



Chris Martin Services

Chris Martin - Herpetologist - Suppliers of Vivarium Equipment

A HERPETOLOGICAL SITE, MEETING THE
NEEDS OF REPTILES, LIZARDS, TORTOISES,
FROGS AND OTHER EXOTICS

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Information Sheet: Why Ceramics?

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In this article I'm going to try and explain why I prefer to use ceramic heating elements to other forms of heating.

All forms of heating should be controlled by a thermostat and protected by a suitable guard

Light bulbs

Advantages - easy to obtain, cheap to purchase and easy to change when they blow

Disadvantages - if run on a mechanical type of stat the bulb will flash on and off causing stress. If run on an electronic stat an expensive dimmer type unit must be used, (except microclimate mini 300), if you use a pulse proportional or standard unit these will fail. You will need to use coloured type bulbs so that the vivarium is not brightly illuminated at night. Light bulb can blow at any time so they are very unreliable to be left i.e. when you go away on holiday or for a few days.

Heat mats & strips

Advantages - easy to obtain and fairly cheap, very reliable. You don't have any problems of stray light as you can have with light bulbs.

Disadvantages - low power output. The problem comes during the winter in the early hours of the morning when the room temperature is at the lowest. The temperature outside may be below freezing and that makes our room temperature fall, to say, the low 50s. If you, for example, are keeping a tropical reptile in your vivarium that needs to be kept at about 78of at night. If your room temperature is about 50of and your vivarium needs to be at 78of do you think in all that a heat mat that is rated at about 12 - 30 watts could raise the temperature through out your vivarium by almost 30of?

Powerplates

Advantages - easy to install and purchase, very reliable

Disadvantages - as with the heat mats it's output is low, only 50 watts, so in larger vivariums you will have the problem of maintaining vivarium temperature in the winter. You could get over the problem by installing several units, however this would be expensive.

Tubular greenhouse heater

Advantages - easy to install, will warm the vivarium very easily

Disadvantages - can cause hygiene and odour problems if the faeces can come into contact with the heater unit. Problems can occur if the reptile can lie on the guard unit. This may get quite hot and burn the occupant. Sloughing can also be a small problem if the animal's oil dries up while laying on the heater unit. In extreme cases the animal may die if the reptile overheats while laying on heater unit.

Ceramic elements

Ceramic elements come in two forms. The 'bulb' type (E.S.E.) and the trough type (F.T.E. or H.T.E.)

The photographs below shows the difference between the two styles of elements.

These two unit have a different ways they work. The E.S.E. or bulb type unit is 'spot' type heaters. You hang them over the spot or small area you need to warm. Being a spot type heater these are ideal for basking animal. If you need a 'hot' spot in your vivarium this is the type of heater unit you need. The trough unit is a 'flood' style heater unit. Its job is to warm an area rather than the spot of heat as you get with an E.S.E.unit. A trough unit mounted in the vivarium roof should easily heat a vivarium of 4ft long by 2ft wide by 2ft height.

E.S.E. ceramic type heater units

Advantages - ideal for basking area. Splash proof

Disadvantages - short life span, usually this type of heater unit only last 2 - 3 years. The temperature under the heater can be difficult to control even with a thermostat. If reflector unit is used this also needs to be protected from any animal that may be able to touch it. Very difficult to use as heater unit for a large area. High temperature melting point wire must be used when connecting mains to this unit

Trough type ceramic heater units

Advantages - very long life span (over 10 years +). Splash proof. Ideal for heating larger enclosures. Small vivariums can be safely heated with one of the lower wattage elements. Quite cheap to purchase. Having the power available when the lower room temperatures of winter come, this type of unit has the backup power to cope with the lower ambient temperatures of your room.

Disadvantages - must be used with a good quality thermostat. May not be easy to find stockist. Must have a good quality guard unit to protect

occupant. High temperature melting wire must be used when connecting power to this unit.



E.S.E Bulb Type



F.T.E Type

Colour Change Elements

Above in the F.T.E. picture is a 'gold' coloured element. This style changes colour as it gets hot. This can be useful as a visual check to check if the element is working. The down side is, it may cause undue worry when simply the unit is turned off on a warm day.

In this article I have tried to list out the very basic pros and cons. As you can appreciate there are many more factors that can affect the conditions of the vivarium. I hope this article has been of help, if you would like to visit me (by appointment only) you are more than welcome. If you wish to phone me, again please feel free to do so. I look forward to hearing from you.

I can supply a wide and large range of vivarium equipment including ceramic elements. Please contact me for a quote if the items you require are not listed on my web site.