# INSTRUCTION MANUAL

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## Introduction

Congratulations on the choice of an Australian made quality product. Labec products are manufactured, tested and calibrated to meet published standard specifications under our strict quality assurance guidelines.

This Instruction Manual is for the guidance of operators of Labec Ovens and should be read before the oven is connected to the electricity supply.

It is hoped that this manual will supply all the information that the customer should require for satisfactory operation of the oven. If, however, there are any questions that remain unanswered then the customer should contact our service department.

## Unpacking

Remove all packing and protective wrapping from both interior and exterior of the unit. Check the unit for the possible transit damage. Ensure all ordered accessories are present. If any physical damage or shortage is evident, do not discard the packaging material until the unit is inspected by the distributor, agent or manufacturer.
*NOTE: All claims for shortage or damage must be made within fourteen days (14) from delivery.*
Subject to our standard published conditions of sale, we have reasonable grounds to believe that we have ensured, so far as is reasonably practical, that the products listed in our catalogue and brochures have been designed and constructed so as to be safe and without risk to health when properly installed and used in their environment by appropriate and trained personnel, and where applicable, in accordance with our published instructions.

## Installation

**Electrical**

**This equipment must be tagged and tested according to AS/NZS3760:2003 prior to use and thereafter on a regular basis dependent upon the environment.**

It is preferable to locate the oven close to a power point and recommended that double adaptors are not used. Check the total wattage if connecting to multipoint outlets. Check the rating plate for power requirements. Installation is to be carried out by a qualified electrician in accordance with the power requirements of the product specifications.

## Location

Select a location free from draught and away from direct sunlight or other heat source.

## Temperature Control

Labec ovens are fitted with solid state proportional action digital temperature controllers which operate from a sensitive thermocouple or Rtd inserted in the working space of the chamber. The controller has been calibrated at 100°C (or 150°c for 300°c model ovens) and before any adjustments to temperature settings are made allow the oven temperature to stabilise for at least one hour. If a thermometer port is located in the top of the cabinet and it is important to ensure that the sensor for the thermometer is located well into the chamber when checking the chamber temperature. A digital controller is fitted please read the enclosed operating instructions when setting the controller temperature.

## Safety Thermostat

The oven is fitted with an over heat safety thermostat. It must be set to slightly above the desired setpoint temperature and will prevent overheating. It will maintain the temp you set on the thermostat. Set the thermostat by turning to full and allowing the chamber to stabilise at the desired set temperature. Then slowly turn the dial anticlockwise until the power to the heaters turns off (thermostat will click on and off s you pass the chamber temp) and note the temperature on the thermostat at this point. Then turn the dial clockwise again to switch the power back on. Turn the dial anticlockwise again until it is slightly above the temperature at which point you noted the chamber switched off. This is now set around 5°c above the desired setpoint and will switch off all power to the elements should the oven reach this temperature.

## Timer

If a timer is fitted set the time period (allowing for heat up time) required by turning the dial around to the correct time period. Adjust the screw at the bottom of the timer to adjust time periods (do not adjust the screw at the top). After the time period elapses the fan and controller remain on but the heaters will switch off. To reset turn the mains power off then on again.

## Description of Controls

See Appendix A

## Caution

Please observe the following safety measures before using your LABEC equipment. Please read and follow the IQOQ document supplied with this oven each and every use.

1. These units are **NOT FLAME PROOF** and under no circumstances should inflammable, combustible or explosive material be placed in the unit.
2. Low ignition temperature materials and those materials which give off inflammable or explosive vapors should not be placed in the unit.
3. Avoid heating substances which give off corrosive vapor.
4. Users are advised of the dangers of heating combustible materials. The manufacturer can recommend special types of elements which will prohibit the units temperature reaching known ignition points.
5. Observe those rules pertaining to wiring and installation of electrical appliances as recommended by the local supply authority.

**WARNING**

It is detrimental for any of the substances listed below to be inside this equipment. The interior of the unit may be damaged if exposed to any of them. Corrosion of the stainless steel and other surfaces will be directly attributable to the presence of one or more of these substances and will not be a defect or failure for which the manufacturer will accept responsibility.

| ORGANIC SUBSTANCES | SALT | ACIDS | MISCELLANEOUS |
|---|---|---|---|
| ALKAFORM | AMMONIUM BROMIDE | ACETIC | BROMIDE |
| ANAESTHESIA | AMMONIUM CHLORIDE | BORIC | CHLORINE |
| CARBON | CALCIUM CHLORIDE | CARBOLIC (PHENOL) | FLUORINE |
| TETRACHLORIDE | CALCIUM HYPOCHLORITE | CHROMIC | IODINE |
| FORMALDEHYDE | FERRIC CHLORIDE | HYDROCYAIC | SULPHUR DIOXIDE |
| LYSOL(CRESOLS ETC) | HYDROGEN PEROXIDE | NITRIC | |
| TRICHLORETHYLENE | MAGNESIUM CHLORIDE | OXALIC | |
| | MERCURIC CHLORIDE | HYDROCHLORIC | |
| | POTASSIUM CHLORIDE | PHOSPORIC | |
| | POTASSIUM HYPOCHLORITE | SULPHURIC | |

| | | | |
|---|---|---|---|
| | POTASSIUM HYPOCHLORITE | SULPHUROUS | |
| | SODIUM CHLORIDE | TARTARIC | |
| | SODIUM HYPOCHLORITE | | |

## Operation

1. Connect the chamber to an alternating current supply of voltage specified on the rating plate mounted on the side or rear of the chamber.

**DANGER: THIS UNIT MUST NOT BE CONNECTED TO DIRECT CURRENT SUPPLY**

2. Turn on the mains and check to see that the illuminating lamp is illuminated.
3. Set the target temperature or set point temperature using the up and down arrows on the front of the controller.
4. Final adjustment of the temperature controller may be required after the chamber has reached operating temperature and this should be checked with a suitable thermometer located in the chamber (A thermometer is not supplied with the chamber).
5. Loading the Oven -Shelves shall be of such design as will not impede the circulation of fresh air or the exhaust from the oven. It has been demonstrated experimentally, that the use of grid-type shelves covering more than one half of the shelf area may lead to considerable increase temperature differential. Notwithstanding the requirements of this clause, serious blockage may occur when the oven is heavily loaded with stock. The best procedure in such cases is to insert the loaded shelves after heating up the oven. **To ensure even heat and air distribution leave gaps between the products on the shelves and a minimum of 50mm from each of the walls, back and door to allow air to pass around the product**. Never allow product to touch or contact the rear wall where the elements are located as this may result in fire as the element surface temperature is much hotter than the overall air temperature in the oven and may ignite if contacted with.

## Trouble Shooting

| SYMPTOM | REMEDY |
|---|---|
| No Power<br>(Indicator Light is off) | 1. Check oven is plugged in and power switched on.<br>2. Ensure mains power supply point is functioning by using a test appliance on power socket.<br>3. Check the internal RCD has not tripped. |
| Failure to heat or maintain temperature<br>(Indicator light is on) | 1. Check the timer is set correctly.<br>2. Check the timer is reset (turn off/on)<br>3. Ensure the temperature controller set point is above ambient.<br>4. Check the safety controller fitted is above the main controller setting. |

If the fault cannot be found call your distributor or the manufacturer quoting the serial number of the unit from the manufacturers label.

## Heating

Heating of the oven is by means of heating elements located in the air duct surrounding the working chamber.

## Safety Information

Isolate the oven from the electrical supply before changing elements or thermocouples or undertaking other routine maintenance. Ensure that the oven is cold.

When reconnecting the oven, ensure that the electrical connections are sound including earth supply continuity.

Wear appropriate safety clothing when operating the oven, including a heat resistant face shield (tinted for eye protection), gloves and apron.

Load and unload "hot" work with oven tongs.

Do NOT use the oven in the presence of inflammable or combustible chemicals: fire or explosion may result. To avoid fire, do not expose combustible materials to heat from the open oven door.

## Safety Note Insulation

This oven contains rockwool fibres in its thermal insulation. The materials used may be in the form of fibre blanket or felt, vacuum formed board or shapes, mineral wool slab or loose fill fibre. Normal use of the oven will not result in any significant level of airborne dust from these materials; but much higher levels may be encountered in maintenance or repair.

Whilst there is no evidence of any long-term health hazards, we strongly recommend that safety precautions are taken whenever the materials are handled.

Exposure to dust from fibre which has been used at high temperature may cause respiratory disease.

When handling fibre always use an approved mask, eye protection, gloves and long sleeved clothing.

After handling, rinse exposed skin with water and wash work clothing separately.

Before commencing any major repairs we recommend reference to:

- ECFIA Bulletin Number 11
- Guidance Note EH46 (U.K. Health and Safety Executive.)

We will be pleased to provide further information on request. Alternatively our Service department will quote any repairs to be carried out at your premises or at our works.

## Maintenance

The chamber is manufactured from stainless steel and may be cleaned with a solvent and if grained stainless steel chamber a stainless steel scratch pad may be used. The pad should be rubbed in the same direction as the grain pattern of the stainless steel.
Ovens are fitted with a fan motor with pre lubricated and sealed bearings which should not require maintenance for some time depending upon extent of usage. The shelves are manufactured from chrome plated steel and a non abrasive cleaner should be used. The silicone door gasket should be cleaned with detergent only ensuring it is dried completely after washing.

## Declaration of Conformity

Each product is thoroughly inspected and tested to not only ensure that it meets the specifications provided, but to also meet Australian Electrical Standard AS3820 and EMC Standard AS/NZ1044:1995,and therefore being accredited with a C Tick label.