Germination Chamber

5/30/23

Plug Germination chamber into outlet. Surge protector is recommended. The thermostat will go through a startup cycle then show the internal temperature on the display in Fahrenheit. This is the "run mode" display. OUT1 or OUT2 will be on the top edge of the display when activated.

OUT1 – If displayed, yellow and red light and heater below will be on. *If only the yellow light is on, check the water level in the reservoir. If water level is fine, unstick float switch (blue switch may be corroded)*

OUT2 – If displayed, green light will be on, indicating that the fans are on.

Push "SET" once. The desired heating temperature is displayed. The temperature is preset at 72 degrees. In "programming mode" the display will slowly flash.

OUT1 will display at the top edge of the display. Use the up/down arrows to change the setting. Push "Set" 2 times when desired temperature displays to return to "Run Mode".

If allowed to flash for one minute, the thermostat will automatically return to "Run Mode".

Set Fan activation temperature. Press "Set" 2 times. OUT2 will show at the top edge of the display and the temperature will slowly blink. The temperature is preset at 80 degrees. Use the arrow keys to raise and lower the temperature setting. Push "Set" 1 time to return to "Run Mode". At 80 degrees, the unit will reach and internal temperature of at least 82 degrees before the fans will turn on until desired temperature is reached. The fans will only reduce chamber temperature to ambient room temperature. Keep OUT2 set at least 8 degrees above OUT1 setting.

Heat Needed Lamp (Yellow) - Indicates that the thermostat is asking for heat. The thermostat will refer to this setting as OUT11.

Heat Element Lamp (Red) - This lamp will only light if the yellow lamp is lit and there are acceptable conditions for the heating coil to turn on. Acceptable conditions are: water level-switch activated, and yellow light on. Normally yellow and red lamps will always be on or off together. (Add 1/2 teaspoon of baking soda to the tank water to prevent corrosion of the heat element. It only needs to be added on the first tank of water and any time the tank is drained.)

Both the red and yellow lamps will be lit during the heating cycle. If only the yellow lamp is lit, then there may be insufficient water level. *First check to make sure the water supply is turned on; there is float valve to control the water level. The heating element must be submerged at all times so there is a water level cut-off switch installed that switches the heating element off so it will not burn out. Safety float switch keeps the element from coming on if there is not enough water to cover element. The inside of chamber can spike in temperature if the doors are left open for an extended period of time, then closed. Once the unit cools it will function as desired.*

Fan Lamp– It gives a visual indicator that the fans are on. The ventilation mode is referenced as S2 on the digital readout. (green light)

OUT 1 Heat has 3 degree differential setting. For example, when set at 72 degrees, heat will turn on at 69 degrees and turn off at 75 degrees. This prevents rapid cycling and premature wear on the relay and heat element. Depending on the temperature of the room the thermostat may need to be set higher than ambient air temperature to turn on.

OUT 2 Fan has a 2 degree differential setting.

Hook up water source on low to fill the tank (or fill by hand). Add 1/2 teaspoon of baking soda to the tank water to prevent corrosion of the heat element. It only needs to be added on the first tank of water and any time the tank is drained. DRAIN TANK AND DRY COMPLETELY WHEN NOT IN USE.

***All Warranties will be invalid if chamber is altered by user.**

Helpful Hints

1. Shelf contents should not exceed 80 lbs of weight.
2. The temperature should be set around 72 degrees or the recommended temperature for the seed being germinated. In a warm environment, it may be necessary to increase the temperature set point so that the heater will turn on. This will add moisture to the air so that the sprouts will not dry out.
3. Be aware of ambient room temperature and direct sunlight hitting germination chamber. This will affect the temperature inside the chamber. If Germination chamber is being used in a room cooler than 52 degrees, thermal insulation of the germination chamber may be required to reach temperatures of 72 degrees and above inside the chamber. It will take time for the chamber to heat ice cold water to temperature. Direct sunlight will increase temperatures inside the chamber beyond what the fans are capable of cooling. If it is too warm the chamber will not turn on.
4. Some seeds may need to be covered with medium vermiculite and others may need no cover at all.
5. Use a soil thermometer to check the actual soil temperature.
6. Seed trays should be moist, but not saturated when placing them in the chamber. The moisture level inside the chamber will keep them moist.
7. Monitor trays daily for germination and moisture levels. If they are too wet, try to lower the temperature or leave unit doors open. Every time the heater comes on, moisture levels is increased.
8. The vent on top helps control the amount of moisture in the chamber. Opening the vent will increase moisture. By allowing hot air to escape from the top, cooler air is pulled into the bottom vents, cooling the germination chamber. The heating element will turn on and raise the moisture level.
9. For best performance, connect to a continuous water source. The unit is equipped with a water level shut-off valve. If the flow of water stops the unit will not run the heating element and protect it from burning out. Keep source water faucet turned to low pressure.
10. Heating element should be covered by the water in the reservoir. Add 1/2 teaspoon of baking soda to the tank water to prevent corrosion of the heat element and the float switch (blue). It only needs to be added on the first tank of water and any time the tank is drained. Drain tank when Germ Chamber is not in use allowing the element to completely cool, waiting at least 30 minutes before draining the water allowing it to acclimate.
11. Most seeds germinate in 7-10 days. Know your seed variety and expected germination period. It is also helpful to know the ideal soil temperature needed for different seeds.
12. Remove tray when 50% germination is accomplished.
13. Regularly change the water by draining and sanitizing the tank and germination chamber to prevent crusty buildup on internal switches and heat element.
14. Heat loss occurs each time the chamber doors are opened. For best results check seeds, at most, once per day.
15. Baffle (cover over the reservoir) causes the heat and moisture to create convection current to circulate the air evenly throughout the chamber.
16. Removable shelving allows for taller trays withing the chamber and easier cleaning of the chamber.
17. The chamber is designed to catch and divert water back inside the germination chamber during operation. Water will not leak onto the floor when doors are closed.

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Important Germination Chamber Parts.

Fan (2)

Outside Chamber

Thermostat

750 Watt

Heat Element

Inside Chamber

Drain Bolt—Inside Chamber

Flow Switch

Inside Chamber

Drain Assembly Pieces

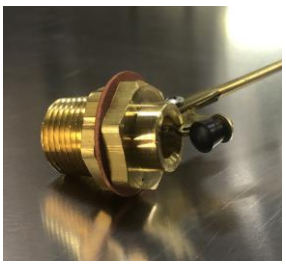
GFCI Plug

Temperature Probe

Inside Chamber

Float Valve

Inside Chamber



Valve Assembly