

Managing your Fermentation with the ICEMASTER MAX 4

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 through your specific cooling coils/jacket/plate/system.

ATTENTION

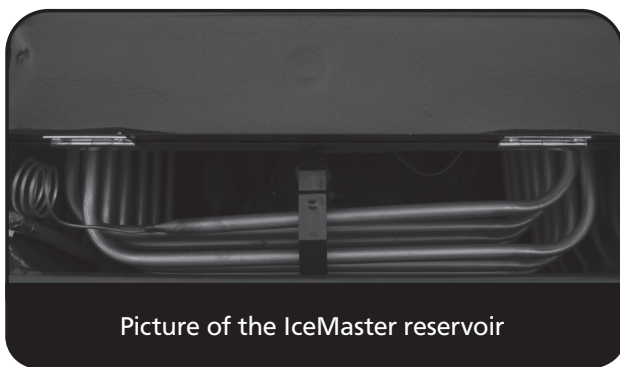
*Freezing can occur so icing in the reservoir is considered normal operation. To compensate for this we recommend that one uses a **20% propylene glycol solution** to lower the freezing point.*

ASSEMBLY INSTRUCTIONS

- 1 Unpack your unit, then unscrew and open the hinged top cover.
- 2 Open the hinged reservoir cover.
- 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 plug in the IceMaster unit to verify that it cools.



Picture of the IceMaster reservoir

QUICK SETUP

TIP - In order to avoid leaks, we recommend using hose clamps to secure all hose connections.

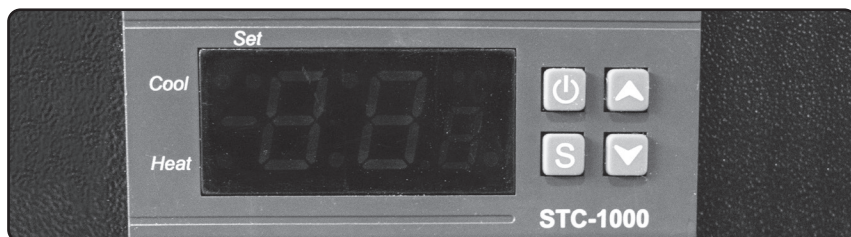
- 1 Connect your cooling system outlet hose to the IN bulkhead.
- 2 Connect your cooling system inlet hose to the OUT bulkhead directly to the right.
- 3 Install the temperature probe in your thermowell, or tape directly to the outside of the vessel if it does not have a thermowell.
- 4 Press the °C/°F button on the temperature controller to switch from Celsius to Fahrenheit.
- 5 The controller displays two temperature readings. The top reading (Red) is the measured temperature. The bottom reading (Blue) is the set temperature.
- 6 To adjust the set temperature, press **SET** and the bottom reading will begin to blink. Use **SET** and °C/°F to increase or decrease the value of the setting. Wait 3 seconds and the controller will save the setting and return to normal operation mode.
- 7 To adjust the ice bath temperature settings, please see instructions on the following page.

ADJUSTING THE DIFFERENTIAL

- 1 The factory default temperature differential is 2 degrees. The differential can be adjusted in the Parameters menu.
- 2 To enter the Parameters menu, hold **SET** for 5 seconds.
- 3 Use **SET** and °C/°F to cycle through parameters. The differential setting parameter is P2.
- 4 Press **SET** and °C/°F at the same time to select the parameter and make adjustments.
- 5 Use **SET** and °C/°F to increase or decrease the differential setting. Wait 3 seconds and the controller will save the setting and return to normal operation mode.
- 6 For other parameter settings please refer to the Technical Specifications Document.

ICEMASTER TEMPERATURE CONTROLLER SETTINGS

The ice bath 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 THE +/- TEMPERATURE RANGE

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 with +/- 0.5 the unit will cycle on/off over a 1°C range at 4.5°C and 5.5°C. The lowest setting is 0.3°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 level.