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1. INTRODUCTION.

- 1.1** Thank you for purchasing your kiln from Castle Kilns Ltd. We have taken every step to ensure your kiln arrives at your premises in safe condition. However before unpacking your kiln please inspect the container and packing to ensure that no physical damage has occurred in transit.
- 1.2** In the event that visual inspection damage through transit, the buyer must inform Castle Kilns Ltd in writing within 24 hours from receipt of goods.
- 1.3** Failure to notify any transit damage within 24 hours from receipt of goods may result in claims been refused by our nominated hauler.

2. UNPACKING THE KILN.

- 2.1** Ensure that the kiln is handled carefully when unpacking.
- 2.2** Do not use sharp objects to undo any packing materials.
- 2.3** On no account should any lifting slings or hooks be used to lift the kiln.
- 2.4** On no account should the kiln be manoeuvred using the kiln lid or door for leverage.
- 2.5** After removal of all packing materials check and ensure; -
 - a. That the heating elements have not been dislodged from the element grooves. Carefully replace any heating elements that have been dislodged. If in doubt contact Castle Kilns Ltd for instructions.
 - b. That there is no brickwork damage.
 - c. Report any damage or defects immediately.
- 2.6** Failure to comply with the above may invalidate any claims under the guarantee (see section 1).
- 2.7** Do not remove the ceramic fibre seal from around the Lid, as this is part of the insulation. Removal of the seal fibre will damage your kiln and invalidate any guarantees.
- 2.8** Do not remove the ceramic fibre blanket from the base, as this is part of the insulation material protecting the base steel work. Removal of the base insulation will damage your kiln and invalidate any guarantees.

3. ACCESSORIES.

- 3.1** Included with the kiln will be the following accessories; -
 - Controller with lead and "Harting Plug" (if purchased with the kiln)
 - Ceramic Plugs

One Base Batt

Kiln Furniture Set (optional)

4. KILN POSITIONING.

- 4.1** Position the kiln on a solid flat floor.
- 4.2** Ensure that the floor is from non-combustible materials.
- 4.3** Position the kiln at least 230 mm (9") from all vertical surfaces.
- 4.4** Ensure that all vertical surfaces are from none combustible materials.
- 4.5** Ensure that a minimum clearance of 760 mm (18") is maintained above the kiln when firing.
- 4.6** Ensure that the kiln room has adequate ventilation. Castle Kilns Ltd recommend the kiln room to be fitted with a high-level extractor fan and a low-level fresh air inlet (door louver panel for example).
- 4.7** After final position ensure that the kiln locking castors are secured in locked position.
- 4.8** Locate the kiln near to the electrical power supply.
- 4.9** **Under normal circumstances the kiln is not classed as a fire risk.** Should the kiln be placed in a wooden shed or close to inflammable materials it may be advisable to take certain precautions. If in doubt, consult your local Fire Officer for advice.

5. ELECTRICAL CONNECTION (TO THE MAINS).

- 5.1** All electrical connection and wiring to be carried out by an approved and qualified electrical engineer.
- 5.2** All electrical supplies to the kiln must be fused. A fused isolator fitted near to the kiln is recommended.
- 5.3** Under no circumstances should the kiln be used with an extension lead or any other temporary arrangement.
- 5.4** Check the electrical requirements and power rating on the kiln data label and ensure the power supply to the kiln is adequate.
- 5.5** All "Studio" Top Loading Electric Kilns can be used with single (220/230 volt) or three phase (380/415 volt). The electrical supply is normally specified at the time of the order and is stated on the kiln data plate.
- 5.6** Where the kiln is supplied as single phase and only three-phase electric is available, a three-phase connection kit is available from Castle Kilns Ltd.
- 5.7** Ensure that all mains cables leading to the kiln are kept well away from any hot surfaces.
- 5.8** Ensure that all connection chamber covers are secured in position prior to using the kiln.

- 5.9** Do not use the kiln where connection chamber panels or covers are removed.
- 5.10** Do not use the kiln with faulty cabling.
- 5.11** Castle Kilns Ltd accepts no responsibility what so ever for kilns not fitted by an approved and qualified electrical engineer and in accordance with I.E.E. Regulations.

6. OPERATING THE KILN.

6.1 Lid Safety Interlock.

All kilns from the "Studio" range are fitted with an electromechanical lid safety interlock, which will disconnect the electricity supply to the heating elements.

The lid safety interlock will disconnect the power when the lid is opened above 25 mm.

The lid safety interlock has been factory set to fine limits. Ensure that the operation of the lid safety lock has not been effected by transit.

The lid safety interlock must be disconnected prior to opening the lid.

To disconnect the lid safety interlock, rotate the safety interlock "T-Bar Key" anticlockwise until it releases under engaged.

6.2 Opening and Closing the Kiln Lid.

The "Studio" STL No. 74 has one lid locking point. The STL No. 112 and STL No. 151 have 2 lid locking points.

Do not over tighten the locking points as this causes damage to the kiln brickwork and lid.

All kilns are fitted with either one or two lift/lower lid stays. Both stays incorporate a simple push type brake, which will hold the lid in the open position. The right hand stay also has a flat locking key located below the break release to lock the lid in any opened position and prevent accidental closure.

When lifting / opening the lid leave the locking key pointing to the front. This ensures that the brakes are operated at all points throughout the lifting motion.

When lowering the lid support the lid handle, turn the lid stay arm-locking key through 180 degrees so that it points to the rear. This automatically realises the break on the right side enabling the lid to be lowered using the handle whilst realising the break pressure on the left hand lid stay.

Always ensure the lid is fully closed by realising both breaks before locking the lid in the fully closed position prior to firing.

6.3 Drying Out and Element Oxidising Fire.

Prior to firing any product it is **vital** to perform an initial drying out fire. This will dry out any moisture in the kiln brick and oxidising the heating element surface.

Failure to carry out a drying out and element oxidising firing will reduce the life of the brickwork and the heating elements and will invalidate any guarantee.

Procedure.

The drying out and element oxidising fire should be performed with an **empty kiln** together with kiln furniture.

Remove the ventilation plugs in the sides and the lid and take the temperature up to 580°C at a temperature rise of no more than 100°C per hour. After 580°C the plugs can be refitted and the kiln taken up to 1100°C over several hours.

When cooling it is recommended to leave the ventilation plugs in place for at the least the first hour of cooling to prevent product thermal shock and to ensure glaze maturity.

On no account must the kiln be fired above the maximum temperature rating of the kiln as designated on the kiln data plate. Failure to comply will damage the kiln and invalidate the guarantee.

6.4 Heating Elements.

The heating elements are spiral wound type rated to suit the kiln and the voltage stated on the kiln data plate. Variations in voltage will affect the performance of the kiln. If in doubt please consult our technical depart for advice.

Always replace damaged heating elements with Castle Kilns Ltd heating elements to ensure the correct specification and quality. Elements supplied from other sources may affect the temperature distribution in the firing chamber.

When the kiln is normally used at temperatures below 900°C (decorating firing) it is advisable to fire the kiln empty periodically to 1100°C to re-oxidising the elements. This will prevent stress relieving of the wire that will result in element coils distorting and reducing the performance of the element. If in doubt please consult our technical department.

6.5 Temperature Controller.

Ensure that you are fully conversant with the Temperature Controller and its operation (see attached controller manual for details).

Never place the Temperature Controller on the kiln or next to excessive heat.

7 LOADING AND UNLOADING THE KILN.

- 7.1** Place Base Batt on top of ceramic Blanket in the base of the Kiln.
- 7.2** Ensure the clearance from the base batt to the sidewall is approx. 25 mm all round. Failure to ensure adequate clearance will affect firing conditions and temperature distribution.
- 7.3** Ensure that all props for further kiln furniture are placed over the base batt support brickwork. The position of these are marked with an "X" on the inside brickwork of the Kiln.

- 7.4** Ensure that all further batts maintain a minimum clearance from the batt to the sidewall of approx. 25 mm all round.
- 7.5** Do not fire the kiln with batts that are bent, cracked or broken.
- 7.6** Do not fire the kiln with prop supports that are bent or show signs of breakage.
- 7.7** Always ensure when direct placing on the batts that the batt is coated evenly with a proprietary batt wash to prevent sticking / plucking.
- 7.8** When loading and unloading the kiln, be careful not to damage or disturb the thermocouple sensing element. The thermocouple insertion length into the chamber has been set prior to despatch at our factory. The insertion length is important to the firing and operation of the kiln and should not be altered.
- 7.9** Never load product too close to the heating elements to avoid product "hot spots"

8 Ware.

- 8.1** Ensure that all ware is completely dry before commencing any firing (wet ware has been known to explode).
- 8.2** Do not place ware too close to the heating elements otherwise scorching or denting may occur.
- 8.3** Distribute the ware equally over each batt and avoid over filling.
- 8.4** Try to keep taller pieces together.
- 8.5** Try to keep smaller pieces together.
- 8.6** Maintain at least 25 mm from the top of the tallest piece to the under side of the next batt.
- 8.7** When loading and unloading the kiln, be careful not to damage or disturb the thermocouple sensing element.
- 8.8** Prior to commencement of firing remove the ventilation plugs to allow through circulation and to remove any excess product moisture and to vent off any cover coats etc.
- 8.9** Replace the ventilation plugs after approx. 100°C. This will depend on the product being fired and the working practices employed by the buyer.

9 GUARANTEE.

9.1 Guarantee period; -

12 months from date of despatch unless otherwise specified and agreed in writing.

9.2 Inclusions; -

Defective parts

Faulty workmanship

Any other items specified and agreed in writing prior to despatch

9.3 Replacement / Repairs under the guarantee.

All replacement goods or faulty parts must be returned to Castle Kilns Ltd post paid by the buyer prior to any replacement approval.

Castle Kilns Ltd reserves the right to repair or replace defective or damaged parts at their discretion.

Castle Kilns Ltd will only repair parts that become defective under normal and proper use and subject to the listed exclusions.

Castle Kilns Ltd reserves the right to appoint an approved sub contract engineer to carry out any repairs or work covered under the guarantee.

9.4 Exclusions; -

Kiln damaged or malfunctioning due to incorrect electrical supply and or installation.

Any controllers supplied and fitted to the kiln by the buyer or a third party must be approved by Castle Kilns Ltd. Failure to get approval may invalidate the guarantee.

Kiln allowed to exceed maximum temperature stated on the kiln data plate for whatever reason.

Heating Elements.

Replacement of Insulation Materials and Kiln Furniture being damaged or distorted due to temperatures above the rated temperature stated on the kiln data plate.

Kiln used for reduction firing, paper mixed with clay, salt glaze firing, raku firing.

Kilns subjected to abuse, neglect, transit damaged or improper storage.

Fair Ware and Tear.

Consequential losses of any kind.

10 EQUIPMENT COMPLIANCE

10.1 The kiln complies with E.U. Directives Electromagnetic Compatibility and Low Voltage Equipment.

10.2 Fitting of any substandard or non-recommended replacement parts may invalidate any Declaration of Conformity.

10.3 When a temperature controller is connected to the kiln, this becomes part of the equipment and as such must comply with E.U. Directives.

10.4 All controllers fitted to the kiln by Castle Kilns & Furnaces Ltd comply with E.U. Directives.

10.5 Any controllers fitted to the kiln by the buyer or a third party must comply with E.U. Directives.

**1 Castle Kilns Ltd.
Unit 2, Trent House
Dunning Street
Tunstall
Stoke on Trent
Staffs ST6 5AP
England**

2 Contact details for reporting the following; -

- **Damage in transit**
- **Guarantee claims**
- **Spares & Service**

PHONE: + 44 (0) 1782 821 500 / + 44 (0) 1782 818 414

FAX: +44 (0) 1782 819 700

E-MAIL: sales@castlekilns.com

11 KILN DATA PLATE.

12.1 In order to efficiently process any enquiries regarding your kiln we advise you to make a note of the information detailed on the kiln data plate together with any other information that may assist us.

<u>KILN DATA PLATE</u>	
Type.....	Model.....
Serial No.....	Date.....
Voltage.....	Phase.....
Amps.....	Kw.....

12 NOTES.

Date of Purchase		Date of Installation	
Controller Type		Controller Model No.	
Type of Ware		Firing Type (i.e. biscuit)	
Max. Firing Temperature		Firing Time (to end of soak)	
Firings Per Week		Service Agreement No.	

NOTES

