



INSTRUCTION MANUAL



Laboratory Equipment Pty Ltd

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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 Heating Block and should be read before the unit 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 heating block. 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 shortages are 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/NZS3760:2010 prior to use and thereafter on a regular basis dependent upon the environment.

It is preferable to locate the heating block 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 heating blocks 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 250°C and before any adjustments to temperature settings are made allow the heating block temperature to stabilise for at least one hour. If a digital controller is fitted please read the enclosed operating instructions when setting the controller temperature. AL4 is the alarm setting and will cut off power at the set value.

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 heating block 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 heating block 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

1. Turn on the mains and check to see that the illuminating lamp is illuminated.
2. Set the target temperature or set point temperature using the up and down arrows on the front of the controller.
3. Final adjustment of the temperature controller may be required after the heating block has reached operating temperature and this should be checked with a suitable thermometer located in the heating block (A thermometer is not supplied with the unit).

Trouble Shooting

SYMPTOM	REMEDY
No Power (Indicator Light is off)	<ol style="list-style-type: none"> 1. Check heating block is plugged in and power switched on. 2. Ensure mains power supply point is functioning by using a test appliance on power socket. 3. Check the internal RCD has not tripped.
Failure to heat or maintain temperature (Indicator light is on)	<ol style="list-style-type: none"> 1. Check the timer is set correctly. 2. Check the timer is reset (turn off/on) 3. Ensure the temperature controller set point is above ambient. 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 unit is by means of heating elements located under the aluminum block

Safety Information

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

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

Wear appropriate safety clothing when operating the heating block, 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 heating block in the presence of inflammable or combustible chemicals: fire or explosion may result. To avoid fire, do not expose combustible materials to heat .

Safety Note Insulation

This heating block 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 heating block 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.

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.