Installation and Operating Instructions for the HC2000 Professional Humidistat

The **HC2000 Professional Humidistat** is a durable and highly accurate device for controlling humidity in your mushroom growing environment. With some basic care, this unit should provide you with reliable control over your humidifiers or other watering devices for years to come.

**Placement**

The HC2000 can be placed nearly anywhere in the grow room. It is recommended that the unit not be placed directly in the path of humidifiers or watering systems; excessive water on the sensor can affect the accuracy of your humidistat.

**Wiring**

This unit is a simple interruptive device, either allowing or preventing the flow of electrical current to devices connected to it. To wire this unit into your humidifier or other watering device, attach the black (often called the “load” or “hot”) wire coming from your power source to one of the black wires coming from the humidistat. Then connect the black wire coming from your humidifier to the other black wire coming from the humidistat (see diagram). Because of the nature of 120V AC current, either black wire from the humidistat can be connected to the black wire from the power source, or from the humidifier; just make sure that the black wires from the power source and humidifier are not directly connected to each other, or to any wire(s) other than the black wires coming out of the humidistat.

The green (ground) lines from the power source, humidistat and humidifier should all be connected together, as should the white (often called the “line”) wires from the power source and the humidifier.

**Calibration**

Once your HC2000 been mounted in the grow room, it will need to be calibrated. This device keys on changes in relative humidity (rH); it does not measure humidity in absolute numbers. Therefore it is necessary to accurately calculate rH in the grow room at the time of initial installation of the unit. We highly recommend our SP7011 Sling Psychrometer for this application. Using less accurate devices will result in a poorly calibrated humidistat and consequently less-than-ideal control of humidity. Consult the instructions included with your sling psychrometer regarding operation of that unit.
After calculating current relative humidity in your grow room, you can calibrate your humidistat by determining the point at which the switch opens and closes, controlling power sent to the device(s) connected to the humidistat. Before starting this process, turn off the power supply to the humidistat, either via an installed inline power switch or power plug or via your electrical circuit panel.

Remove the cylindrical metal mesh cover from the humidistat by gently twisting and simultaneously lifting the cover straight up and off, exposing the sensors underneath. The top of the exposed sensor housing is a dial, marked with gradations. Each gradation represents an approximately one-percent change in humidity. Turning the dial to the left (clockwise) raises the desired level of humidity; turning the dial to the right (counterclockwise) lowers the desired level of humidity.

Slowly turn the dial until you hear a “click” inside the housing of the humidistat. If turning the dial halfway around its circumference does not produce a “click”, turn the dial in the other direction. You are searching for the point at which the electrical switch inside your humidistat switches from “on” to “off” (open to closed). When you hear the “click”, begin slowly turning the dial in the other direction until you hear the “click” again. It may take several passes back and forth on the dial to pinpoint the setting on the dial at which the electrical switch opens and closes. The point on the dial at which the switch opens/closes is equal to the relative humidity you measured with the sling psychrometer. In other words, if the sling psychrometer measured the relative humidity as being 70%, then the point on the dial at which the switch is opening/closing is also 70%.

You can now select the desired humidity level in your grow room by turning the dial to the left (clockwise) to raise the humidity, or to the right (counterclockwise) to lower it. Each gradation on the dial represents a change of approximately once percent rH. For instance: if the switch in the humidistat is opening/closing at 70% rH (as measured with your sling psychrometer), turning the dial 5 gradations to the left will raise the point at which the switch opens/closes to 75% rH. This means that the humidistat will activate the attached humidifier(s)/watering device(s) when the relative humidity falls below approximately 75% (remember that this humidistat is accurate to ± 1% rH, so some very minor variation is to be expected).

Thank you for doing business with Fungi Perfecti. We wish you the best of luck in your future fungal endeavors. We highly recommend thoroughly familiarizing yourself with Growing Gourmet and Medicinal Mushrooms and The Mushroom Cultivator prior to undertaking any advanced cultivation operation, as they contain detailed information on all aspects of gourmet and medicinal mushroom cultivation. Should you have any questions concerning your system, please feel free to contact us.