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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; -

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.

That there is no brickwork damage.

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 door, as this is part of the insulation. Removal of the seal fibre 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 kiln).
 - Kiln furniture set (optional).
- 3.2 Check that the accessories are completed and undamaged.
- 3.3 Report any items that are missing or damaged in writing within 24 hours.

4. KILN POSITIONING.

- 4.1 Position the kiln on a solid flat floor.
- 4.2 Ensure that the kiln 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 & Furnaces Ltd recommends the kiln room be fitted with a high-level extractor fan and a low-level fresh air inlet (door louver panel for example).
- 4.7 Locate the kiln near to the electrical power supply.
- 4.8 **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 certain precautions. If in doubt, consult your local Fire Officer for advice.
- 4.9 In certain circumstances it may be necessary to vent the waste heat or products of combustion. On these occasions it is possible to provide a canopy and flue pipe (at extra cost) to suit the site requirements.

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 Most "Designer" Front 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 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 Door Safety Interlock.

- 6.1.1 All kilns from the "Designer" range are fitted with an electromechanical door safety interlock, which will disconnect the electrical supply to the heating elements.
- 6.1.2 The door safety interlock will disconnect the power when the door is opened above 25mm.
- 6.1.3 The door safety interlock has been factory set to fine limits. Ensure that the operation of the door safety lock has not been effected by transit.
- 6.1.4 The door safety interlock must be disconnected prior to opening the door.
- 6.1.5 To disconnect the door safety interlock rotate the safety interlock "T-Bar Key" anticlockwise until it releases under spring action.
- 6.1.6 To reconnect power aligns the "T-Bar Key" with the interlock keyhole and push down and turn clockwise until engaged.

6.2 Drying Out and Element Oxidising Fire.

- 6.2.1 Prior to firing any products it is vital to perform an initial drying out fire. This will dry out any moisture in the kiln brick and oxidise the heating element surface.
- 6.2.2 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. Some fine cracks may appear, but will not be determined to the kilns operation.
- 6.2.3 **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 least the first hour of cooling to prevent thermal shock and to ensure glaze maturity.

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

6.3 Heating Elements.

- 6.3.1 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 department for advice.
- 6.3.2 Always replace damaged heating elements with Castle Kilns Ltd to ensure the correct specification and quality. Elements supplied from other sources may affect the temperature distribution in the firing chamber.
- 6.3.3 When the kiln is normally used at temperatures below 900°C (decoration firing) it is advisable to fire the kiln empty periodically to 1100°C to re-oxidise the elements. This will prevent stress relieving of the wire, which will result in element coils distorting and reducing the performance of the element. If in doubt please consult our technical department.
- 6.3.4 Heating elements may "hum" – particularly when the kiln is first switched on. This is quite normal.

6.4 Temperature Controller.

- 6.4.1 Ensure that you are fully conversant with the Temperature Controller and its operation (see controller manual for full details)
- 7.4.1 Never place the Temperature Controller on the kiln or next to excessive heat.

7 LOADING AND UNLOADING THE KILN.

- 7.1 All "Designer" kilns are provided with one vase batt as standard. Ensure that the base batt has not been dislodged during transit and sits firmly on the support brickwork beneath.

- 7.2 Ensure the clearance from the base batt to the sidewall is approx. 25 mm all around. 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.
- 7.4 Ensure that all further batts maintain a minimum clearance from the batt to the sidewall of approx. 25mm all around.
- 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 products "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 dunting 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 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. 300 - 400°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 the 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 Replacements/Repairs under the guarantee.

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

All replacement goods or parts will be returned to the buyer with the post paid by Castle Kilns Ltd.

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

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

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 temperature above the rated temperature stated on the kiln plate.

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

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

Fair ware and tear.

Consequential losses of any kind.

10 EQUIPMENT COMPLIANCE.

10.1 The kiln complies with E.U. Directories concerning electromagnetic compatibility and low voltage equipment.

10.2 Fitting to 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 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.

11 CONTACT DETAILS FOR REPAIRS, SPARES AND SERVICING.

11.1 Address; -

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

11.2 Contact Details Reporting Damage in Transit; -

Department	Despatch
Phone	+44 (0) 1782 818 414
Fax	+44 (0) 1782 819 700
E-mail	sales@castlekilns.com

11.3 Contact Details for Guarantee claims; -

Department	Guarantee & Claims Department
Phone	+44 (0) 1782 821 500
Fax	+44 (0) 1782 819 700
E-mail	sales@castlekilns.com

11.4 Contact Details for Spares, Repairs and Service Requirements; -

Department	Spares and Service
Phone	+44 (0) 1782 818 414
Fax	+44 (0) 1782 819 700
E-mail	sales@castlekilns.com

12 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.

KILN DATA PLATE

Type.....	Model.....
Serial No.....	Date.....
Voltage.....	Phase.....
Amps.....	Kw.....

13 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

