



### DESCRIPTION

It is a laboratory, FLOOR kiln, built with a 180°C fire-painted steel frame with scratch-resistant epoxy paints.

**Thermal insulation is provided in low-density refractory bricks** and pre-formed ceramic fiber panels in the second wall.

The heating part is composed of spiral-wound wire electrical resistors. They are placed in the 2 sides of the inner chamber.

The kiln features a double-walled body with forced air cooling, for keep the outside temperature low.

AT THE MAXIMUM SET TEMPERATURE (ABOVE 1000°C),  
MAXIMUM RECOMMENDED PARKING IS 60 MINUTES

**This kiln is suitable for working in a controlled atmosphere (preceded by the intervention of a pump)<sup>1</sup>**, with the introduction of inert gas. In its standard version, the inlet gas flow rate is manually adjusted using a special ROTAMETER.

<sup>1</sup> the system therefore includes a vacuum pump which facilitates the injection of gas inside the chamber, depriving it of air

### PERFORMANCE

- The rising gradient of the kiln is equivalent to the incirca at 5°C/min 300°C/hour)
- Cooling is natural (there are no chimneys)

### TECHNICAL FEATURES

- heating elements<sup>1</sup>, mounted on 2 sides
- double-walled carpentry with forced ventilation
- opening with flag door
- micro-safety switch on the door
- temperature and cooking cycle control, using a LUMEL RE-82 programmer
- S-type thermocouple
- *no exhaust chimney*
- *manual rotameter for metered inert gas inlet*
- *connection, equipped with a ball valve, for the gas outlet (to achieve partialization of the fluxing and possible "de-gassing" of the chamber)*

<sup>1</sup> composed of spirally wound wire resistors (in Kanthal type alloy), supported by easily removable and replaceable glow plugs

### CONTROL PANEL



Control of the temperature and cooking cycle is entrusted to a Lumel RE 82 microprocessor programmer.

With this type of programmer you can configure and store a maximum of 15 programs each consisting of a maximum of 15 ramps.

The kiln is equipped with special seals to allow for a minimum vacuum and to keep the gas, which is *exclusively inert*, inside the cooking chamber.

*Therefore, it will only be possible to open the door at a temperature (reported inside the chamber) below 80°C.*

The management of the cycle and the controlled atmosphere with inert gases is entrusted to a programmer (LUMEL RE82) through which the cooking curve and the ramps into which the inert gas inlet is desired can be set.

*The gas inlet is preceded by the intervention of a vacuum pump which allows, by removing the air from the cooking chamber, optimal saturation with the gas.*

*For the creation of the modified atmosphere, evacuation and filling of the chamber should only be performed at room temperature.*

*The operation at high temperatures risks damaging the vacuum pump.*

**A manual rotameter** allows the regulation of the flow of the gas to be introduced, particularly when gas current treatment is required and not in a saturated and static environment.

*The kiln can be used by saturating the chamber or in “flow” mode with gas entering and simultaneously escaping.*

A special tap, equipped with a ball valve, allows saturation in the vertical position (tap closed), differently placed in the horizontal position (tap open) allows the gas to escape and therefore operate in flow mode.

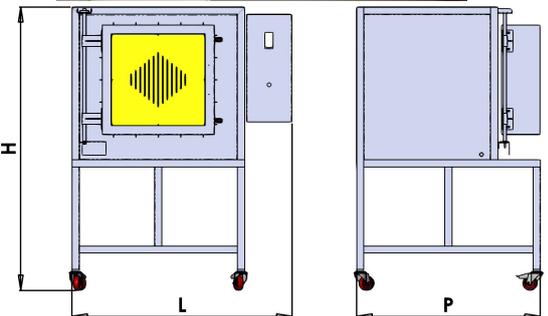
Furthermore, this tap, suitably connected to a system, can also be used to “de-gas” the chamber before opening the door.



**MANUAL ROTAMETER:**

- measuring tube: pyrex glass
- connections: 1/4” NPT-F threaded
- contact material: AISI 1,4571
- inlet control valve equipped with VITON gaskets
- screen-printed scale
- floating: model 44, in aluminum
- accuracy: class 4
- fluid: Ar
- flow rate: 3-32 NI/min
- load loss: 4 mbar

**Gas may be introduced to a maximum pressure of 0.1 bar**



**TECHNICAL FEATURES**

Mod.	Max temp. [°C]	Internal dimensions [mm]			External dimensions [mm]			Power [kW]	Power supply 3ph+N+T [V]	Weight [kg]
		Width [l]	Depth [p]	Height [h]	Width [L]	Depth [P]	Height [H]			
KLN-40/13 VAC	1280	330	330	400	1160	930	1750	6,5	400	305
KLN-60/13 VAC		400	400		1230	1000				415
KLN-40/14 VAC	1340	330	330	400	1160	930	1750	6,5	400	305
KLN-60/14 VAC		400	400		1230	1000				415

(all data are non-binding, the manufacturer reserves the right to modify them)

**OPTIONAL**

- software for management with PCs:
  - ability to store up to 15 recipes
  - ability to set up to 15 ramps for each recipe
  - ability to program date and time to automatically start a recipe
  - ability to record temperature trends in real time during the cooking cycle
- manual introduction of a second gas (by manual rotameter)
- gas introduction using a digital flowmeter with special software for PC management