BrewBuilt

ICEMASTER 100

Thank you for purchasing the IceMaster refrigeration unit. You are taking a big step to better manage fermentation temperatures, and ultimately making cleaner, more consistent beverages.

This IceMaster is designed to manage your fermentations by cooling water/glycol to a set temperature in a reservoir which will then be circulated via a submersible pump (sold separately) through your specific cooling coils/jacket/plate/system.

WARNINGS

1. Freezing can occur so icing in the reservoir is considered normal operation. To compensate for this we recommend that one uses a 20% propylene glycol solution to lower the freezing point.

2. Do not set the reservoir temperature controller lower than 28°F (-2.2°C). Running the unit below this temperature may negatively affect the unit's efficiency and has the potential to freeze beer which may impact the finished beer's flavor.

Assembly Instructions

1. Unpack your unit and open the top cover to find the power cord and drain plug. Install the drain plug and place the power cord aside for now.
2. Unscrew and remove the 3-piece reservoir cover.

> **TIP** - take note of which side the slot is located on.

3. Fill the reservoir with a 20% propylene glycol solution - 4 parts RO/distilled/deionized water to 1 part 99.9% propylene glycol.

   If you choose to use water only - it is best to use tap water as RO/distilled/deionized water on its own may damage the heat exchanger.

> **TIP** - While you work on the next steps, attach the power cord and plug in the IceMaster to verify that it cools.

Picture of the IceMaster with our optional Glycol Pump Kit installed.

USING THE OPTIONAL GLYCOL PUMP KIT (GLY355)

> **TIP** - Ultimately you will need to have the tubing and pump power cord come out of the unit through the slotted cover removed earlier. Make note of which corner you will need to run the tubing and cord through.

1. Attach & clamp the hose to the pump.
2. Place the pump in the middle of the reservoir - it should rest at the bottom.
3. Routing the hose through one of the stainless bulkheads, extend the hose to the inlet of your cooling system. This depends on your cooling system, but the general idea is that we want the coolant to circulate from the bottom of your fermenter to the top.
4. Cut & clamp the hose to the inlet of your cooling system.
5. Attach & clamp the remaining hose to your cooling system's outlet.
6. Routing the return hose through one of the stainless bulkheads, insert the other end of the tubing into the reservoir below the liquid level.

> **TIP** - to ensure the tubing stays in place zip tie it to one of the cooling lines.

7. CHECK FOR LEAKS:
   - Plug in the pump to any outlet/extension cord (not the temp controller).
   - Look for leaks where the tubing is connected to the cooling system.
   - If necessary, tighten or re-attach clamps.

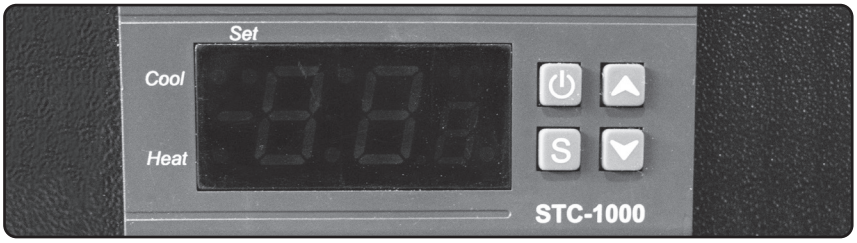
Final Set-Up

1. Assuming the unit is cooling and there are no leaks, unplug the pump.
2. Replace the 3-piece reservoir cover ensuring all tubing and the pump power cord are routed through the slotted corner.
3. The top cover is optional so it may be set aside.
4. Plug the pump in to your temperature controller.
5. Set your desired fermentation temperature by following the instructions provided with the temperature controller.
6. Confirm the IceMaster reservoir temperature is properly set to where you need it.

CONGRATULATIONS, YOUR SYSTEM IS READY!

ICEMASTER TEMPERATURE CONTROLLER SETTINGS

The temperature controller (found just above the red power switch near the bottom of the unit) has several functions to help maintain ideal conditions to control your fermentations.



THE CONTROLLER UNIT ITSELF IS FAIRLY STRAIGHTFORWARD, BUT IT'S STILL A GOOD IDEA TO GET FAMILIAR WITH THE BUTTONS/FUNCTIONS.

CONTROLLER BASICS

- To turn on/off - hold the **POWER** button down for few seconds.
- The readout on the controller will show the temperature (Celsius) of the liquid inside the IceMaster.
- To check the temperature setting - press & hold the **UP** arrow.
- To check the differential (+/- range from the set temp) - press & hold the **DOWN** arrow.

FUNCTION CHANGES

TO MAKE CHANGES TO ANY OF THE FUNCTIONS

1. Hold down the **S** button until **F1** shows on the controller, release the button.
2. Select the desired function by clicking the **UP** or **DOWN** arrows until the controller shows the correct function number.
3. Press & hold the **S** button while using the **UP/DOWN** arrows to adjust to your desired setting.
4. Release the **S** button
5. And finally, press the **POWER** button to lock in the setting.

FUNCTION SETTINGS

F1 THE DESIRED TEMPERATURE SETTING

F2 TEMPERATURE DIFFERENTIAL
IceMaster will cycle on/off to keep its temperature within the set range of the set temperature – example: if you set the temperature at 5°C and the differential to 1°C, the unit will cycle on at 6°C and chill the reservoir till the temperature cools back down to 5°C.

F3 COMPRESSOR DELAY TIME IN MINUTES
This feature protects the unit from turning on/off too quickly, and potentially damaging the compressor. The range is from 1-10 minutes with the default set at 3.

F4 CALIBRATES THE ICEMASTER AGAINST AN ACCURATE THERMOMETER
Generally, the unit does not need any additional calibration. However, to find the correct adjustment – place an accurate thermometer in the unit and compare against the controller readout. If needed, set the calibration on the controller +/- by the number of degrees it is off. This will ensure the unit is adjusting to your desired temperature properly.

MAINTENANCE/ CLEANING

To ensure the unit continues to properly function it is good practice to dust/clean the heat exchangers every 6 months.

TROUBLESHOOTING

IceMaster does not turn on	Check circuit breaker or fuse ; Check plugs.
IceMaster does not seem cold enough	Check temperature setting by placing a thermometer inside reservoir. Check after 30 minutes & compare against set unit temperature. Calibrate with F4 function on controller as needed.
IceMaster shuts off/on too often	Check set temperature range. Adjust F2 function on controller to a higher range.
IceMaster is always on	Ambient room temperature is too high, so unit is working harder to cool to set temperature.
IceMaster seems to make too much noise	Humming is normal and gurgling sounds are caused by cooling liquid used by the unit. The unit may not be not level.