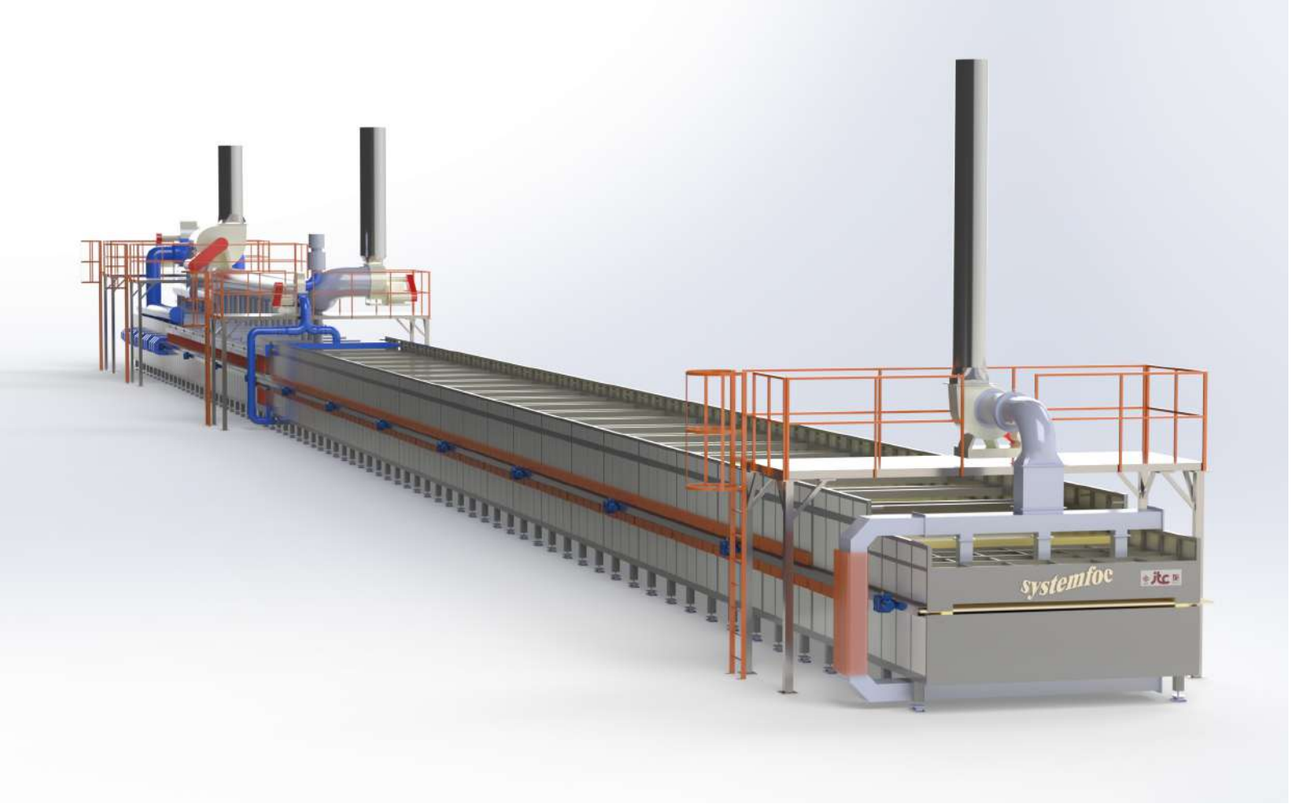


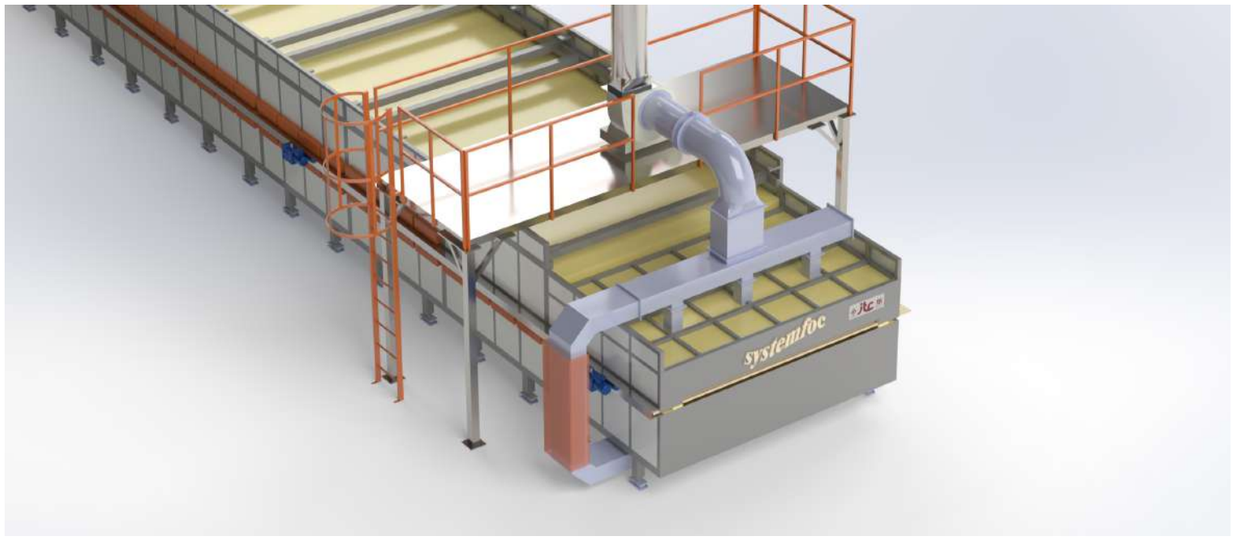
systemfoc

ELECTRIC KILN



HEATING ELEMENT SYSTEM:

The main element that characterizes our electric kiln is the **heating element system, responsible for enabling the kiln to reach a working temperature of 1200 °C** in a short period of time (within a few hours), **unlike conventional gas kilns, which require several days to rise from room temperature to 1200 °C.**



ADVANTAGES OF THIS SYSTEM

Easily repairable.

Easily replaceable.

Locally available spare parts; the heating elements can even be repaired by the customer.

HEATING ELEMENT SYSTEM FEATURES:

1. HEATING ELEMENT AND SUPPORT

Ceramic support: Thermal shock–resistant ceramic tube, hollow to facilitate connections and thermal insulation.

Heating elements: High-resistance filament (1500–1600 °C), evenly wound for uniform heat distribution.

Maintenance: Easy replacement without stopping the kiln, maintaining continuous production.

Thermal optimization: Uniform heat throughout the entire kiln channel, except inside the walls.

2. MANAGEMENT SYSTEM

PID control: Precise regulation through thyristors to keep the heating elements at the desired percentage of their capacity, reducing energy consumption.

3. INSULATION SYSTEM

Innovative and efficient: Lightweight insulation with low thermal inertia, allowing fast start-ups/shutdowns and external temperatures ≤70 °C.

Advanced materials: Use of pressed ceramic fiber and vapor barriers to minimize heat losses and improve durability.

Modular assembly: Perfect fitting of insulation layers, preventing heat leakage.

4. COOLING SYSTEM

Fast and controlled cooling: Air injection for internal cleaning and gradual temperature reduction, ensuring material stability.

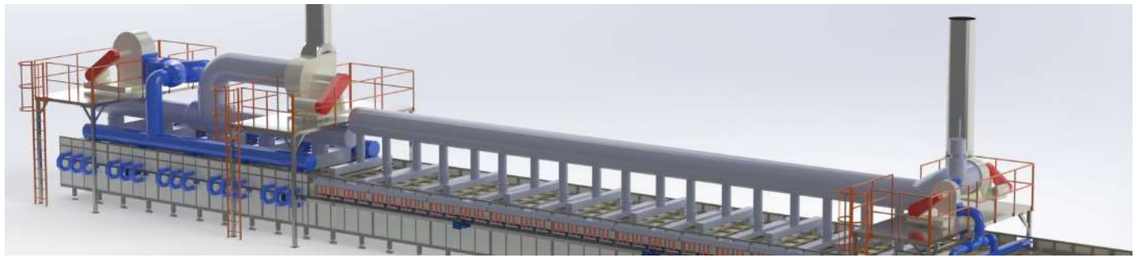
Modular heat exchanger: Individual PID control for uniform cooling.

Final cooling zone: Separate section to quickly reduce temperature to <300 °C, avoiding turbulence and ensuring final quality.

Savings of up to 50% compared to a conventional gas kiln.

KILN ZONES:

The electric kiln is based on the design of conventional gas kilns, so similar proportions can be found in terms of zone sizes.





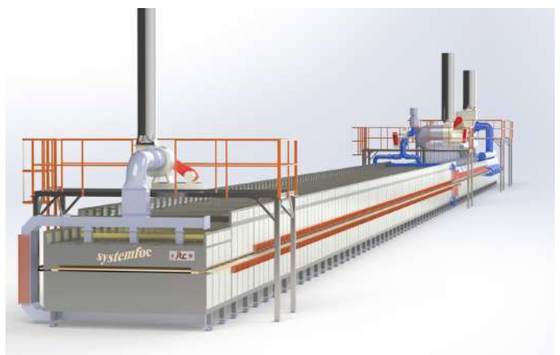
Pre-kiln (heating): Incorporation of heating elements for precise temperature control, avoiding thermal shock.

Firing: Evenly distributed heating elements for homogeneous firing.

Rapid cooling: Additional heating elements to prevent breakage caused by sudden temperature drops.

Indirect cooling: Heat exchanger that ensures gradual and uniform cooling.

Final cooling: Separate section to reduce the temperature to <300 °C in a controlled manner.



MODULE DISTRIBUTION IN A 30-METER KILN:

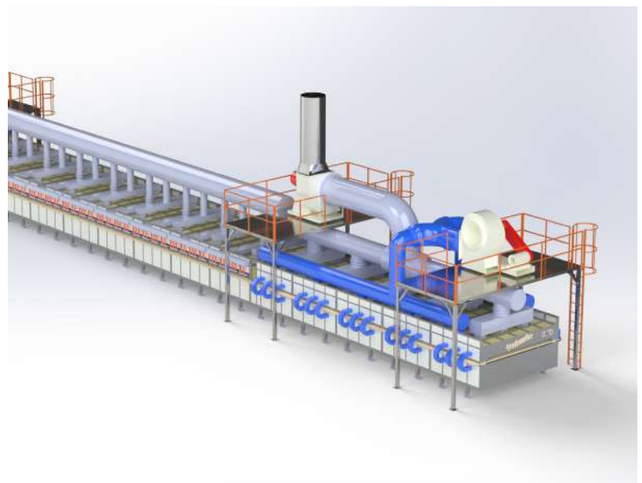
1 heating module.

8 firing modules.

1 rapid cooling module.

3 indirect cooling modules.

1 final cooling module.



UNIFORM TEMPERATURE

The electric kiln ensures a **uniform temperature and heat distribution** throughout its interior, eliminating cold or hot spots that could affect the firing process.

Thanks to this thermal uniformity, **each piece receives the same amount of heat, ensuring consistent, high-quality results.**

As a result, the produced pieces are:

Uniform
Free of deformation
Free of irregularities

BASIC FEATURES

HORNO	1500	3000	6000	9000	12000	UNITS
Kiln length	30,870	50,400	84,000	113,400	123,900	m
Kiln width	1,500	1,800	2,200	2,500	3000,00	mm
Usable kiln area	46,305	90,720	184,800	283,500	371,700	m2
Maximum production at 36' (±80% approx.)	1537	3012	6024	9185	12043	m2/day
Maximum working temperature*	1.200 - 1.250	1.200 - 1.250	1.200- 1.250	1.200 - 1.250	1.200 - 1250	°C
Consumption (estimated) at 1150 °C Wh/kg	450	435	420	410	410	Wh/Kg
Nominal power	1000	2000	3000	4500	5000	KW
Atmosphere	Oxidizing	Oxidizing	Oxidizing	Oxidizing	Oxidizing	
Energy source	**100% ELECTRIC**					

*The indicated temperatures vary depending on the type of product, the installed rollers, and the weight of the material to be produced.

*The minimum and maximum firing formats, as well as the dimensions and roller spacing, will be adapted to the customer's requirements upon request.

*The operating cycles will be adapted to the customer's requirements, typically ranging between 30 and 120 minutes under normal conditions.

WE HAVE A TECHNICAL COLLABORATION AGREEMENT WITH THE ITC:

Pre-firing tests on the ITC electric prototype: Precise product firing.

Establishment of optimal operating parameters: Maximum firing efficiency.

Analysis of production needs and kiln sizing: Adaptation of the kiln to process requirements.

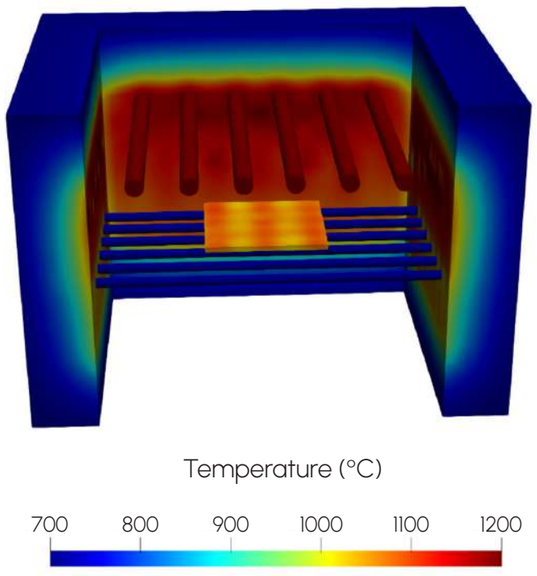
Support during integration into the production process: Guidance and training at every step to ensure a smooth transition.

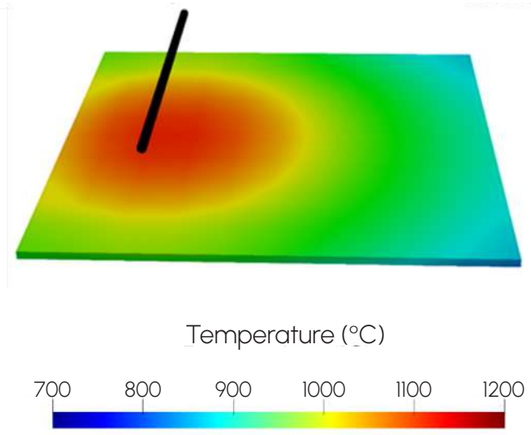
Technical assistance and commissioning: Monitoring of efficient kiln operation once installed at the company.

Adjustment of optimal configuration per product: Ensuring each type of ceramic receives the perfect treatment.

Integration of improvements and innovations: The kiln remains at the forefront with continuous updates.

SIMULATION OF TILE HEATING USING HEATING ELEMENTS.





OUR TEAM



Systemfoc is a well-established company in the field of industrial machinery design, development, and manufacturing.

We have extensive experience, which has enabled us to create our own distinctive product catalog applicable to a wide range of sectors.

We are committed to providing a ***comprehensive service, from manufacturing to ongoing support.***

We keep our products up to date and in optimal condition by investing in research and development.

Our goal is to ensure total customer satisfaction and secure our sustainable presence in the market.

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WITH THE TECHNICAL COLLABORATION OF:

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