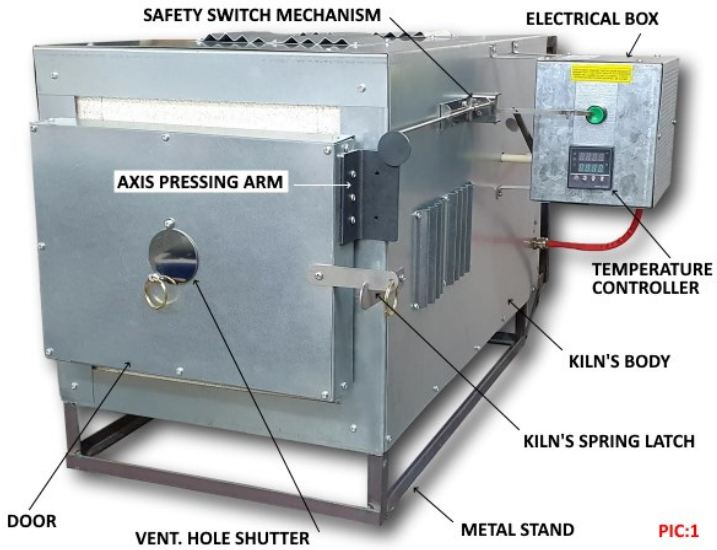
NAUTILUS-1100C/1240P(WF) MULTI-FUNCTIONAL ELECTRIC KILN USER MANUAL

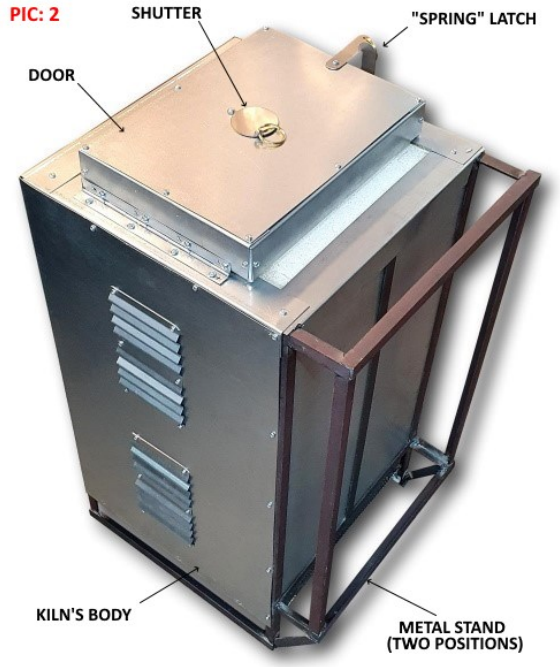
PRODUCT INTRODUCTION:

THIS NAUTILUS-1100C/1240P(WF) MULTI-FUNCTIONAL ELECTRIC MUFFLE KILN WITH A PROGRAMMABLE TEMPERATURE CONTROLLER AND A SPACIOUS 20.0 CUBIC LITRE CHAMBER HAS FOUR HEATING ELEMENTS AND IS ESPECIALLY DESIGNED TO WORK WITH MOST TYPES OF MATERIALS SUCH AS: GLASS, WAXES, METALS, CLAYS, STONE, HOT ENAMELS AND MANY OTHER MATERIALS. THE NAUTILUS-1110C AND THE NAUTILUS-1240P CAN REACH TEMPERATURES OF UP TO 1,100°C/2,012°F AND 1,240°C/2,264°F RESPECTIVELY. THE KILN CAN BE USED BOTH HORIZONTALLY AND VERTICALLY. FOR YOUR SAFETY, THIS KILN HAS A SECURE MECHANISM THAT WILL DISCONNECT THE KILN'S POWER SUPPLY FROM BOTH THE RIGHT AND LEFT HEATING ELEMENTS IF THE KILN'S DOOR IS OPEN OR HAS NOT BEEN PROPERLY CLOSED. IT ALSO HAS ONE VENTILATION HOLE WITH A STAINLESS STEEL SHUTTER ON THE DOOR AND A DIGITAL OVER/UNDER TEMPERATURE DETECTION SYSTEM TO HELP MAINTAIN A CONSTANT TEMPERATURE DURING THE ENTIRE SOAKING PROCESS. THIS KILN ALSO HAS A SMOOTHING CIRCUIT TO ALLOW THE PROGRAMMABLE CONTROLLER TO CORRECTLY READ AND STABILISE ELECTRICITY FLUCTUATIONS, WHCH IS ESSENTIAL FOR MOST FIRING PROCESSES.

Pic. 1 HORIZONTAL POSITION:

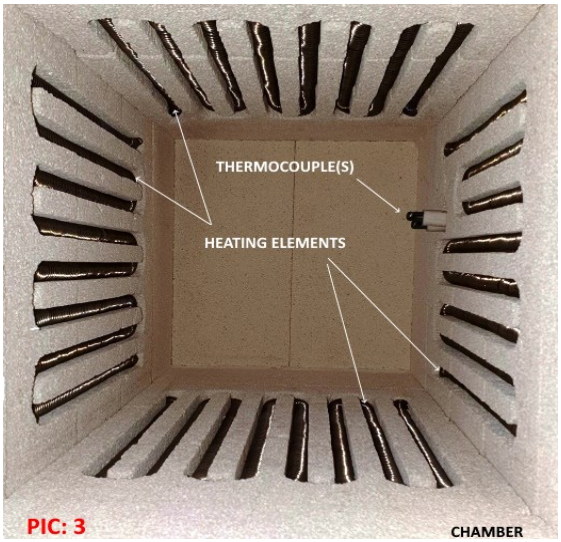


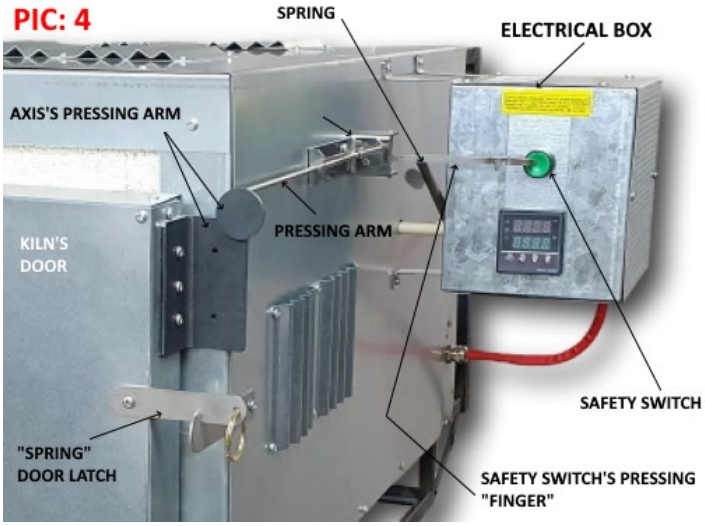
Pic.2 VERTICAL POSITION:



TECHNICAL SPECIFICATION:

MODELS:	**NAUTILUS-1100C/1240P(WF)**	**CALIBRATION:**	**YES**
INPUT ON REQUEST:	**115, 220 or 240 V**	**SOAKING PROCESS ACCURACY:**	**+/- 1°C**
POWER:	**3,900 WATT / 16 A**	**SAFETY MECHANISM:**	**YES**
ESTIMATED MAXIMUM HEATING TEMPERATURE:	**1,100°C (2,012°F) 1,240°C (2,264°F)**	**WORKING POSITIONS:**	**VERTICAL OR**
ESTIMATED HEATING TIME TO 1,240°C:	**90 MINUTES**	**HEATING ELEMENTS:**	**FOUR**
CONTROLLER TYPE:	**TWO-LINE - PROGRAMMABLE OR NOT PROGRAMMA-**	**CHAMBER DIMENSIONS MM (INCH) (horizontal position):**	**200 (w) X 200 (h) X 500 (d) (8" x 8" x 20")**
CONTINUOUS WORKING TIME AT 1,240°C:	**10 MINUTES**	**KILN DIMENSIONS MM (INCH): (horizontal position):**	**375 (w) X 400 (h) X 700 (d) (15" x 15" x 28")**
CONTINUOUS WORKING TIME BELOW 1,100°C:	**8 HOURS**	**WEIGHT:**	**50 KG**



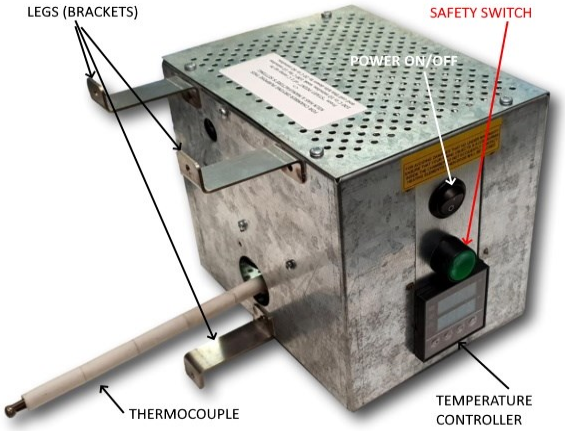


PREPARATION:

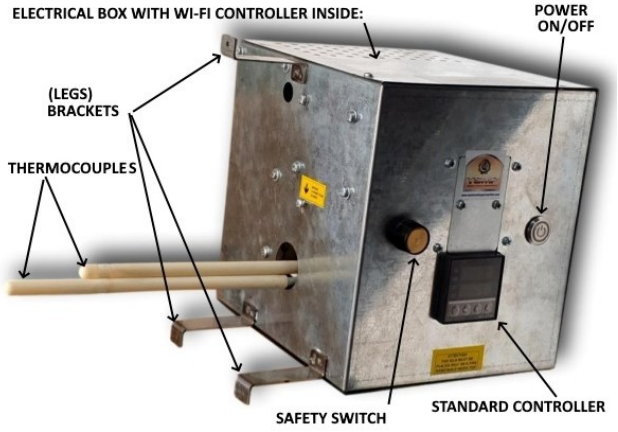
- Only place this kiln on a heat-resistant floor or worktop. Please note that the worktop should be very stable and be capable of safely supporting a MINIMUM of 50 kg of weight.
- Open the door and carefully remove all the accessories and packing materials from the chamber.
- If the electrical box has not been attached to the kiln's body yet, attach it now:

♦ Take the electrical box (Pic. 4, 5), which has three stainless steel legs (brackets), and screw it to the kiln's body as shown in Pic. 7 and Pic. 8 using three screws (supplied).

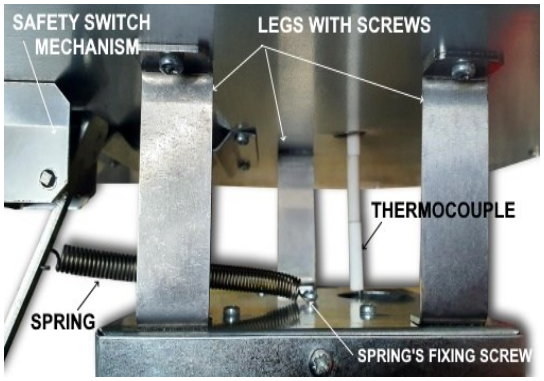
Pic. 5 ELECTRICAL BOX MODELS 1100C & 1240P



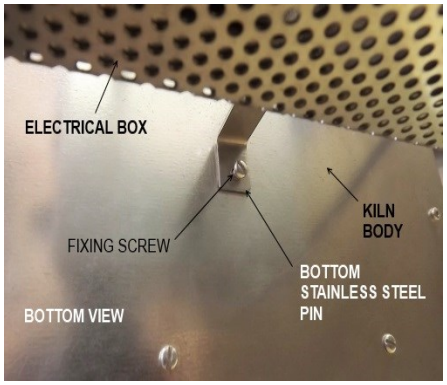
Pic. 6 ELECTRICAL BOX MODEL RWF-1240P



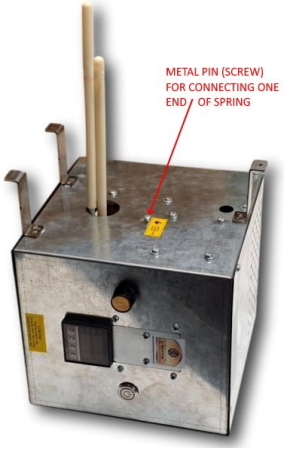
Pic. 7



Pic. 8

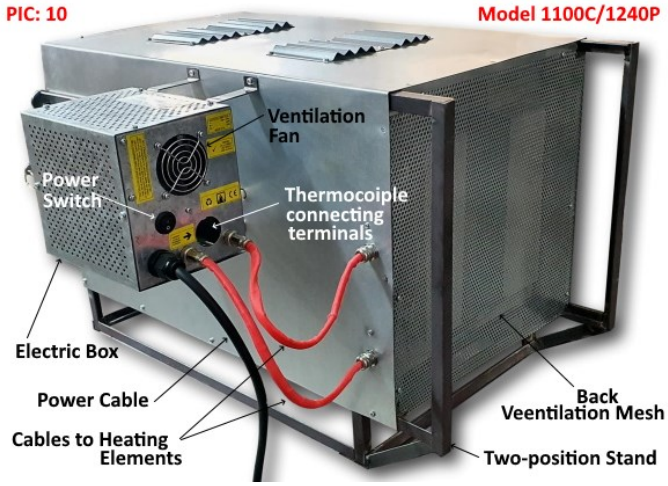


Pic. 9

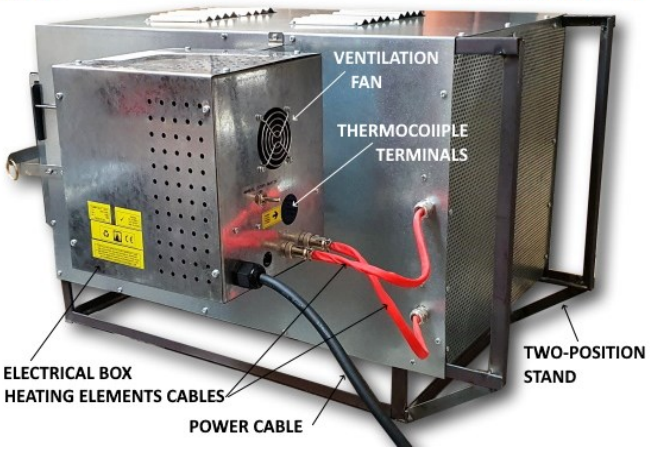


Now attach one end of the metal spring to the safety switch's pressing "finger" (Pic. 4) and attach the other end to the screw on the electrical box (Pic. 7, 9). When this is connected, attach the electrical box to the heating elements (RED cables behind your kiln - Pic. 10) and the safety mechanism, as shown on the next page:

PIC: 10 Model 1100C/1240P



PIC: 11 MODEL: RWF-1240P

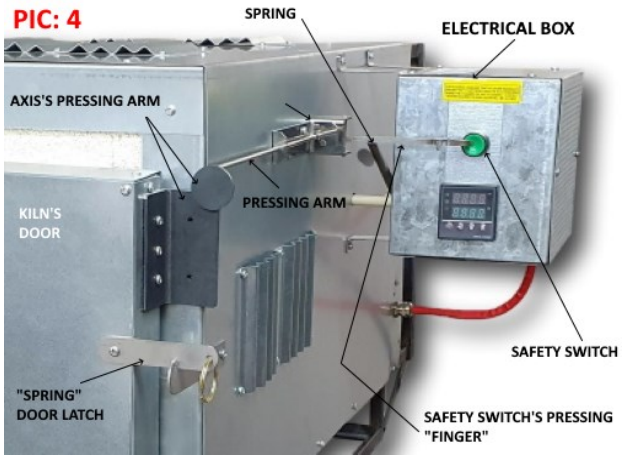


IMPORTANT NOTE: It does not matter which RED cable you connect to which socket on the rear wall of the electrical box. Both red heating element cables are same.

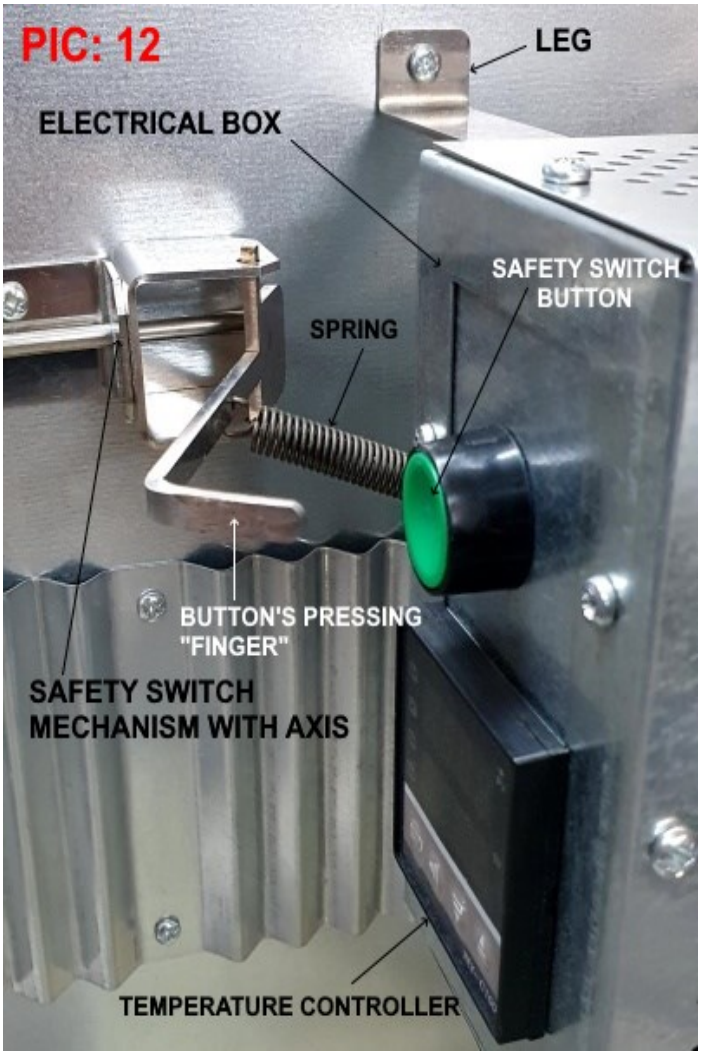
Now you need to attach the safety-switch mechanism to your kiln. This mechanism is important for your safety. It will disconnect all heating elements inside the chamber if your kiln's door is open or is not closed properly. This is done to avoid electric shocks following accidental contact, for example with metal tongs, flasks or the item(s) being fired.

- To attach the safety-switch mechanism, take the ready-to-use mechanism from its pack and attach it to the kiln using two screws (supplied) in the position shown in Pic. 4 below:

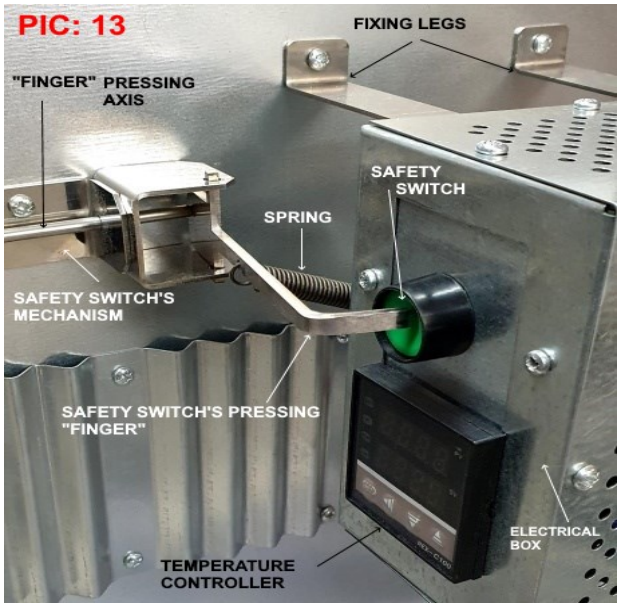
PIC: 4



PIC: 12



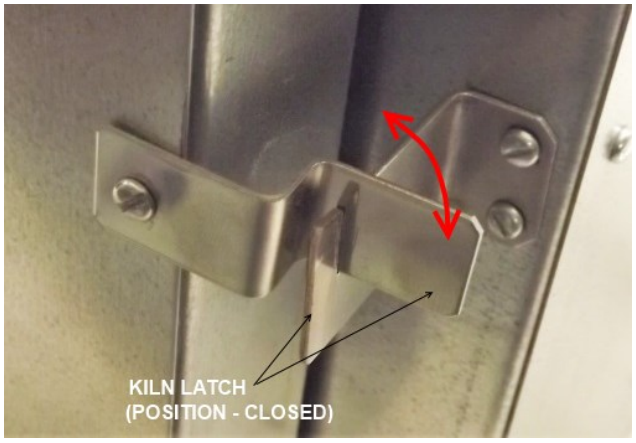
PIC: 13



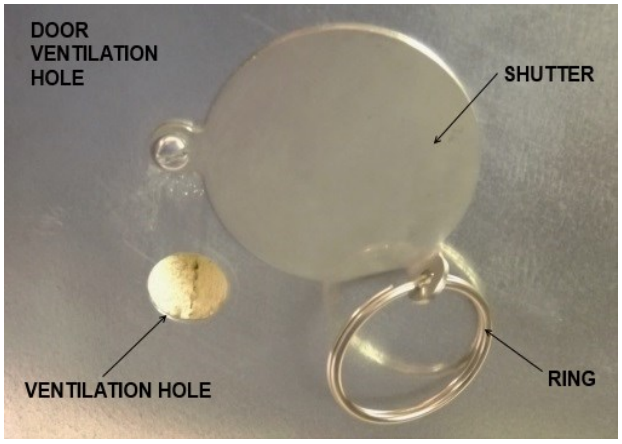
IMPORTANT! After assembling, please ensure that the PRESSING "FINGER" FIRMLY PRESSES on the SAFETY SWITCH when the door is OPEN (Pic. 13) and RELEASES the SAFETY SWITCH when the door is CLOSED (Pic. 12).

- You can easily open or close your kiln's door using the simple stainless steel "spring" latch on the door (Pic. 14).

Pic. 14:



Pic. 15:



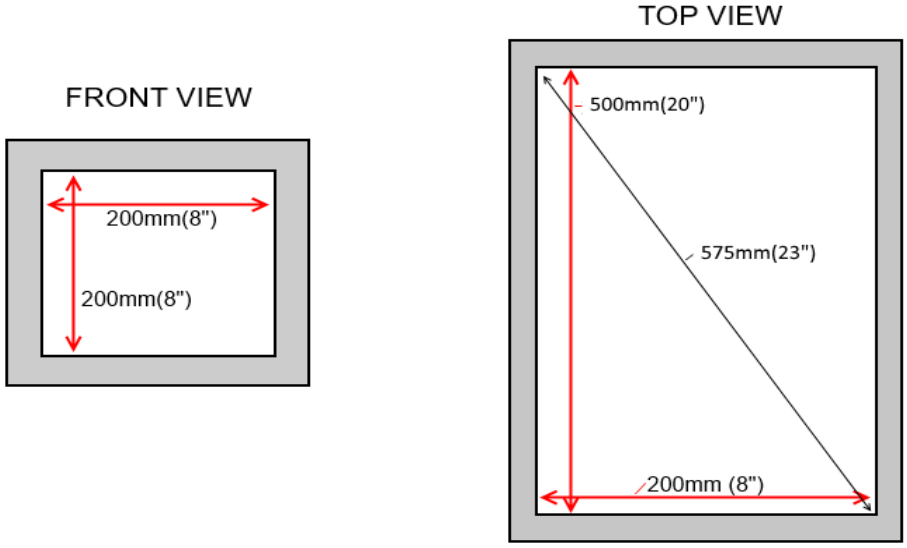
- Now your kiln is assembled. Close the shutter on the door (Pic. 15) to avoid heat leaking out from inside of the chamber. Plug the mains cable into a power supply to start using your kiln.

- When using the kiln for the first time, it must be heated up for approximately 90 minutes (factory setting) to allow any water to evaporate from the chamber. Please do not be alarmed if light smoke and/or a smell appears (when using the kiln for the FIRST time). This is normal for new kilns as any water, grease or oils burn out from the heating element(s), shelves, chamber and from inside the kiln. It should not happen again after the first time it is heated. If your kiln is used less than once a month then please repeat this process each time you use it.

- Please also note that the temperature shown on the controller is the temperature around the thermocouple(s) inside the kiln's chamber. You may have to wait up to two hours for the inside of your kiln to heat up fully and reach the same temperature everywhere inside the chamber.

- USABLE CHAMBER DIMENSIONS: Below (Pic. 19) you can see FRONT AND TOP VIEW diagrams of the kiln's chamber (inner).

PIC. 19:



TEMPERATURE CONTROLLER FOR R-500P MODEL (HOW TO PROGRAM):

The programmable temperature controller (XMTG-7000) has already been set up for chamber drying by the manufacturer (if you have not requested a different setting). If you want to re-program this controller, please refer to the controller's user manual or contact us for FREE help on Skype. Below are some useful tips for using this controller:

1. *"SET" – setting/confirmation button (used for setting all of the controller's parameters).*
2. *"Arrow Left" or "A/M" – segment selector (to choose from four segments).*
3. *"Arrow Down" – decrease (used to set the required temperature).*
4. *"Arrow Up" – increase (used to set the required temperature).*

Example program: Increase from room temperature up to 450°C within 99 minutes, soak at 450°C for 4 minutes and then decrease to room temperature within 145 minutes.

Example instructions:

1. Open your kiln's door to trigger the safety-switch mechanism, which will disconnect the power supply from the heating element(s) and prevent the kiln from heating up while you program the temperature controller. Alternatively, simply press button 4 for 3 seconds until you see "STOP" on the bottom display. Now you can start programming your controller.
2. Each of the following steps consists of first setting the temperature and then setting the time period in which the NEXT temperature should be reached. There are 32 available input slots each consisting of a pair of temperature and time inputs, i.e. there are a total of 32 temperature inputs alternating with 32 time inputs. To start programming, short-press the 'SET' button.
3. After you have pressed the 'SET' button, you have to set the kiln's starting temperature ("C1" on the top display line). In this case, input the desired temperature (usually 1°C), i.e. "0001", into the BOTTOM display line using buttons 2, 3 and 4. Now press 'SET' to confirm this initial temperature ("Starting point") and to proceed to the next input ("Γ1"). This input is the required TIME to reach the NEXT required temperature. For this example, insert "0099" (99 minutes) into the BOTTOM display, and then press 'SET' again to set this input and to proceed to the next step.
4. The next step begins by setting the second required temperature ("C2"). To set this, insert "0450" (450°C) into the bottom display. Next, press 'SET' again to proceed to the next input ("Γ2"), where you will set the required time to the NEXT temperature. In this case, this is our soaking time of 4 minutes - "0004". Press 'SET' again to confirm this time and to proceed to the next step.
5. The next step begins by setting the third required temperature ("C3"), in this case the required soaking temperature. Enter "0450" (450°C) into the bottom display again. Next press 'SET' once more to proceed to the next time input ("Γ3"), which in this case will be 145 minutes. Input "0145" into the bottom display, then press 'SET' again.
6. For the next step, set the fourth and final required temperature ("C4") – "0020" (20°C or room temp.).
7. To indicate the end of the program, press the 'SET' button again, insert "0000" into the bottom display and press the 'SET' button once more. Your program will automatically finish when it reaches this last input.

A. When you have finished programming the controller, short-press the 'SET' button or simply leave the controller for about 30 seconds for the new setting to be remembered and for your job to start.

B. Close the kiln door to disconnect the safety-switch mechanism, allowing your kiln to start heating up. Alternatively, if you pressed button 4 in step 1 above, now press button 3 for 3 seconds until the word "RUN" appears on the bottom display line.

C. Important: you'll have about 20 seconds to change EACH temperature/time setting. Please do not worry if you take too much time and the controller resets and starts displaying the current temperature inside the chamber again. Simply restart the programming process by short-pressing the 'SET' button again. If you are a beginner and are having difficulty programming your controller, please feel free to contact the manufacturer or agent/shop for free help with this matter anytime during the warranty period.

D. You can find detailed information about the controller's settings and all of its functions in the controller's user manual. We do not recommend changing the manufacturer's setting yourself (except for any programs) as this can cause the factory settings to be lost and may result in you needing to fully reset and/or re-calibrate the controller in future, which is NOT COVERED BY THE WARRANTY.

E. **Kiln model RWF-1240P (with Wi-Fi programmable controller)** only has a digital temperature-reader (e.g. REX-C100) that is only used for reading the temperature and does not require any pre-setting. This controller is installed on your kiln only to enable you to read the current temperature when you are in front of your kiln.

SAFETY INSTRUCTIONS AND USEFUL TIPS FOR BEGINNERS:

⇒ Please make sure that any item(s) you place inside the chamber are not touching the heating element(s) EVEN WHEN THE DOOR IS CLOSED.

⇒ It is always best to conduct some tests on a small quantity of your firing material before you fire your item(s).

⇒ Using this kiln at temperatures higher than 1,240°C (for both models) or on temperatures higher then 1,200°C for longer then 15 minutes may cause a problem with the heating element(s) and/or with the kiln's metal body that is NOT covered by the warranty.

⇒ This kiln must be placed on a level surface that will not be damaged by heat. A masonry or concrete floor is recommended, but other protective materials like metal or ceramic (tiles) sheets may be used. For a small additional charge, this kiln can also be supplied with a set of shelves and with a metal stand to be placed on a heat-sensitive worktop.

⇒ Always make sure that the door is closed and is pressing on the pressing arm correctly, connecting the heating elements to the power and allowing high temperatures to be reached inside the chamber.

⇒ Always use heat-resistant gloves and long metal tweezers to remove or place item(s) from/into the kiln.

⇒ This kiln should be kept away from all inflammable materials and other nearby heating devices.

⇒ When the door is open at temperatures higher than 200°C (392°F), always maintain as much distance as possible between your hands/face and the hot chamber. Please also wear dark glasses to avoid any problems with your eyes.

⇒ Because of the high temperatures that this kiln can reach, you should never leave it unattended when it is in use.

⇒ Never touch the kiln's metal body and shutter on the door without gloves on as these can burn your hands.

⇒ KEEP OUT OF REACH OF CHILDREN.

WARNING: This is an electrical, often extremely hot piece of equipment: always follow any applicable health and safety rules and regulations for electrical equipment and hot work in your country.

MADE IN THE UK