

## **OPERATING INSTRUCTIONS**

### **LARGE CAPACITY OVENS**

#### **SOIL DRYING OVENS**

#### **HOT AIR STERILISERS**

### **MOISTURE EXTRACTION OVENS**

Sizes 250 - 500 Litre

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### **LARGE CAPACITY INCUBATORS**

Sizes 250 - 1250 Litre

**240 & 110 volt supply**

## 1. UNPACKING

- 1.1 Remove all packing material from between the shelves and inner walls of the oven.

## 2. MAINS SUPPLY

- 2.1 **240 volt units.** Supplied with a mains connection lead already fitted with a correctly rated fuse. The fuse rating and other details for each unit are shown on the voltage plate riveted to the back of the unit. It is important that, if the fuse needs to be replaced, it must only be replaced with one of the correct rating.
- 2.2 **240 volt units** That require direct connection (*no fused plug supplied*). Then a qualified electrical engineer must connect the mains cable to an appropriately fused supply. Please read the voltage plate at the rear of the unit for the correct rating
- 2.3 **110 volt units** are supplied with a cable but without a plug or fuse. These units should be wired in by a suitably qualified electrician to the following:-

BROWN	`L' Live pin	Refer to voltage plate
BLUE	`N' Neutral pin	for fuse requirement
GREEN/YELLOW	`E' Earth pin	

### WARNING

**DO NOT CONNECT THE OVEN TO A D.C. MAINS SUPPLY OR SERIOUS DAMAGE WILL OCCUR**

## 3. OPERATION - THERMOSTATIC CONTROL

- 3.1 Position the shelves within the work chamber.
- 3.2 Place a suitable thermometer into the top tubular, so that the thermometer bulb is about two inches into the chamber.
- 3.3 Switch 'ON' the mains (0 / 1) switch, indicated by the green lamp.
- 3.4 Turn the overheat thermostat dial (red cap) to approximately 10°C above the desired working temperature (5°C above the desired working temperature for incubators).
- 3.5 Set the control thermostat dial (grey cap) to the desired working temperature and allow the unit to heat up and maintain a steady state before making any adjustments.
- 3.6 On units fitted with a HI-LO switch, set this to HI for oven temperatures above 100°C and incubation temperatures above 50°C.
- 3.7 If a closer overheat thermostat setting is required, at the working temperature turn the overheat downscale until its indicator lamp is ON. Advance the knob very slowly upscale to the point at which the indicator lamp is just extinguished.

**NOTE: The dials may be locked using the Allen key provided. Do not remove the dial lock as this forms part of the scale end stop.**

## OPERATION - DIGITAL CONTROL

- 3.8 Position the shelves within the work chamber.
- 3.9 Switch 'ON' the mains (0 / 1) switch, indicated by the green lamp.
- 3.10 Turn the overheat thermostat to approximately 10°C above the desired working temperature (5°C above the desired working temperature for incubators).
- 3.11 Units fitted with **digital overheat control. (TLK38)**  
Set the overheat controller to the desired temperature by pressing the 'P' button once to show 'SP1' then use the up or down buttons to alter the set point, press the 'P' button again to accept the change. The display will revert back to the normal display if no button is pressed for approximately 10 seconds. The operational parameters of the controller have been factory set to cover a wide range of temperature and load conditions.

- 3.12 Units fitted with **digital temperature control. (CAL 3200/9500)**  
Set the Digital Controller to the desired control temperature by: -  
Press and hold the \* button (the display will flash on and off).  
Change the set point up or down as required, using the respective buttons.  
As supplied, the controller has been set up to achieve optimum performance.  
Refer to manufacturer's instructions booklet (supplied) to make any parameter changes

Units fitted with **TECHNOLOGIC TLK39 OR K39**

Set the main temperature controller to the desired temperature by pressing the 'P' button once to show 'SP1' then use the up or down buttons to alter the set point, press the 'P' button again to accept the change. The display will revert back to the normal display if no button is pressed for approximately 10 seconds. The operational parameters of the controller have been factory set to cover a wide range of temperature and load conditions.

*Note: Top display shows Actual temperature and bottom display shows set temperature.*

## **TIMERS**

- 3.12 Units fitted with **7 day time switch.**

Set the clock by turning the dial to the right until the correct time is above the red arrow. Insert the pins into the holes in the dial for the on/off times required. The inner ring is the ON time, the outer ring the OFF. When the off time is reached, the units' heaters will be turned off.

*Note: If manual reset overheat fitted, then this will have to be pressed to energise the overheat circuit. Fan and Elements will remain off until the set on time.*

- 3.13 Units fitted with **run-back timer.**

For a timed ON period:

Set the timer to the desired period

Set the MAN / TIM switch to the TIM position

Timing will start immediately. At zero time, the heaters will be switched off.

On some (special) circuits, the timing will start on reaching the set temperature. At zero time, the heaters will be switched off.

To over-ride the timer, set the MAN / TIM switch to the MAN position.

- 3.14 Units fitted with **Tecnologic TT 34 (99.99hour).**

### **Programming of timer**

- ◆ Press 'P' for 1 sec until 'T1' appears.
- ◆ Release and the adjustable time appears.
- ◆ Press up or down to adjust
- ◆ Set the MAN TIM switch to TIM.
- ◆ Press the green reset.
- ◆ The timer will start timing down when the chamber reaches the set temperature.

#### **4 EXTRACTOR UNIT (IF FITTED)**

As supplied, the extractor requires fitting to the unit as follows: -

- 4.1 Present the extractor unit to the top of the unit.
- 4.2 Fit the extractor to the top of the unit with the 4 screws provided.
- 4.3 Plug the extractor lead into the socket on the back panel.
- 4.4 The extractor can now be switched on and off manually by the toggle switch.

#### **5 PREVENTATIVE MAINTENANCE**

- 5.1 Ensure that the unit is kept in a clean dry condition. When not in use, store in a normal warm atmosphere.

Minimum recommendations every six months: -

- 5.1 Check the operation of the overheat protection.
- 5.2 Carry out an electrical safety check (Portable Appliances) using an appropriate appliance tester operated by a competent person.
- 5.3 Check that the control temperature is maintained within limits.

The manufacturer can offer the above service on request.

#### **6 WARNING**

The following precautions should be observed:

- 6.1 Mop up any spillage from the chamber floor or damage to the element may result.
- 6.2 Position the unit away from direct sunlight or radiant heat sources when operating at incubation temperatures.
- 6.3 Space off from walls, cabinets, etc.
- 6.4 Sample trays should not be placed on the floor of the unit.
- 6.5 Take the normal precautions not to allow water to come into contact with the electrical components.
- 6.6 The outer surfaces and work chamber may be cleaned with a warm damp soapy cloth or any proprietary cleaner suitable for a painted surface. Do not use harsh abrasives or solvents on the painted surface.
- 6.7 Sterilising may be carried out using a cloth moistened diluted bleach solution or with 50:50 dilution of isopropyl alcohol in water.

The chamber must not be 'washed' with these solutions due to the risk of contact with the electrical components / wiring situated below the chamber floor.

## 7 STANDARD CONTROL PANELS

7.1 The actual panel fitted will depend on the size and style of unit supplied.

