KILN care®

IKON Instructions

MADE IN BRITAIN®

Thank you for choosing to purchase one of the IKON Range of kilns for your ceramics work.

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

The IKON range utilises the latest in technology and modern design to bring a premium top loading kiln and all of the benefits that go with it.

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

Index

Safety notices

Your IKON is designed and built to meet all European Directives and British Standards as well as many other standards applicable throughout he world. However, as with all kilns, there are certain measures that you must take to achieve optimum safety.

Electricity
The IKON range meets all Electrical Safety Directives, including a door safety switch. However, the kiln is 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.

Initial Inspection
Once unpacked it is time to give the kiln a good inspection to make sure that it has travelled well. We have the absolute strictest quality controls on our kilns so you can be assured that the kiln has already gone through a rigorous procedure before it arrives with you. However, accidents can happen.

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. The IKON does have air clearance under it and so there should be no need to protect the floor, however, if your firings are to be prolonged then it is advisable to sit the

kiln on a heat resistant material.

I**MPORTANT**. It is advised that the kiln is left untouched until the kiln has finished its given program and fully cooled.
Remember, whilst the kiln is cooling 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 are almost no emissions from the kiln but there will always be vapour etc released by whatever you are firing in the kiln 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
The IKON V38,V46,V61E and V61GXR come fitted with a 13 amp plug top (or plug top specific to your region). 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., also to test the voltage at the socket, as a voltage higher than 230v will result in the kiln producing more power.

IKONs not supplied with a supply lead, require connection by a qualified electrician to a suitable electrical supply with protective earth.

IMPORTANT!
The design voltage for the IKON is 230v.
All kilns, or any 2.9kw unit, such as fan heaters or oil filled radiators, that operate from a plug top can result in the plug and socket getting warm to the touch. However, this will vary depending on the condition and age of the socket being used, the condition and fit of the plug top and also the actual voltage of the socket which can legally vary higher or lower than the dedicated claimed voltage in the UK of 230v.
THIS ALSO APPLIES TO OTHER REGIONS WHERE THE DESIGN POWER OF THE KILN IS APPROACHING THE LIMIT OF THE PLUG TOP.

It is advised that the plug and socket are checked regularly for signs of over heating.

It is recommended that a competent person or qualified electrician is contacted to assess the plug and socket condition whilst the kiln is being used and also

the voltage to the kiln, which will effect the power drawn by the kiln. They may decide that the kiln is better to be on it's own dedicated switched spur supply, or dedicated 16amp supply (or solution applicable to your region).
PLEASE NOTE. This is NOT Kilncare specific issue. This recommendation is for ANY 2.9kw / 3kw kiln, of any manufacturer, any oil fillled radiator , fan heater, tumble dryer or any other appliance of this KW rating.

Do not use the kiln from an extension lead.

If the kiln is to be used on a 3-phase supply a neutral must also be supplied. The electrical supply MUST have a sound earth connection.

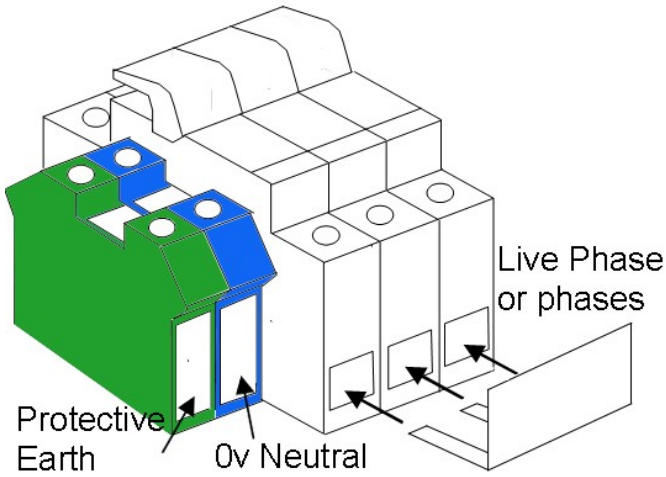
Your IKON range, if not supplied with a mains connection lead, is supplied ready for connection to a 3-phase supply. If your supply is single phase then use the connection link fixed to the side of your connection panel. The link fits across the 3 fused terminals as shown opposite in Fig. 1.4. Make sure to tighten all 3 screws.
We recommend that the centre terminal is then used to make your live connection with the wire sitting under the fork rather than on top of it.

The terminals are for use with cable of a size up to 10mm.

REMEMBER that if the kiln is then re-connected to a 3-phase supply then the link MUST be removed.

The blue and green terminals are for Neutral and Protective Earth respectively.

Fig. 1.4.



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 is disconnected before testing or there is a risk of the high voltage associated with the test effecting the controller permanently. The solid state relay may also need to be linked out.

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 due 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 or 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 us or a fully qualified electrician for advice.

Connecting the controller
The controller supplied with your kiln will be fitted with a connecting plug. It will mate to a matching socket fitted to the rear of the kiln but it could also be on the side or front depending on kiln specification.

The socket is sided and so will only allow the plug to be inserted in the correct manner.

Once the plug is inserted lock it into place using the securing clamp.

Always ensure the mains power to the kiln is turned off before fitting or removing the plug.

The controller can be wall mounted or it can be mounted to the control mounting bracket that sits on the side of the kiln.
Use the 2 pins provided to hold the controller holster whilst the fixing screws for the kiln bracket are already screwed into position on the kiln.
See Fig. 2.4.

The Lid Seal

One of the IKON'S most unique features is its three tier lid seal system. This ensures maximum efficiency from the kiln by keeping heat losses through the seal to an absolute minimum.
The first line of defence is the recessed brickwork that provides a stepped "brake" to the heat by dropping the lid brickwork into the opening of the chamber by a few millimetres.
Next is the brick on brick seal between the lid and chamber. Most kilns available rely on this as their ONLY method of lid seal.
Finally is the outer anti-draught seal that sweeps up and closes off any final routes of heat loss.

If it appears that the seal is compromised then it may be apparent in the seal line of fig. 2.5. It will no longer be a continual brown line but will be broken where the heat has escaped. It is also possible that there is residue on the Stainless steel metalwork of the lid also.
If this is the case the seal can be gently eased up back into position using a small putty knife, flat modellers knife with no sharp edges or slightly curved fork handle.
If that is not suffice then the seal is relatively easy to replace altogether and new seals are available.

The usual cause for a loss of the integrity of the outer anti-draught seal is if it is leant on whilst loading or unloading the kiln.

Fig 2.4

Fig. 2.5

Initial firing

Before using the kiln it is advisable to fire the kiln empty to a temperature of 1000 degrees centigrade at a rate of around 85 degrees per hour.
Program 22 is pre-set for this firing. Consult the KCR32C instructions later in this manual.

Open the exhaust and inlet shutters before starting and leave them open for the duration. This will dry and “settle” the kiln.

Also if you have purchased the kiln furniture set with the kiln it is advisable to load the furniture into the kiln for drying on this first firing. The kiln furniture will have been cut with a wet cutter and invariably contains a large amount of water.
Load the kiln furniture using the props supplied to allow air space between them .

On the first firings, a slight odour will be emitted, this is the remnants of binding resins in the insulation 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 fully read this instruction manual and the controller manual to ensure you are familiar with all aspects of the kiln and usage of the controller.
We also recommend that this firing is monitored to ensure that the kiln is operating in a correct manner.

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 IKON kiln.

Operation

The vents
Your IKON has an inlet port, on the lower right hand side of the chamber and an exhaust port on the upper left side of the chamber.
The inlet port can be opened or closed by sliding the shutter arm forward or backwards.
The outlet port has a shutter flap that is opened or closed using the black ball handle on the outlet exhaust. Move the Handle in towards the kiln to close the

kiln and away from the kiln to open it. The handle can be left anywhere
In between to limit the amount of air leaving the kiln.
For a biscuit firing the exhaust port should be left fully open up to a temperature of around 600c in order to allow all moisture from the work to be released from the kiln chamber. The inlet port can also be open if there is plenty of moisture to be released from the ware during this cycle if not required.
After the drying temperature has been reached the vents would then be closed to allow the kiln to reach its final temperature.

For glaze vapour, the vents will be closed after the glaze has finished releasing.

For cooling the vents can be opened at any point after the final temperature has been reached. At this point it may be of advantage to open both the inlet and outlet ports. However, when and how the vents are opened for cooling is very much a preference.

Closing the lid
The lid has a gas spring on either side to assist in the closing and opening of the lid. The gas springs will also reduce the risk of the lid getting damaged by being dropped whilst being closed but it is advised that the closing process is done completely manually and with care. The bricks of the kiln are strong but also relatively easy to damage with rough treatment.

There is a catch on either side of the kiln chamber to keep an even pressure across when fully closed.
As the kiln is used and settles in, the catches may need to be tightened to maintain the quality of the lid seal, in particular the effectiveness of the outer anti-draught seal around the edge of the chamber.

The lid switch
The safety of the kiln is maintained with an automatic lid switch that disengages the kiln power to the elements ass soon as the lid is opened. The elements will not receive power again until the lid is fully closed.

Loading

Before loading the kiln it is advisable to turn the kiln off at the mains supply, even though your safety is ensured by the lid safety switch.

You may have purchased the kiln with a kiln furniture set or you may be using your existing furniture.
The first batt can be laid directly onto the floor of the kiln to maximise the internal height of the kiln although for best results, raising the bottom shelf from the floor may be advantageous.
There are enough props for 3 per layer. If multi stacking layers of batts always

ensure the each layer of props is directly above the one below.

When loading the kiln furniture be careful, remember, the batts are harder than the brick wall of the kiln and in our experience a large proportion of kiln wall damage is caused by careless kiln furniture loading.

For obvious reasons, care must always be taken when loading larger objects into deeper kilns to avoid back strain.

What to expect on the initial firing

Once the lid has been closed and the power turned on, a click will be heard at the back of the kiln, this is the safety contactor, the red “mains on” light on the kiln should illuminate and the controller should illuminate.
If there is no display on the controller at this point check that the on-off button on the controller is in the “on” position..

Once the controller has started the kiln, the operation will be relatively silent due to the kilns solid state switching. There may be a hum or slight buzz heard as the elements are powered.

As mentioned earlier there may be odours from the kiln.

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

A large contributing factor to element failure is often that debris from general kiln use starts to clog up the grooves that the elements sit in causing them to overheat.
Periodically clean out these grooves and remove the dust and debris.
This can be done by brushing gently with a suitable brush or by using a filtered vacuum cleaner.
REMEMBER. After the first few firing the elements become less supple and so when cleaning the grooves be gentle with the elements and try not to disturb them too much.
As always when working with refractory materials, wear protective clothing and use a suitable dust mask.

If an element starts to “curl” out of the groove it can be saved but the earlier you try the better the result.
Heat around the area that is starting to curl out with a gas gun and, once the element is orange, ease it back into position with a heat resistant tool.
This repair can result in burns if care is not taken and so if in doubt, contact a recognised kiln engineer.

Depending on use it is 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.

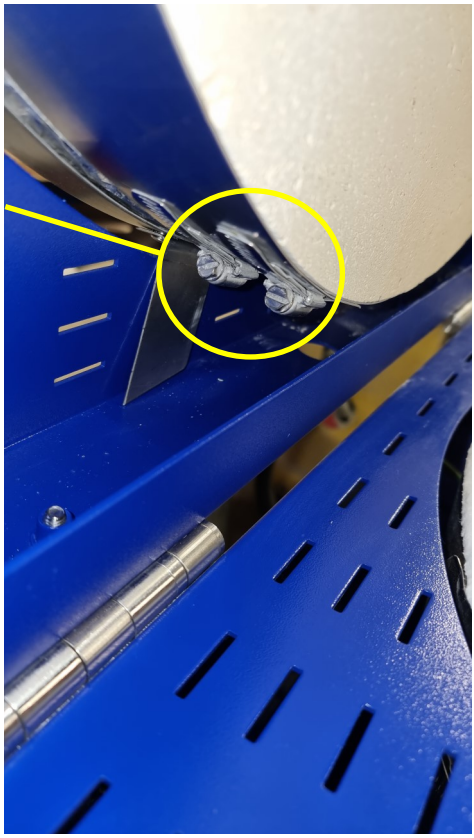
Tightening the lid bricks

As the kiln ages, it may be noticed that the odd brick in the lid appears to slightly drop and the surface of the seal area may appear to not be as smooth as it once was. This may be more likely with higher temperature firings.
This is not a problem, or a fault with your kiln.
If you decide to do nothing, it will not have any effect on your kiln or its performance.

The cause is simple, with heat, kiln bricks shrink. Your IKON is made with the most expensive and shrink resistant brick available, and when combined with the mortared joint, is the reason why the case of a slightly lower brick is not a problem to worry about.

The joints in your kiln lid are tongue and groove. This ensures that the joints between the bricks not only remain effective against heat loss, but it also
ensures that the bricks can never move more than the few milllimeters of tolerance that is in the tongue and groove, mortared joint.

fig. 2.6



However, it does no harm to reline the brick and give the lid ring a tighten to take up any slack created by the kiln brick shrinkage.
To do this follow the steps here.
See fig 2.6

- Open the kiln lid.
- Gently apply a little pressure to the brick that is protruding slightly so that it becomes flat again.
- Tighten the lid breeze clamps located in the rear hinge section of the kiln lid.
- The breeze clamps may only need a quarter or half turn and can be done with a long reach flat head screw driver
- Gently close the kiln lid to check for fit.

Tightening the lid clamps

Over time, you may find that the lid clamps may to start to feel loose and, if so, may not be as effective as they should be.

- To tighten the lid clamps, release the lock-nut below the head of the clamp.
- Turn the D section of the clasp one half turn.
- Try the clamps with the lid closed to gauge the feel. There should be some resistance as the clamp is pulled shut, but not enough to make closing or opening the clamp uncomfortable.
- Once the clamp tightness is set, re-tighten the lock nut below the clasp D.

Safety contactor circuit

All IKON kilns are fitted with a double safety contactor circuit and overheat protection as secondary back up against any failure making them one of the safest kilns available..

IKON kilns use an internal protection circuit inside the controller to determine over temperature conditions and so safely shut the kiln power off.

Such protection will protect the kiln, it will not protect the medium being fired from the effects of reaching the pre-set protection temperature.

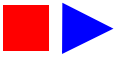
KCR32C instructions

KCR32C WIFI as below. GATEway instruction in separate manual.

On power up controller will go into test mode then after a few seconds will settle down and show kiln temperature in the top display.

Before starting, make sure that only the top display is illuminated, if any other lights are lit press the “start” key to extinguish them.

Buttons index

Start / stop 

Step 

Back 

Up 

Down 

Function **Fn**

Advance 

Pause ll

Event 

Information *I*

To set a program
If whilst in programming mode no buttons are pressed for a few seconds the controller will time out and go back to kiln display.

The KCR32C has 32 settable programs. Each program has 32 segments.

Press the “Step” key. The top display shows the program number, for instance 1 . The bottom display shows “Pn”. Use the “Up” or “Down” buttons to select the program required.

Press “Step”. Top display will show a ramp rate, for instance “85”, “FULL” or “END”. The bottom display will show 1, this is segment 1. This segment is how fast you would like the kiln to reach its first temperature in degrees per hour. A slow firing might require the first temperature to be reached “50” degrees per hour. Whilst a fast firing would be set to reach temperature as quickly as possible so the rate required would be “FULL”.

Press “Step” and the top display will show a temperature for instance “600”. The bottom display will still show 1 and a light will illuminate above temperature. This temperature is in Celsius. This temperature is your first temperature. Use the “Up” or “Down” buttons to select the desired temperature. Press “Step”. The top display will show a time, for instance “0.30” or “PASS”. The bottom display, again will show “1” and the triangle above dwell will illuminate. Dwell is the time in hours and minutes that you require the kiln to hold the first temperature.

Press “Step”. Top display will show a time, for instance “85”, “FULL” or “END”. The bottom display will show 2, this is segment 2. This segment is how fast you would like the kiln to reach its second temperature.

At this point, if the kiln is required to finish, press the ”Down” button until “END” is shown in the top display.
End is below 00.

All the above is segment 1, the controller has 32 segments and so for more complicated firings carry on as above by setting the next time, temperature and dwell.
When you have programmed all you require, select “END” at the start of the following segment.
Press “Start” and the controller will display kiln temperature again.

To run a program
Press ”Step”. Bottom display will show “Pn” and the top display will show the program number. Use the “up” or “down” keys to select the program number required.
Press “Start” and the top display will show a time, for instance “0.10” or “PASS”. The bottom display will show “ - - “ and the delay triangle will light.
Delay is the time in hours and minutes before the kiln will actually start. Set the desired time using the “Up“ and the “Down“ buttons. If no delay is required hold the down key until the display shows “PASS”. Pass is below 0.00.

the top display will show kiln temperature and the bottom display will go blank.

Press “Start” again and the top display will briefly display the Program number then it will begin the program. Depending on the program contents the delay triangle or the ramp triangle will flash and the segment number will be displayed in the bottom display.

If a delay has been set the delay triangle will flash and the top display will act as a count down timer showing the hours and minutes remaining before the kiln starts to fire.

As the kiln fires the top display will show the kiln temperature and the bottom display will show the segment number. If the kiln is climbing the upward facing ramp triangle will flash. When the kiln is holding temperature the dwell light will flash.

To stop a program
Press “Start”.

To pause a program
Press and hold the “Function" button then press the “Pause” button.
The top display will alternate between the current temperature and
“ - - “. This temperature will be held indefinitely or until the pause key is pressed again. A warning reminder will be sounded every 10 seconds during the pause. When the pause is stopped the kiln will continue through the program from where it was paused.

To forward a program
At any time the controller can be made to skip to the next segment. To do this, hold the “Function” button and press “Advance”. This can be useful if the “Pause” button is used. It may be that at the end of the manual pause you do not require

To view entered program data
This can be done whether the kiln is firing or not. Press the “Step” button, each press will forward the display to the next section. Once viewed, press the “Start” key once to return the control display to kiln temperature.

Example program

If you require the kiln to start a 7am, fire at 85c per hour to 600c then full speed to 1060c and no soak.

It would be programmed like so. We will presume that it is being programmed at 5pm the evening before. We will make this program 24.

Press “Step”. Use “Up” or “Down” to select 24 in the top display.

Preset Programs. #First kiln set firing is pre-set in program 22

Prog	Prog. type	Seg. 1 Ramp c/hr	Seg. 1 Temp	Seg. 1 Hold Hr/min	Seg. 2 Ramp c/hr	Seg. 2 Temp	Seg. 2 Hold Hr/min	Seg. 3 Ramp c/hr
11	Slow Bisque	60	600	00	FULL	1000	00	END
12	Normal Bisque	100	600	00	FULL	1000	00	END
13	High Bisque	100	600	00	FULL	1140	00	END
14	Brush-On Earthenware Glaze Cone 6	100	300	00	FULL	1000	00	END
15	Standard Earthenware Glaze	100	300	00	FULL	1100	00	END
16	Earthenware High Temp. Glaze	100	300	00	FULL	1140	00	END
17	Mid-Range Stoneware Glaze	100	300	00	FULL	1200	00	END
18	Standard Stoneware Glaze	100	300	00	FULL	1245	00	END
19	Onglaze	100	400	00	FULL	780	00	END
20	Lustre	100	400	00	FULL	750	00	END

Press “Step”. Use ”Up” or “Down” buttons to enter “85” for ramp time.
Press “Step”. Use ”Up” or “Down” buttons to enter “600” for temperature.
Press “Step”. Use ”Up” or “Down” buttons to select a dwell time of “0.00” hours.
Press “Step”. Use ”Up” or “Down” buttons to enter “FULL” for ramp time.
Press “Step”. Use ”Up” or “Down” buttons to enter “1060” for temperature.
Press “Step”. Use ”Up” or “Down” buttons to select a dwell time of “0.00” hours
Press “Step” Use “Down” button to select “END”.
Press “Start” Use ”Up” or “Down” buttons to select a delay time of “14.00” hours.
Press “Start” The kiln will start.

Top display will flash program number then”14.00” with a flashing dot.
The bottom window will show”- -“ and the delay triangle will flash.

The above example is a typical basic biscuit firing with a 14 hour delayed start

Trouble shooting

Control has no lights
If the “mains on” light on the kiln is not illuminated :-

Check that the socket outlet that the kiln is plugged into is turned on or that the mains isolator is turned on.

Check that the controller is securely plugged into the kiln.

With the kiln unplugged or turned off, check the cable from the kiln to the controller for damage.

Check If the “mains on” light on the kiln is illuminated:-

Check that the “on / off” button on the bottom of the controller is in the “on” position.

Check that the controller is securely plugged into the kiln.

With the mains turned off a competent person should be used to check the condition of the glass 1 amp fuse in the rear power panel of the kiln. Access to this fuse is by removing top screws to the lower rear panel and swivelling the panel open.

If the above appear correct contact Kilncare®

The control is working correctly, is showing that the kiln is receiving power but the kiln is not heating up.

With the kiln unplugged/isolated, check the cable from the kiln to the controller for damage.

Check that the controller is securely plugged into the kiln.

With the mains turned off, a competent person should be used to check the condition of the internal wiring and electrical contact points.

If there is no obvious damage then the kiln will need to be checked over with an electrical meter.

Controller shows an ERROR message.
Consult the controller manual and contact Kilncare®

Plug top is getting hot on 2.9kw / 3kw models.
See page 4 of this manual.

A crackling noise can be heard when the kiln is firing.
This will be a loose connection and needs to be fixed immediately by a competent person.
Continued use will almost certainly result in the connection failing.

Kiln is not reaching temperature or is slow.
This could be either an element failure, a burnt connection a loss of supplied power or a component failure.

The elements may be tired and ready to be changed.

Get the kiln checked by a competent kiln engineer.

Kiln is giving an overfired result to the ware.
Check recommended clay / glaze firing range matches the program set to be fired in the controller.
See “kiln is not reaching temperature or is slow”.

Cracks in the kiln brickwork.
Minor cracking is to be expected, see page 9 of this manual.

Contact us at

Kilncare ltd,
The Kiln Works, 907 Leek New Road, Baddeley Green,
Stoke on Trent, Staffordshire, United Kingdom. ST2 7HQ,
Tel +44 1782 535915
E-mail sales@kilncare.co.uk, Web www.kilncare.com

European Declaration of Conformity.

Kilncare Limited, The Kiln Works, 907 Leek New Road, Baddeley Green, Stoke on Trent, Staffordshire, United Kingdom, ST2 7HQ.

We declare that the equipment described below was manufactured ourselves to comply with directives listed.
We do not give any assurance that the equipment is suitable for any purpose other than that listed below and must be operated and maintained in accordance with our operating instructions.

Products.
IKON range of kilns.

Directives.
LVD - Low Voltage Directive 2006/95/EC.
EMC - Electromagnetic Compatibility Directive 2004/108/EC.#
'#The equipment is intended for use only in premises having a service current capacity of 100 A per phase, supplied from a distribution network having a nominal voltage of 400/230 V,
The user should determine in consultation with the supply authority, if necessary, that the service current capacity at the interface point is sufficient for the equipment.

Harmonized Standards.
BS EN 1088:1995+A2:2008, BS EN 55014-1:2006, BS EN 55014-2:1997.

Description.
Ceramics / glass kiln

Purpose of use.
Firing of ceramic and glass items up to the maximum temperature stated on the kiln data plate.

Product serial number.
As per affixed data plate.

Manufacture year.
2026

Technical documentation is held for this product.

Lee Sherwin,
Director,

IKON Range
Instruction manual.

2026