO2
5. Listen for the compressor to kick on
6. Install lid
7. Allow for 3-4 hours for the ice bank to form

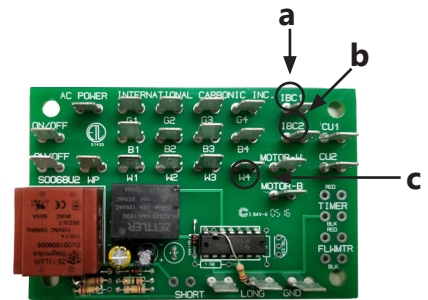


Figure 2.1 S0068-U Control Board, new style

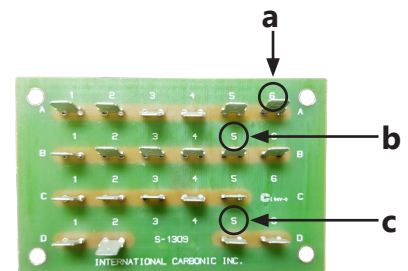


Figure 2.2 S1309 Control Board, still water only

Ice Bank Control (IBC) sensor & bracket location

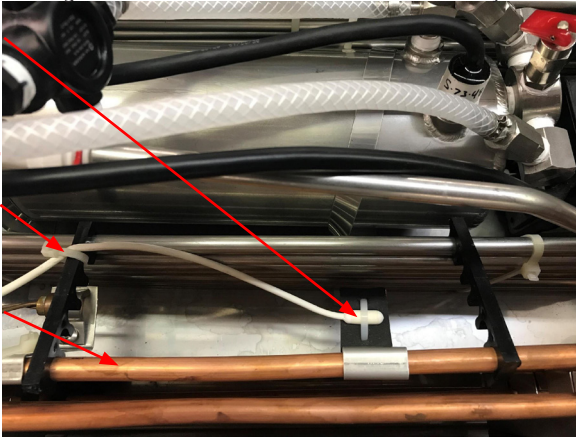
CR-UCM1 & CR-1 chillers

Figure 3.1 CR-UCM1 & CR-1 Ice bank control layout

New IBC sensor
& bracket
(install)

Secured to water
coil away from
where the ice
bank will form

Evaporator/IBC
coil



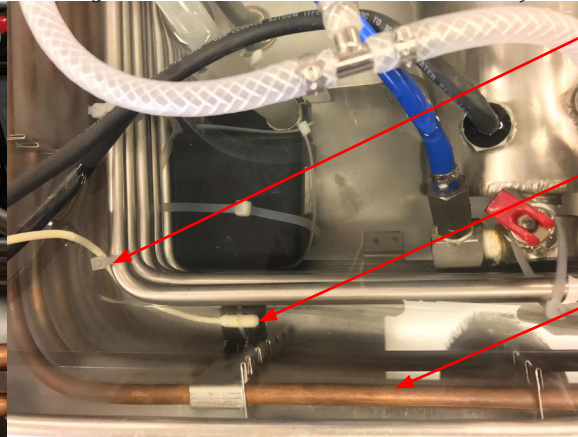
CR-UCM2 & CR-2 chillers

Figure 3.2 CR-UCM2 & CR-2 Ice bank control layout

Secured to water
coil away from
where the ice
bank will form

New IBC sensor
& bracket
(install)

Evaporator/IBC
coil



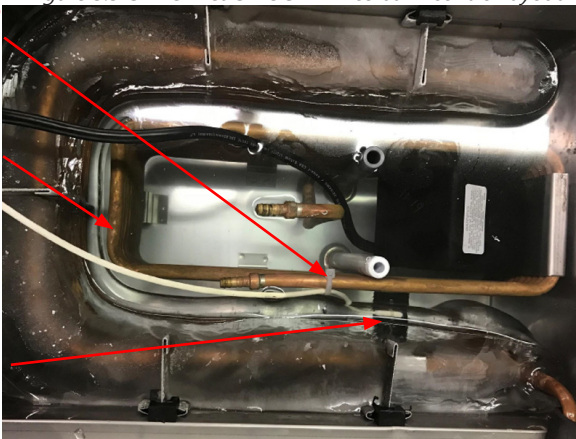
CR-1SW & CR-UCWBH chillers

Figure 3.3 CR-1SW & CR-UCWBH Ice bank control layout

Secured to water
coil away from
where the ice
bank will form

Evaporator/IBC
coil

New IBC sensor
& bracket
(install)



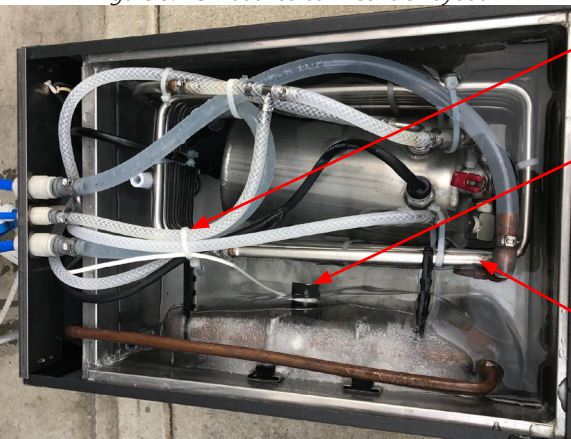
CP2000 chillers

Figure 3.4 CP2000 Ice bank control layout

Secured to water
coil away from
where the ice
bank will form

New IBC sensor
& bracket
(install)

Evaporator/IBC
coil



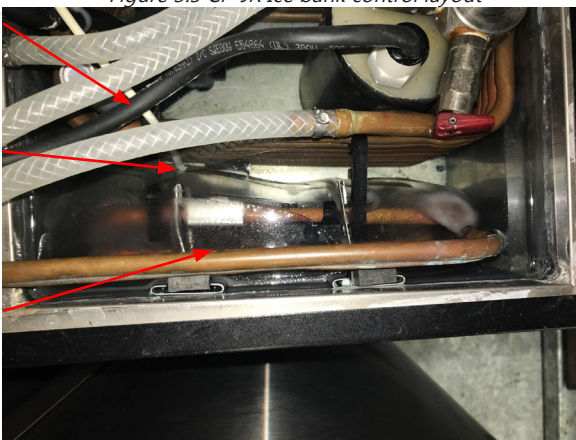
CP-JR chillers

Figure 3.5 CP-JR Ice bank control layout

Secured to water
coil away from
where the ice
bank will form

New IBC sensor
& bracket
(install)

Evaporator/IBC
coil



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If the QR code is not working, follow this link:

<http://crysalli.com/news/135-ice-bank-control-conversion-guide>

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