

# OPERATING INSTRUCTIONS

## 60 L Water Bath

### 45-6490

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<i>In the interests of improving and updating its equipment, ELE reserves the right to alter specifications to equipment at any time</i> <b>ELE International 2006 ©</b>		

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WEEE Directive		

## 1 Safety

This equipment has been tested and is safe to use providing that the proper safety precautions are observed:

***Do not use this equipment in any manner, other than as specified in this user manual; misuse may result in serious injury to personnel.***

***Do not attempt to operate the equipment with covers removed.***

***Only connect to the correct electrical supply. Equipment voltage setting is stated on the fuse cover of the appliance inlet module.***

***Refer to Installation section before installing machine.***

***Do not operate machine with wet hands.***

Please read this entire manual before unpacking, setting up or operating this equipment. Pay particular attention to all **DANGER** and **CAUTION** statements. Failure to do so could result in serious injury to the operator, or other personnel, or damage to the equipment.

### 1.1 Key to hazard information

**DANGER :**

Indicates a potentially or imminently hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION :**

Indicates a potentially hazardous situation that may result in minor or moderate injury.

**Important Note:** Information that requires special emphasis.

**Note:** Information that supplements points in the main text.

## 2 Introduction

- 2.1 The 60 L water bath is suitable for thermally conditioning Marshall samples prior to the Marshall stability test for both BS598 and EN12697-34 standards.
- 2.2 The bath is equipped with an advanced and accurate water temperature control system with a mechanical water circulating unit which will maintain a constant temperature of 60 +/- .5°C throughout the bath.
- 2.3 The water bath is supplied with a lid to minimise heat loss and water evaporation during use and the bath can condition up to 29 Marshall samples at one time.
- 2.4 For a full understanding of the conditioning process of Marshall samples, consultation of the required standard is recommended.

## 3 Specification

Maximum sample capacity	29
Supply voltage	230 VAC, 50/60Hz
Power consumption	1500W
Fuse	8 Amp (Fast blow) X 2
Maximum water capacity	60 L
Temperature range (Ambient)	5 - 40°C
Humidity range (Ambient)	30% - 90%
Certification	CE

## 4 Installation

- 4.1 When unpacking make sure the water bath is not damaged or any parts are missing.
- 4.2 It is recommended that the bath is located on a bench top near the samples to be stability tested, to minimise any drop in sample temperature when removed from the bath.
- 4.3 Fill the bath with water to the required level above the sample height before making any electrical connections to mains power. **Note:** during filling make sure the water does not accidentally access the top ventilation slats on the water bath.

## 5 Electrical Power Supply

### *Electrical Safety*

**Danger :** Before removing any cover or performing maintenance repair and service, isolate from electrical supply by removing mains plug. Where mains supply is required during these activities, only competent persons should perform the work.

**Danger :** Installation and servicing must be carried out by a qualified person.

**Danger :** A good low impedance Protective Earth Ground connection is required for this product.

**Danger :** It is recommended that this equipment is connected to a mains supply using an RCCB "Residual Current Circuit Breaker" for extra electrical safety protection.

**Danger :** Check that the power supply is compatible with the requirements stated on the voltage label on the unit and connect in accordance with IEE regulations or to local requirements.

**Danger :** Do not use the bath with wet hands. Dry hands carefully before touching any part of the bath or controls.

Power Cable is coded as follows:-

Brown wire	L	Live or Power
Blue wire	N	Neutral
Green/Yellow wire	E	Earth or Ground

## 6 Operation

**Caution :** Always use suitable protective garments to protect the operator from burns and scalds during use.

- 6.1 Never switch on the bath without it firstly being filled with water to the correct depth.
- 6.2 Switch on the bath using the green mains switch which will then illuminate. At the same time the LED display will show the current water temperature. The temperature of the water will slowly increase until it reaches the set temperature (see section 6.6 to change required set temperature). The stirrer unit should also be functioning.
- 6.3 Once the samples have been carefully placed into the bath it is essential to place the lid in position to minimise heat loss and evaporation of water.
- 6.4 During the heating process it is important to verify the water temperature of the bath using a glass thermometer. It might be necessary to slightly offset the set temperature to compensate for small errors. The lid has a small hole in one corner for this purpose.
- 6.5 Follow the required standard for temperature settings and sample soaking times.

- 6.6 The factory pre-set temperature is normally set to 37.8°C. To change the set temperature of the bath press the button marked "P" on the controller and, using the up and down arrows, adjust the display to the required set figure. By holding the arrows for an extended period this will speed up the increments. Once set the controller will automatically revert to the normal real-time temperature display.
- 6.7 During the sample conditioning process it is important to check that the height of the water has not dropped due to evaporation of the water. Replace as necessary.
- 6.8 Once the soaking process is finished and the samples removed, the bath can be switched off.

## **7 Maintenance**

**Danger** : Isolate the bath from the mains power supply before attempting any cleaning processes.

**Caution** : Make sure the water temperature has dropped to a safe level prior to any maintenance.

- 7.1 After repeated use it is recommended that sample debris is removed and the inside of the bath cleaned by initially removing the mains power supply, then removing the lower tray to access the bottom of the bath.

**Note:** Take care not to damage the heating element and thermostat probe.

- 7.2 The outer surfaces should only be cleaned with a soft dry cloth.
- 7.3 If the water bath is not used for any length of time, it is recommended that the mains power supply is disconnected and all the water drained from the bath prior to storage.

## **8 Trouble shooting**

If the mains switch does not illuminate when switched on, check the electrical power supply and plug for errors. Check the 2 fuses are intact.

If the switch light comes on but the bath does not heat up, the element could be damaged or the controller is not functioning correctly (contact ELE service department).

## **9 Spares**

Please contact ELE service department for any spares requirements.

## DIRECTIVE ON WASTE ELECTRICAL & ELECTRONIC EQUIPMENT (WEEE)



Electrical equipment marked with this symbol may not be disposed of in European public disposal systems after 12 August of 2005. In conformity with European local and national regulations (EU Directive 2002/96/EC), European electrical equipment users must now return old or end-of life equipment to the Producer for disposal at no charge to the user.

**Note:** For return for recycling, please contact the equipment producer or supplier for instructions on how to return end-of-life equipment for proper disposal.

**Important document. Retain with product records.**

### GERMAN

Elektrogeräte, die mit diesem Symbol gekennzeichnet sind, dürfen in Europa nach dem 12. August 2005 nicht mehr über die öffentliche Abfallentsorgung entsorgt werden. In Übereinstimmung mit lokalen und nationalen europäischen Bestimmungen (EU-Richtlinie 2002/96/EC), müssen Benutzer von Elektrogeräten in Europa ab diesem Zeitpunkt alte bzw. zu verschrottende Geräte zur Entsorgung kostenfrei an den Hersteller zurückgeben.

**Hinweis:** Bitte wenden Sie sich an den Hersteller bzw. an den Händler, von dem Sie das Gerät bezogen haben, um Informationen zur Rückgabe des Altgeräts zur ordnungsgemäßen Entsorgung zu erhalten.

**Wichtige Informationen. Bitte zusammen mit den Produktinformationen aufbewahren.**

### FRENCH

A partir du 12 août 2005, il est interdit de mettre au rebut le matériel électrique marqué de ce symbole par les voies habituelles de déchetterie publique. Conformément à la réglementation européenne (directive UE 2002/96/EC), les utilisateurs de matériel électrique en Europe doivent désormais retourner le matériel usé ou périmé au fabricant pour élimination, sans frais pour l'utilisateur.

**Remarque :** Veuillez vous adresser au fabricant ou au fournisseur du matériel pour les instructions de retour du matériel usé ou périmé aux fins d'élimination conforme.

**Ce document est important. Conservez-le dans le dossier du produit.**

### ITALIAN

Le apparecchiature elettriche con apposto questo simbolo non possono essere smaltite nelle discariche pubbliche europee successivamente al 12 agosto 2005. In conformità alle normative europee locali e nazionali (Direttiva UE 2002/96/EC), gli utilizzatori europei di apparecchiature elettriche devono restituire al produttore le apparecchiature vecchie o a fine vita per lo smaltimento senza alcun costo a carico dell'utilizzatore.

**Nota:** Per conoscere le modalità di restituzione delle apparecchiature a fine vita da riciclare, contattare il produttore o il fornitore dell'apparecchiatura per un corretto smaltimento.

**Documento importante. Conservare con la documentazione del prodotto.**

### DANISH

Elektriske apparater, der er mærket med dette symbol, må ikke bortskaffes i europæiske offentlige affaldssystemer efter den 12. august 2005. I henhold til europæiske lokale og nationale regler (EU-direktiv 2002/96/EF) skal europæiske brugere af elektriske apparater nu returnere gamle eller udtjente apparater til producenten med henblik på bortskaffelse uden omkostninger for brugeren.

**Bemærk:** I forbindelse med returnering til genbrug skal du kontakte producenten eller leverandøren af apparatet for at få instruktioner om, hvordan udtjente apparater bortskaffes korrekt.

**Vigtigt dokument. Opbevares sammen med produktdokumenterne.**

#### SWEDISH

Elektronikutrustning som är märkt med denna symbol kanske inte kan lämnas in på europeiska offentliga sopsstationer efter 2005-08-12. Enligt europeiska lokala och nationella föreskrifter (EU-direktiv 2002/96/EC) måste användare av elektronikutrustning i Europa nu återlämna gammal eller uttrangerad utrustning till tillverkaren för kassering utan kostnad för användaren.

**Obs!** Om du ska återlämna utrustning för återvinning ska du kontakta tillverkaren av utrustningen eller återförsäljaren för att få anvisningar om hur du återlämnar kasserad utrustning för att den ska bortskaffas på rätt sätt.

**Viktigt dokument. Spara tillsammans med dina produktbeskrivningar.**

#### SPANISH

A partir del 12 de agosto de 2005, los equipos eléctricos que lleven este símbolo no deberán ser desechados en los puntos limpios europeos. De conformidad con las normativas europeas locales y nacionales (Directiva de la UE 2002/96/EC), a partir de esa fecha, los usuarios europeos de equipos eléctricos deberán devolver los equipos usados u obsoletos al fabricante de los mismos para su reciclado, sin coste alguno para el usuario.

**Nota:** *Sírvase ponerse en contacto con el fabricante o proveedor de los equipos para solicitar instrucciones sobre cómo devolver los equipos obsoletos para su correcto reciclado.*

**Documento importante. Guardar junto con los registros de los equipos.**

#### DUTCH

Elektrische apparatuur die is voorzien van dit symbool mag na 12 augustus 2005 niet meer worden afgevoerd naar Europese openbare afvalsystemen. Conform Europese lokale en nationale wetgeving (EU-richtlijn 2002/96/EC) dienen gebruikers van elektrische apparaten voortaan hun oude of afgedankte apparatuur kosteloos voor recycling of vernietiging naar de producent terug te brengen.

**Nota:** *Als u apparatuur voor recycling terugbrengt, moet u contact opnemen met de producent of leverancier voor instructies voor het terugbrengen van de afgedankte apparatuur voor een juiste verwerking.*

**Belangrijk document. Bewaar het bij de productpapieren.**

#### POLISH

Sprzęt elektryczny oznaczony takim symbolem nie może być likwidowany w europejskich systemach utylizacji po dniu 12 sierpnia 2005. Zgodnie z europejskimi, lokalnymi i państwowymi przepisami prawa (Dyrektywa Unii Europejskiej 2002/96/EC), użytkownicy sprzętu elektrycznego w Europie muszą obecnie przekazywać Producentowi stary sprzęt lub sprzęt po okresie użytkowania do bezpłatnej utylizacji.

**Uwaga:** *Aby przekazać sprzęt do recyklingu, należy zwrócić się do producenta lub dostawcy sprzętu w celu uzyskania instrukcji dotyczących procedur przekazywania do utylizacji sprzętu po okresie użytkowania.*

**Ważny dokument. Zachować z dokumentacją produktu.**

#### PORTUGUESE

Qualquer equipamento eléctrico que ostente este símbolo não poderá ser eliminado através dos sistemas públicos europeus de tratamento de resíduos sólidos a partir de 12 de Agosto de 2005. De acordo com as normas locais e europeias (Directiva Europeia 2002/96/EC), os utilizadores europeus de equipamentos eléctricos deverão agora devolver os seus equipamentos velhos ou em fim de vida ao produtor para o respectivo tratamento sem quaisquer custos para o utilizador.

**Nota:** *No que toca à devolução para reciclagem, por favor, contacte o produtor ou fornecedor do equipamento para instruções de devolução de equipamento em fim de vida para a sua correcta eliminação.*

**Documento importante. Mantenha junto dos registos do produto.**