

### Safety

Avoid water coming into contact with the thermostat box heater. Do not open the thermostat box, mains voltage is present. For repairs/ services, the complete heater/ thermostat assembly should be returned to ECoSTAT. If in doubt about the installation of the unit contact ECoSTAT Helpline or a qualified electrician.

### Hints on incubation

- When the temperature has been running steadily for twenty four hours, the eggs can be placed in the incubator.
- As soon as the temperature is up to 39°C which may take a few hours the eggs may be turned. They should be turned night and morning up to the eighteenth day, after which they should be left until the hatch is over. Marking with a wax crayon will help to ensure that all the eggs have been turned correctly.
- Eggs need no "cooling" other than that which they get being turned.
- Towards the end of the hatch, from the eighteenth day, the temperature may tend to rise. The rise is due to the heat given off by the chicks. Keep the temperatures as near 39°C as possible, but better a little lower than higher at the end of the hatch.
- Eggs should 'pip' on the nineteenth to twentieth day.
- The hatched chicks should be left to dry off completely before removing to a brooder- details of brooding equipment available from ECoSTAT.

### 2 year guarantee

We will repair or replace the thermostatic heater in the event of electrical or mechanical failure within two years from the date of purchase on condition that it has been returned to us accompanied by the sales receipt showing date of purchase and it has been used in accordance with the instructions and has not been tampered with or abused. No consequential claims will be accepted.



**HELPLINE**

**01326 378654**

*Mon-Fri 9.00am-5.00pm*

*Details and brochure of all ECoSTAT products available from*

ECo STAT

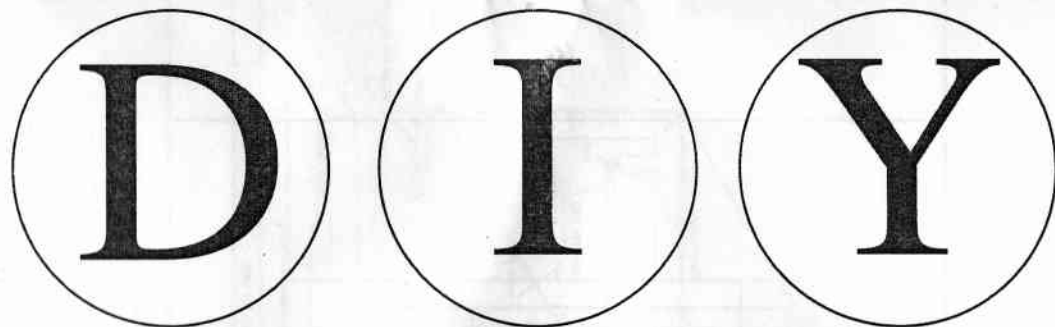
Unit 20 Parckengue

Kernick Ind Est

Penryn, Cornwall TR10 9LX

Tel: 01326 378654

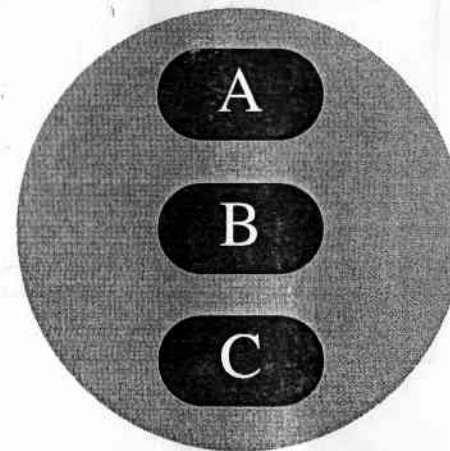
Fax: 01326 378539



# **ECoSTAT**

## **INCUBATOR KIT**

*As simple as*



**A**

**Follow instructions to build a simple insulated box**

**B**

**Fit heater and thermostat - no wiring required**

**C**

**Introduce eggs to your new incubator**

## **INSTRUCTION BOOKLET**

## Instructions and Plans

The box material is 9mm plywood with 25mm polystyrene for insulation.

The polystyrene can be bonded to the plywood with the silicone sealant and replaced periodically. Alternatively, the inner surface can be lined with another layer of plywood so that the insulation is sandwiched, for easy cleaning. The observation window should be double glazed with perspex or glass to avoid the possibility of cold spots.

The Eco-Element is mounted on 40mm lengths of doweling fitted to the top inside of the cabinet.

The Eco-Element and sensor are mounted through a 14mm hole in the side of the cabinet. The sensor is secured to the side of the cabinet with the grey clip provided.

(Some experimentation may be required to find the optimum position of the sensor).

Insulation is not required in the bottom of the incubator



## Cabinet dimensions for different size kit

Capacity	Internal size (L,W, x D)	Heater size
25 egg	350mm x 230mm x 180mm	25 watt
50 egg	350mm x 460mm x 180mm	50 watt
75 egg	525mm x 460mm x 280mm	75 watt
100 egg	700mm x 460mm x 280mm	100 watt

## Inside the incubator

Supports 25mm high should be positioned to support the 6mm twin weld mesh. Ensure there are no gaps between the mesh and inner side of the incubator. The water trays are positioned below the weld mesh to control humidity.

The bottom surface of the incubator should be raised with runners or small feet to allow a free flow of air through the holes.

## Setting the incubator

The incubator kit is fitted with the latest plug in thermostat. The green indicating light will stay on during the initial warm up or if the incubator is opened. Once the incubator temperature has stabilised the green light will flash. The length of the flash will increase in length or decrease in length to maintain very accurate temperature control. Set the control knob on the thermostat three indicating marks from the + sign. This is the approximate setting for the incubation temperature. Place the indicating strip in the two clips provided and stand on the plastic tray. The temperature strip should be horizontal and level with the top of the eggs. Position the indicator so that it can be viewed through the incubation window.

After switching on, leave the incubator for twenty minutes to stabilise. Observe the indicating strip, this will glow green at the incubator temperature. If no green is observed on the strip, then the temperature is either over 40 degree C or under 32 degree C, ie out of range of the thermometer. Adjust the control knob clockwise to increase the temperature, always allow the incubator to stabilise between adjustments.

## Humidity

Water trays under the egg tray are used for controlling the humidity. Humidity is increased by increasing the surface area of water. The chart (fig 1) shows the diameter of the circular water trays required to maintain an approximate humidity for successful hatching. Plastic plant pot coasters are ideal for all this purpose.

For more accurate measurement of humidity eggs can be weighed periodically throughout the hatch.

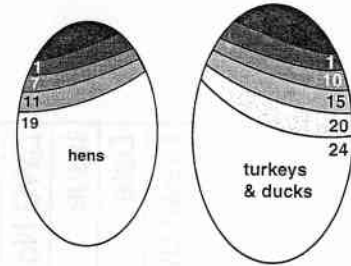
Eggs should loose between 13% of their weight over the complete incubator period. Therefore after 7 days eggs should loose:-

$$\text{CHICKEN} \left( \frac{13}{100} \times \text{START WEIGHT} \right) \div 21 \times 7$$

after 14 days

$$\text{CHICKEN} \left( \frac{13}{100} \times \text{START WEIGHT} \right) \div 21 \times 14$$

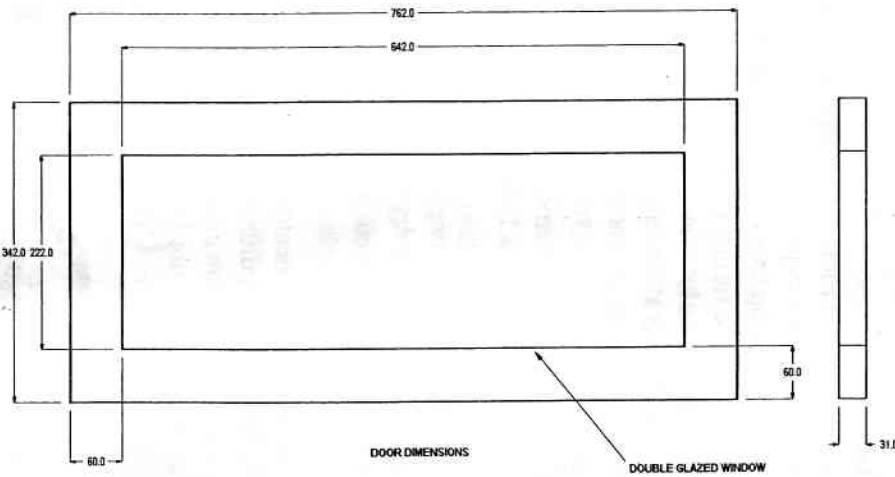
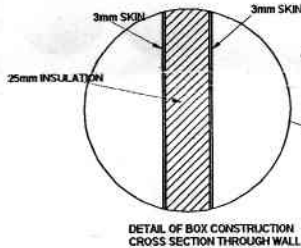
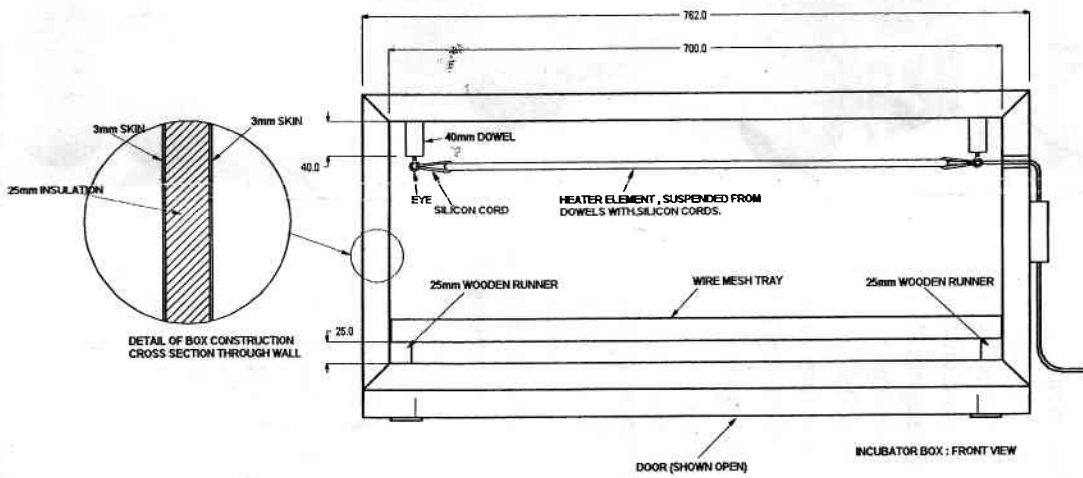
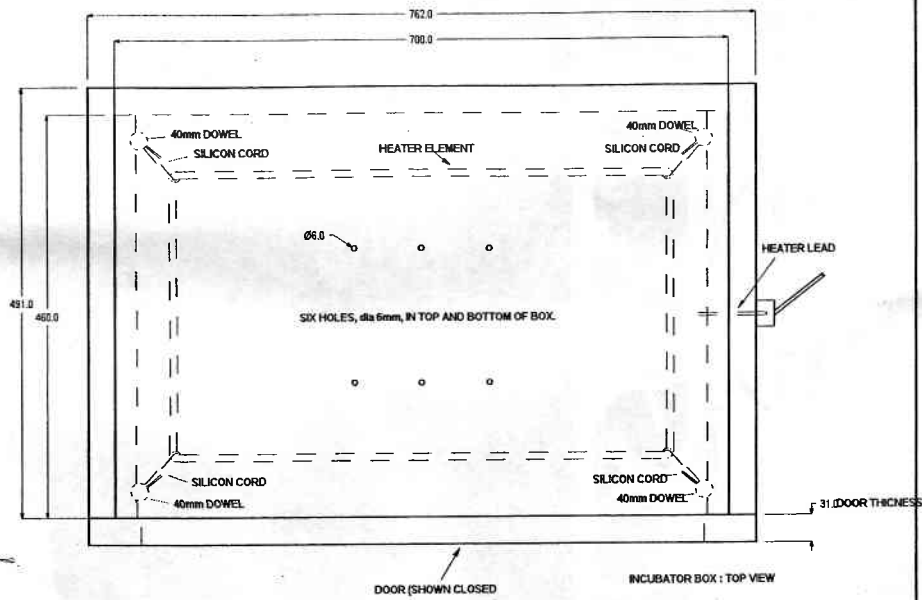
An accurate set of scales should be used  
Digital humidity meters can also be used.



One tip to help monitor humidity is to shine a light through the egg to determine the size of the egg's air sack

fig 1	INCUBATOR KIT SIZE	WATER TRAY DIAMETER	NO. OF 6MM TOP & BOTTOM
	25	2 x 50mm	4
	50	2 x 62mm	4
	75	2 x 75mm	6
	100	2 x 87mm	6

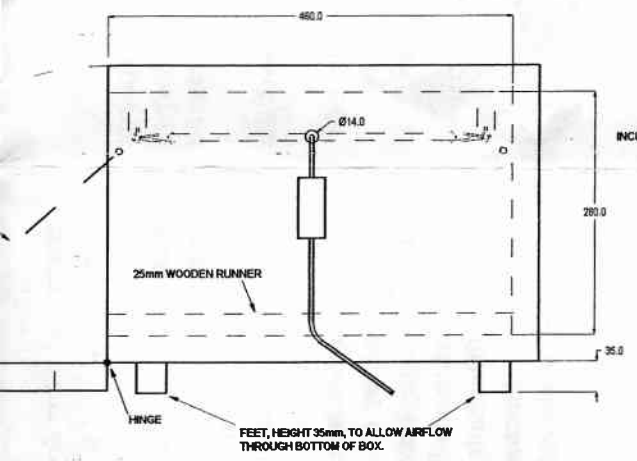
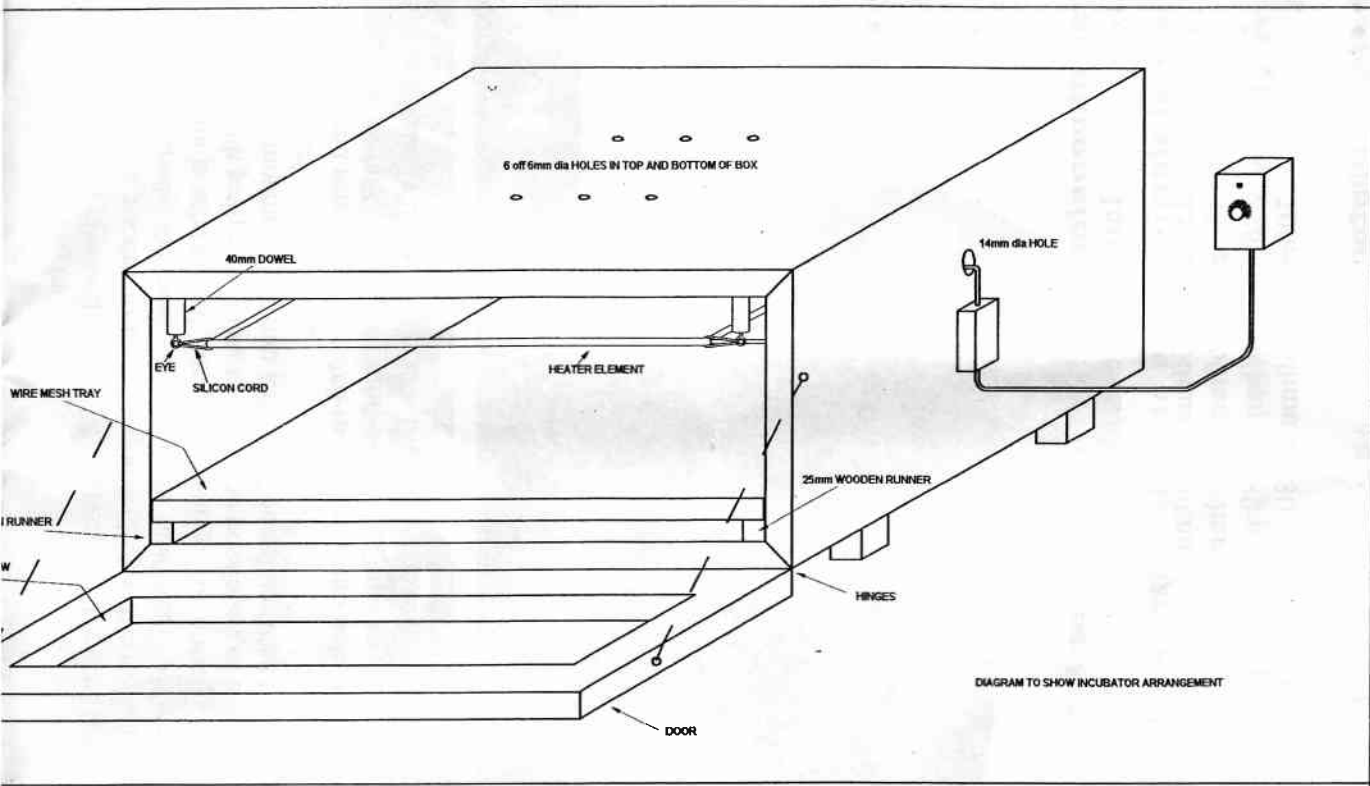
For chickens fill one tray for the first 18 days then fill the second for the final 3 days. For ducks & geese fill both the water trays for the complete hatching period.



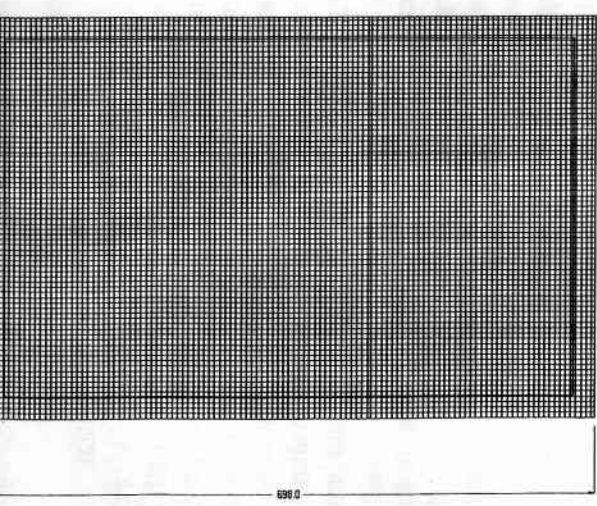
25mm WOOD  
DOUBLE GLAZED WIN

CHAIN OR CORD

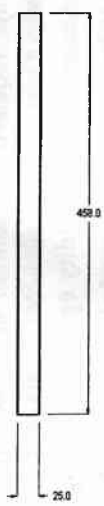
DOOR (SHOWN OPEN)



\* These plans are for the 100 egg kit see over for 25, 50, 75 egg kit cabinet dimensions



WIRE MESH TRAY.  
6mm SQUARE WIRE MESH  
MOUNTED ON WOODEN  
FRAME.



ECOSTAT (A DIVISION OF HIRST MAGNETIC INSTRUMENTS Ltd)	
Title	
100 EGG INCUBATOR KIT	
DWG No	001/INC100/96
Issue	1
Date	14/10/96
Drawn By	G QUEEN