NANOE

USER MANUAL

ZETASINTER PORCELAIN

Dear Customer,

We thank you for the installation of this new equipment and for the confidence you have demonstrated by relying on our services.

Please carefully read this document and follow its instructions before first use. This will ensure the safety and proper functioning of your equipment as well as the preservation of its warranty.

We advise you to keep this user manual in a suitable place so that you can consult it whenever necessary.

We would like to draw your attention to the fact that during normal operation, but also when it is turned off after a cycle, your kiln may have hot surfaces with a risk of burns.

We recommend that all interventions on your equipment be carried out by specialized CERINNOV technicians and never by other technicians without a personal connection to our services.

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1 Description

1.1 General Description

The Zetasinter Porcelain furnaces are highly insulating refractory brick kilns with a capacity of **54 to 121 liters**, with an operating temperature of **1250°C** and a maximum temperature of 1320°C.

Heating is provided by electrical resistances integrated into the bricks.

They are equipped with an automatic temperature programmer for fully configurable firing curves with several heating, leveling and cooling modes.

These kilns are ideal for prototyping and small productions.

1.2 Technical datas

Specifications	Zetasinter Porcelain
Voltage	230 V
Electric Phases	1
Intensity	20 A
Power	4,5 kW
Weight	95 kg
Internal Volume	54 L
Maximum Temperature	1320°C
Operating Temperature	1250°C
Serial Number	*

*Consult the metallic plate located on the side of the kiln.

2 Temperature controller installation

Position the programmer on its support fixed to the structure of the kiln (right side wall). Then connect it to the round socket provided for this purpose.

3 Instructions of use

3.1 First use

Before starting production, the kiln must be subjected to two specific and consecutive heating programs.

Program 1 has the function of extracting all the humidity from the materials in the kiln up to 600ºC.

Program 2 allows the electrical resistances to acquire an anti-corrosion surface layer. This protection is obtained by a step of several hours at the temperature of 1050°C.

Implementing these two programs before any other heating is very important and mandatory to ensure the durability of the equipment.

Please find program details below.

Program 1 - Maximum temperature of 600°C – Empty kiln

- Open the kiln chimney completely
- Load the controller program with the following data:
    - o Heating ramp to 600°C in 6 hours (100°C/h)
    - o Heating plateau at 600ºC for 2 hours
    - o Complete cooling (room temperature). Keep the chimney open.

Program 2 – Maximum temperature 1050°C – Empty kiln

- Close the chimney from 600ºC only
- Load the controller program with the following data:
    - o Heating ramp to 800°C in 8 hours (100°C/h)
    - o Heating ramp to 1050°C in 2 hours (125°C/h)
    - o Heating plateau at 1050°C for 3 hours

Once these two programs have been completed, the kiln will be able to be used for firing your products.

3.2 Daily use

The kiln **must not be used as a dryer**. Storing products with high humidity will cause progressive and accelerated degradation of the insulation and structure.

The kiln door should never be opened above 150°C. This would seriously affect the lifespan and strength of the refractory bricks.

Use at maximum temperature reduces the life of resistors and insulation. The maximum recommended temperature for regular and prolonged use is **1250°C**.

4 Safety

The kiln is equipped with a safety mechanism that prevents heating when the door is open. This mechanism works by means of a stop located on the door shaft which activates a limit switch. Protection against electric shocks caused by contact with the resistors is thus ensured.

5 Dangers and Warnings

Hot surfaces: surfaces with a high temperature that can lead to serious burns.

Danger of crushing: risk of crushing.

Danger of electrocution: risk of electric shock, potentially fatal.

Attention:

Only qualified personnel should work on the rear electrical cabinet of the kiln. The connection terminals of the electrical heaters must not be too close to the protection plates and grills! Check your safety distances and thus avoid the dangers of electrocution and short circuit.

Do not get the equipment wet!

6 Maintenance

Not requiring any particular preventive maintenance, it should be noted the importance of maintaining the refractory lining in good condition. Energy efficiency also depends largely on the condition of the insulation.

Item	Monthly	Quarterly	Semestrial	Action
Limit switch			Check	Change if necessary
Thermocouple		Check		Change if necessary
Controller	Check			Change if necessary
Bricks		Check		
Heating elements	Check			Change if necessary
Door's stop			Check	Change if necessary

The equipment is painted and protected against corrosion by the powder coating process. For minor touch-ups and equipment maintenance, use the following color codes as appropriate:

Pantone 297 P - Blue

RAL 7024 - Dark gray

The heating elements (resistors) must be checked regularly, and their good condition confirmed. Contact CERINNOV after-sales service for your replacement resistors.

7 Cleaning

The kiln does not require specific cleaning processes but requires a minimum of care to ensure the best operating conditions, always seeking rational use of energy and increasing its durability.

You should clean the inside of your kiln regularly. Splinters and other materials resulting from broken parts can interfere with their normal operation.

Exterior cleaning of the equipment must be carried out with a damp cloth and never with the appliance plugged in.

Avoid using solvents.

8 Guarantee

We guarantee the kiln for **12 months** after invoice for defects in construction and materials provided it is used in accordance with the instructions for use. The heating elements (resistors) benefit from a 6-month warranty.

Any costs resulting from problems not covered by this warranty will be the responsibility of the customer.

Covered by warranty:

- Manufacturing defects
- Defects in the materials constituting the equipment (for example: temperature programmer)

Excluded from the warranty:

- Normal cracking of the brick during the first firings (due to the different expansion of the materials making up the four)
- Damage caused by accident, negligence, misuse or connection to improper voltage
- In the event of intervention by people outside our technical services.

9 Manufacturer

CERINNOV Group TOMORROW'S SOLUTIONS TODAY

TÜVRheinland CERTIFIED Management System ISO 9001:2008 www.tuv.com ID 9105078469

CERINNOV – Unipessoal, Lda

Rua Paulo VI, nº2490, Vale Sepal

2415-614 Leiria – PORTUGAL

10 Technical assistance

CERINNOV has a team of experienced technicians capable of clarifying any doubts regarding the equipment that may not be explicit in this document.

CERINNOV ensures the best support and supply of spare parts.

Support Technique

+351 244 817 800

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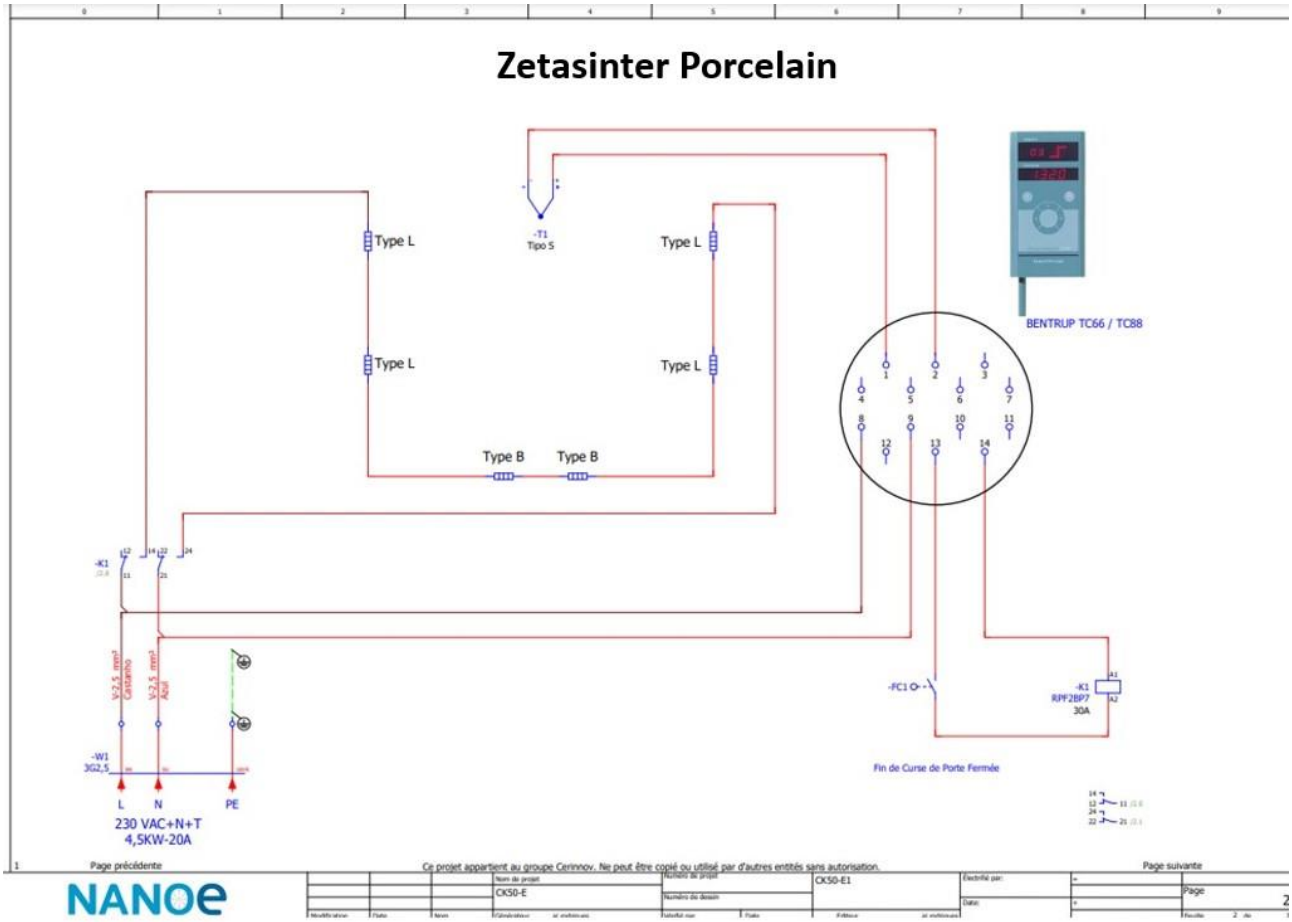
11 Annexes

11.1 Controller User Manual

11.2 Electric drawings



11.3 EU Declaration of Conformity

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CE DECLARATION DE CONFORMITE CE

FABRICANT:

CERINNOV Unipessoal, Lda.,
Rua Paulo VI, 2490, Vale Sepal
2415-614 Leiria
Portugal

Le fabricant déclare par le présent que les équipements décrits ci-dessous sont conforme aux exigences des directives UE, conforme en matière de qualité et de sécurité.

Produit:	CK
Numéro de Série:	vérifiez la plaque de caractéristiques
Marque:	CERAMIFOR
Année de fabrication:	2023
Normes et Directives de Référence:	Directive 2014/35/UE
	Directive 2014/30/UE
	Directive 2006/42/CE
	Standard EN 746-2

L'installation, l'utilisation et la maintenance de cet équipement pourront être effectuées par des professionnels qualifiés avec une formation appropriée. Veuillez à consulter le manuel d'instruction pour plus d'informations.

Toute modification sans l'autorisation du fabricant met fin à toutes les garanties et à la validité de cette déclaration. L'équipement doit être installé et utilisé en conformité selon le manuel d'instruction et ne doit être en aucun cas mis en fonctionnement à une alimentation en tension ou en fréquence autre que celles mentionnées dans son mode d'emploi et sa plaque signalétique.

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CERINNOV

Colas Chastagnier
Directeur Technique