EN Range
Instruction manual.

2022

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EN Range Instructions

Thank you for choosing to purchase one of the EN range of kilns for your Enamelling and Jewellery work.

We hope you will have many years happy use out of your kiln.

The EN range is very much a tried and tested formula. One that has seen this range of kilns provide reliable service in both educational and studio use for over 2 decades.

Please read this manual fully to get to know your kiln before use.

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Safety notices

Your EN is designed and built to meet all European Directives and British Standards.
However, as with all kilns, there are certain measures that you must take to achieve optimum safety.

Electricity
The EN range meets all Electrical Safety Directives, including a door safety switch. However, the kilns are electric and as such certain measures should be taken.

Keep the kiln dry.

Never attempt to remove any of the kiln covers or do any repair work when the kiln is plugged into a mains electricity socket or with the isolator turned on.

Never use the kiln if external cables are damaged.

Have the kiln tested by a competent person at least every 12 months.

Hot Surfaces
The kiln will have hot surfaces. Do not touch the kiln when it has been on for any period of time as the case temperatures will rise with time.

Keep pets clear at all times.

Keep the kiln clear of flammable items such as curtains etc.

Your new arrival

For your records
Date of purchase. _____

Company purchased from _____

First date of use _____

Unpacking your kiln
Once unpacked please show consideration to the environment when disposing of your kiln packaging.

Where to install your kiln
Position the kiln allowing a minimum of 30cm clearance around both sides. The kiln casing will get hot and so any combustible material must be kept at a safe distance.

Never leave combustible materials on the kiln or touching the kiln during a firing.

Do not site the kiln close to flammable items such as curtains etc.

The floor or bench must be capable of carrying the weight of the kiln.

EN kilns do have air clearance under them and so there should be no need to protect the bench top, however, if your firings are to be prolonged then it is advisable to sit the kiln on a heat resistant material.

Consideration must also be given to the ceiling area above the kiln as heat will radiate upwards from the kiln.

I**MPORTANT**. It is advised that the kiln is left untouched until the kiln has finished it's given program and fully cooled. Remember, whilst the kiln cools it may be possible that the external case temperature actually increases.
KEEP PETS AND CHILDREN AWAY FROM THE KILN DURING ITS FULL CYCLE AND UNTIL COOL.

Do not site the kiln outside.

It is advised to site the kiln in a room that has ventilation.
After the first couple of firings there is almost no emissions from the kiln but there will always be vapour etc released by whatever you are firing in the kiln, especially stains so room ventilation is always advisable.
The type of room venting required depends on many factors and so it is best to contact a ventilation specialist if in any doubt.

Electrical connection

All EN models come fitted with a 13 amp plug top.
They are designed to work from standard 230v socket outlets. It is advisable to have your chosen socket outlet tested by a qualified electrician prior to use to ensure its sound condition

It is not advisable to use the kiln from an extension lead.

The electrical supply MUST have a sound earth connection.

Portable Appliance Testing
It is possible, depending on the type of establishment that the kiln is to be used in that the kiln may be required to be Portable Appliance Tested along with other electrical items.
It is important that the controller, if one is fitted, is disconnected before testing or there is a risk of the high voltage associated with the test effecting the Controller permanently.

On initial testing, the kiln may show a low insulation resistance reading, this is normal and will improve as the kiln dries. Kilns are porous by nature and will absorb moisture from the atmosphere, especial if the kiln is new or has had a period of inactivity.

Periods of testing will be stipulated by the testing body.

KILNS AND R.C.D. "TRIPS"
Due to the reasons stated above and to insulation material properties, a certain amount of leakage to earth will probably be evident, therefore the fitting of a 30ma R.C.D. in the circuit can create a fault condition at low temperatures if the kiln is damp, at higher temperatures as the kiln insulation heats up, when first fired or used after a long period of inactivity.

This problem is relatively rare but can be solved by the fitting of a 100ma R.C.D.
Consult a fully qualified electrician for advise.

Notes

Connecting the controller

If you EN kiln has been provided with a controller it will most likely be the KCR2. This controller is simple to fit to the kiln.

The hole for the thermocouple is on the right hand side of the kiln.
Insert the thermocouple into the kiln ensuring that it is approximately 25mm into the kiln chamber. Then apply a slight bend to the tip section that is protruding into the kiln. The angle only needs to be enough to stop the thermocouple sliding back out of the kiln. DO NOT bend to a right angle or make the bend severe.
The thermocouple can now be plugged into the end of the KCR2. The plug will only go in one way.

Now plug the kiln into the socket on the face of the KCR2

Now plug the KCR2 into a suitable 13amp socket and you are ready to go.

Initial firing

Before using the kiln it is advisable to fire the kiln empty to a temperature of 300 degrees centigrade at a rate of around 100 degrees per hour.
This will dry and “settle” the kiln.

On the first firings, a slight odour will be emitted, this is the remnants of binding resins in the boards and should stop after two or three firings depending on temperature of the firings.
For this initial firing we recommend that the kiln is in a well ventilated area.
We suggest that prior to the initial firing, that you use this instruction manual, and the controller manual to ensure you are familiar with all aspects of the kiln and usage of the controller if the kiln is to be used with a controller..

We also recommend that the kiln controller is set to fire the kiln at full power to a low temperature and then end, say 50 degrees, whilst being monitored to ensure that it is switching off the kiln and that no problems have occurred during transport.
At such low temperatures the kiln will overshoot the set point temperature by some amount.
This is normal as the controller is set to full and not a controlled rate of climb.
It may also cause the controller to show an Error message or code, again, this is normal as the controller may believe that the overshoot is caused by the kiln having a fault.

This test is to ensure that the controller shuts the kiln power off, whether it be due to the correct temperature being reached or by it going into fault mode.

Control

The controller supplied with this kiln has already been set and the characteristics of the kiln have been entered in to it.
The kiln and the controller will have already been put through a test firing at the factory.
Please read the instructions on control before starting to use your EN kiln.

The Energy Regulator
If the kiln is to be just used with the energy regulator that comes fitted in the front panel of the kiln then follow these guides to the energy regulators use.

The energy regulator is marked around its dial “off”, “full” and the numbers 1 to 4.
The energy regulator is not a “smart” temperature regulator as it does not show, or know how hot he kiln actually is, but it can be used as a temperature regulator as you gain in experience.
If the energy regulator, if set to “full” will turn the elements on permenently until it is manually turned off. If the energy regulator is turned to 2.5 it will fire the kiln at approximately half speed, at 1 the kiln will be slow as it will be off more than it is on and so on.
To manually hold the temperature when a given temperature is reached, turn back the until the orange “heat on” light goes out, this may still allow the kiln to rise slightly so further adjustment may be required. As experience with the regulator is gained it can be used successfully.
**IF THE REGULATOR IS LEFT ON FULL AND NOT MONITORED, EVENTUALLY IT WILL CAUSE THE KILN TO OVERHEAT AND CAUSE DAMAGE TO THE
ELEMENTS OR, AND THE BRICKWORK.**

KILN NOTES

Loading on the kiln floor tile

When placing object onto the kiln floor care must be taken to avoid contact with the kiln floor tile with any enamels or glaze etc.
The floor tile is porous and enamels and glazes etc will stick to the kiln floor tile as they get hot and become molten.
Use a separator to protect the kiln floor tile. There are many method of separation ranging floor batt wash to fibre paper.
If a secondary floor tile is to be used then raise the secondary tile off the primary floor tile to avoid the additional thickness of refractory causing overheating of the base element. The same applies with fibre etc,

Kiln brickwork cracking.
After the initial firing small or hairline cracks may appear at various points in the kiln brickwork and possibly again at the first higher stoneware temperatures. This is normal and is due to expansion and contraction of the kiln bricks. After only a few firings the cracking will stop. Please don’t hesitate to call of if you have any concerns about this.

Looking after your kiln

Avoid damaging the door fibres if you EN has a fibre door.

Cleanliness will always improve kiln life.

Be gentle with door operation.

Depending on use it advisable to check all electrical connections are tight every 6 months or so and that no cables are discolouring due to heat.

It is advisable to have the kiln periodically checked by a qualified person to ensure all electrical components are in a healthy condition.