

Basic Guidelines for Heating Vivaria

Reptiles are Ectotherms, they heat themselves and regulate their body temperature by means of the environment. They move in and out of hot and cool areas to maintain a preferred temperature. It is therefore important that vivaria have suitable temperature gradients within which the animals can behave naturally.

The heater should be placed to one end of the vivarium in a condition that does not heat the

whole of the enclosure. In this way the temperature will normally vary between the hot area near the heater and the cooler areas at ambient temperature.

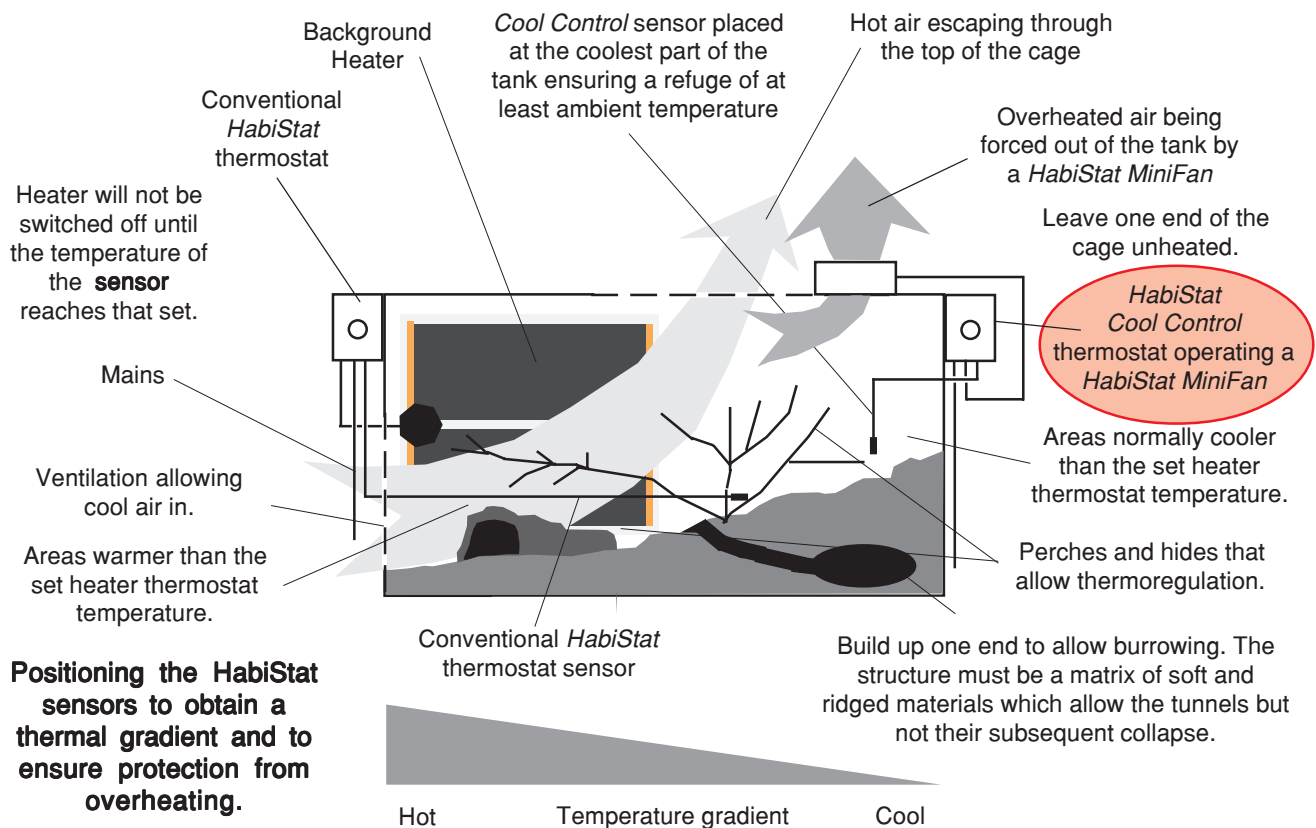
This system may occasionally fail when the ambient temperature is either too high or when the combination of a high ambient temperature and residual heat from a heater also takes the cage temperature too high. The solution is to sense these high temperatures and immediately flush them away and hopefully replace them with something cooler.

Two remedies present themselves; one is to cool the whole room and the other is to cool the individual cages. Whole room cooling is quite easy to accomplish if an extractor fan is employed to flush the heat out of the room. The disadvantage is that it may take some time for the temperature in the individual cages to drop and equilibrate with the now cooler room.

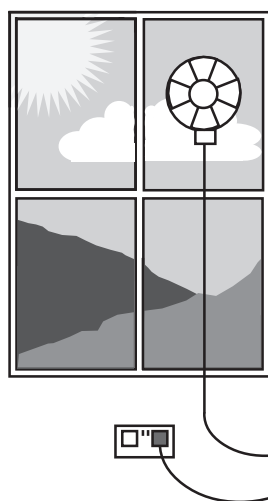
Cooling the cage is quicker and a *HabiStat MiniFan* is the ideal extractor for these occasions. The problem here is that the room

temperatures may also be high and replacing hot air with still more hot air does not give any relief.

The only solution in these circumstances is to use an active cooling device. Any heat pump can only move heat from one place to another. The laws of physics make it almost impossible to generate cold without an equal rise in temperature somewhere else. In essence the control of high temperatures in animal management entails removing heat from the direct environment of the animal to somewhere it can do no harm.



Positioning the HabiStat sensors to obtain a thermal gradient and to ensure protection from overheating.



A Cool Control thermostat being used to control the temperature of a room by activating an extractor fan (max 300W). Site the probe within one of the cages to be protected. Choose either one high up or the one containing the least heat tolerant animal. Set the temperature to about 5° below the maximum permitted.

...Cool Control in Use

The *Cool Control* thermostat is like an ordinary thermostat except it switches mains electricity *on* when a set temperature is reached and *off* again

once the temperature has dropped sufficiently. It is used, as the name implies, to control a cooling effect rather than one of heating; the normal action of most thermostats.

Over temperature is poorly tolerated by most animals. The range of high temperatures between those which are comfortable and lethal is usually many times smaller than the equivalent at the cold range of tolerance.

The *Cool Control* thermostat will give added confidence in ensuring this vulnerable area of control is catered for. It is intended to activate a device

that brings the temperature down.

In practical terms, most cooling is effected by increasing ventilation. Either cool air is moved in or hot air out. The sensation of moving air being cold is peculiar to mammals and is caused by sweat being evaporated. It will not affect dry animals like reptiles.

When cooling animals by relying on ambient temperatures, it is imperative that this temperature is not allowed to exceed the maximum an animal can comfortably tolerate. To bring the temperature down below ambient a chiller must be used.

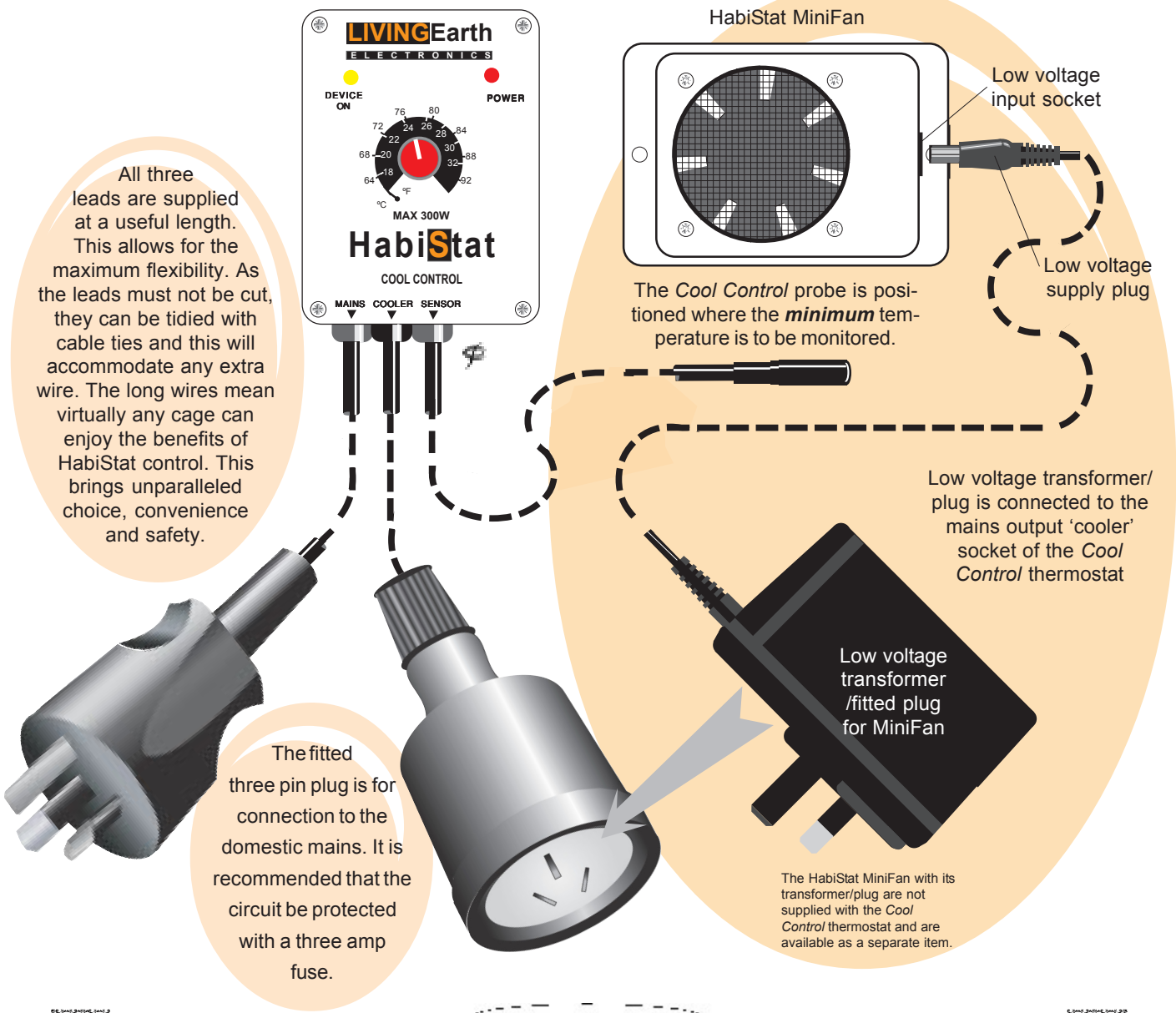
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HabiStat

THERMOSTATS

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- Over temperature thermostat for cooling equipment like fans.
- Switches up to 300 watts on when a set temperature is reached and off again when the temperature falls low enough.
- Used in sophisticated management of environmental heating and ventilation.



Guarantee

Thank you for buying this HabiStat electronic thermostat. Used in accordance with the instructions this unit will give many years service. There are no user serviceable parts in this unit, so **please do not open it**. Any tampering including the cutting of any wire, will render the guarantee void. This thermostat is guaranteed for one year from the date of purchase against faulty parts and workmanship. In the unlikely event of failure, return it to our distributor, Herp Shop, with a **receipt or proof of purchase** and details of the fault. Herp Shop will ensure your unit is returned to full working order. No liability is accepted other than for the repair or replacement of a faulty product. Statutory rights are not affected

