

Read the product instructions before installation and use.  
Please keep this manual safe for future reference.



# YRC-C200 Porcelain Furnace

## Product Manual



# Introduction

The YRC- C200 porcelain furnace adopts advanced vacuum technology with a vacuum degree up to 97%, creating a high- purity, stable and uniform vacuum environment. It effectively eliminates bubbles and micropores, making the ceramic body denser, more translucent, and with a natural color. It significantly improves firing density and the fracture resistance of the porcelain, greatly reducing the risk of clinical porcelain chipping and ensuring long- lasting restorations.

The YRC- C200 porcelain furnace is designed for bench- top installation.

This installation and operation manual shall be kept by designated personnel for future reference.

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## Chapter 1: Safety, Maintenance and Precautions

### 1.1 Installation Location



Place the porcelain furnace in a dry indoor area. Maintain a minimum clearance of 30 cm from walls and 50 cm between two furnaces for safe heat dissipation.

Ensure the supporting surface is heat-resistant. Although thermal radiation from the furnace is within safe limits, improper operation may cause minor discoloration of the surface due to high-temperature contact.

Do not place flammable materials around the equipment.

### 1.2 Equipment Idle

When idle, retract the worktable into the chamber and turn off the main power switch.

Closing the chamber preserves insulation and prevents moisture absorption.

### 1.3 Installation and Operation

- **Only qualified personnel may disassemble the furnace.**
- Unpack the furnace and place it on a flat, stable surface in a clean, well-ventilated area. Inspect all accessories, especially the **firing platform** and **firing tray**, for damage.
- Ensure the power supply is **grounded**. Before powering on, check the power connection, inspect the chamber for packing materials, and confirm the **vacuum pump** is properly connected.
- Center the firing platform on the tray.
- Perform an **empty firing cycle** before processing restorations.
- Run the **chamber cleaning program** when using the furnace for the first time.
- Keep flammable/volatile substances away and ensure adequate ventilation and heat dissipation.
- To move the furnace: **power off first**, then handle gently to avoid impact damage.
- If a **vacuum error** is prompted, immediately check for air leaks/blockages in the vacuum line and inspect the solenoid valve.

### 1.4 Equipment Cleaning

- Do not use a wet cloth to clean the chamber lid to avoid water ingress, short circuits, or equipment damage.
- If the fault indicator lights or the buzzer alarms, contact qualified service personnel.
- If a fuse blows, replace it with a spare fuse of the same specification to avoid safety hazards.
- Do not perform maintenance while the furnace is running. To open the chamber lid, power off first to prevent electric shock.
- Do not place objects on the chamber lid to avoid fire risk.

### 1.5 Vacuum Pump Installation Precautions



- a. Take out the vacuum pump and tubing from the accessory box. Connect one end of the tubing to the pump's **inlet port** (follow the airflow arrow). Install the silencer on the exhaust port. When using Teflon tape for sealing, leave **three front threads unwrapped** to prevent tape fragments from entering and damaging the pump.
- b. Connect the supplied silicone tube between the vacuum pump and the furnace, ensuring a tight fit at both ends for airtightness.
- c. Plug the vacuum pump power cord into the dedicated outlet on the furnace's rear panel. Turn on the main power switch (**I = ON, O = OFF**).

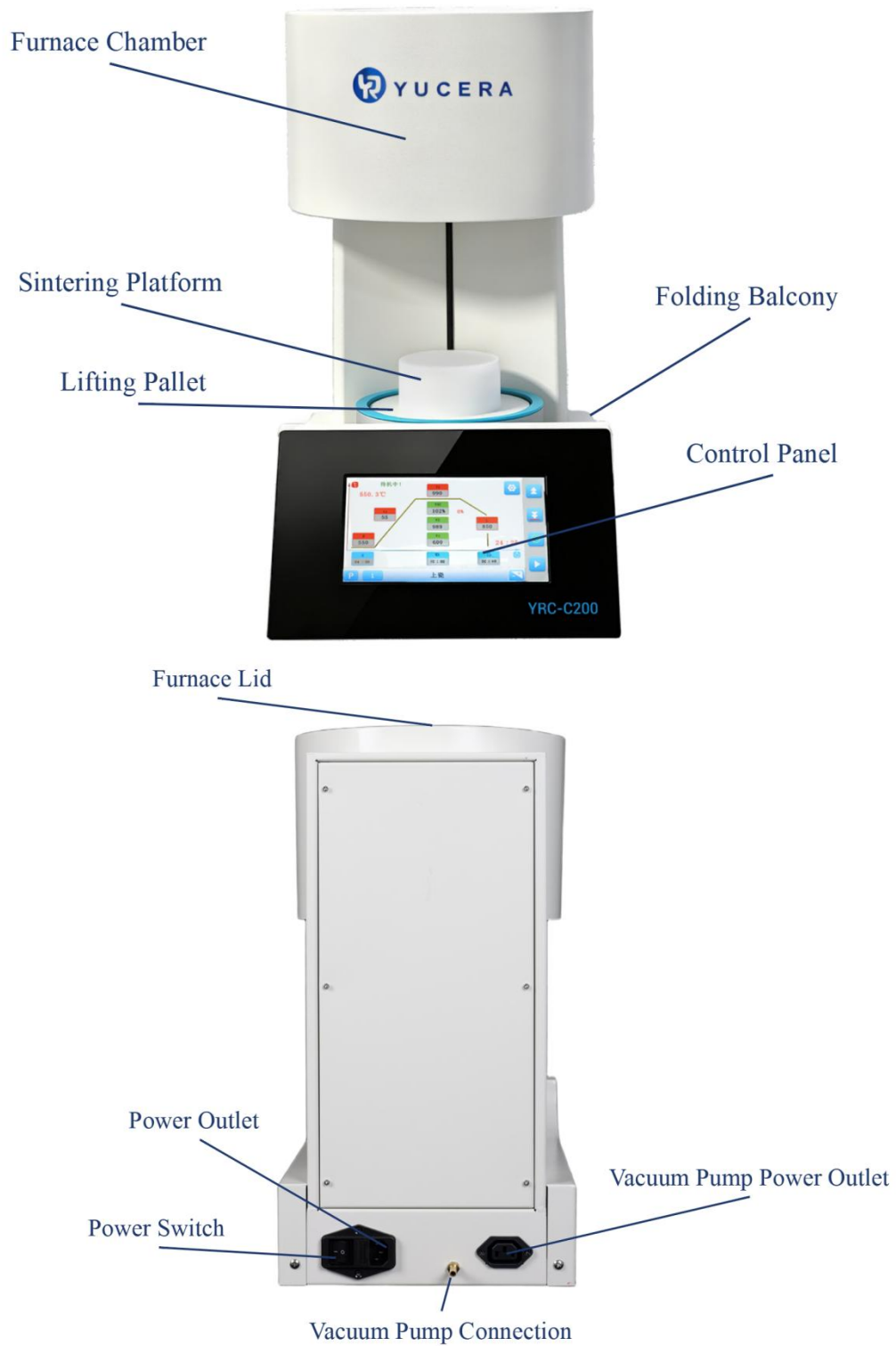
### 1.6 Automatic Temperature Regulation

The system automatically regulates temperature upon starting any firing program.

The automatic temperature control system compensates for component deviations, maintaining a temperature accuracy of  $\pm 1^{\circ}\text{C}$  during prolonged operation.

# Chapter 2: Equipment Introduction

## 2.1 YRC-C200 Porcelain Furnace



## 2.2 Features Overview

- Touchscreen: 7-inch LCD.
- Insulation: New ultra-light, low-energy refractory material.
- Temperature control: High precision, auto-regulation,  $\pm 1^{\circ}\text{C}$  accuracy.
- Vacuum pump: High ultimate vacuum, maintenance-free, high flow.
- Tubing: Multi-layer filtration for improved component stability and lifespan.
- Vacuum performance: Optimized design for excellent airtightness.
- Alerts: LED status indicators and buzzer prompts.

## 2.3 Software

- 50 single-stage conventional sintering curves, 8 two-stage glass-ceramic sintering curves, 1 cleaning curve, and 1 temperature calibration curve.
- Visual curve preview.
- Quick curve selection interface.
- Second-order sintering curve function.
- Remaining time display.
- Standby mode (maintains chamber dryness).
- Temperature calibration.
- Multilingual support: 11 languages (Chinese, English, Russian, Arabic, Portuguese, Italian, French, Spanish, Korean, Vietnamese, Turkish).
- Chamber cleaning function.

## 2.4 Technical Parameters

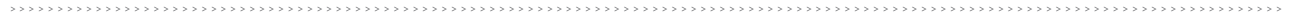
NO.	Item	Specification
1	Dimensions	415*260*530(mm)
2	Net weight	15KG
3	Chamber size	$\Phi 95*60\text{H}$ (mm)
4	Firing platform diameter	$\Phi 85\text{mm}$
5	Voltage	220V/50Hz (110V/60Hz optional)
6	Heating power	$\leq 1050\text{W}$
7	Maximum power	1400W
8	Temperature range	Room temperature—1050°C

## Chapter 2: Equipment Introduction

9	Rate of heating	100°C/min
10	Temperature control accuracy	±1°C
11	Screen	7-inch HD capacitive touchscreen
12	Fuse Specifications	15A

## 2.5 Packing List



Shenzhen YuruchengDental Materials Co.,Ltd.					
YRC-C200 Porcelain Furnace—Equipment List					
Number	Product Name	Model Specifications	Unit	Quantity	Equipment Photos
1	YRC-C200		set	1	
2	Vacuum Pump	220 V/50 Hz (110 V/60 Hz optional)	set	1	
3	Muffler		pcs	1	
4	Silicone Vacuum Tube		pcs	1	
5	Sintering Tray		pcs	1	
6	Support Rod		pcs	20	
7	Furnace Platform		pcs	1	
8	Silver Wire		pcs	5	
9	Sealing Ring		pcs	1	
10	Power Cable	EU wire/AWG wire	pcs	1	



## Chapter 3: Operation Instructions

### 3.1 Main Interface

	<p>After turning on the rear power switch, the main interface displays real-time chamber temperature, vacuum level, vacuum settings, and current program information.</p> <ul style="list-style-type: none"> <li>➤ “P1” = Program number.</li> <li>➤ “Porcelain Application” = Program name (editable).</li> <li>➤ Displays curve parameters and 1/2- stage firing graphics.</li> </ul>
	<p>Current furnace temperature</p>
	<p>Current curve program countdown</p>
	<p>Target vacuum and actual vacuum</p>
	<p>Enter the array selection program</p>
	<p>Enter the number selection program</p>
	<p>Go to the Settings menu</p>
	<p>Control the tray rise; click again to stop the rise</p>
	<p>Control the tray descent; click again to stop the descent</p>
	<p>Stop button</p>

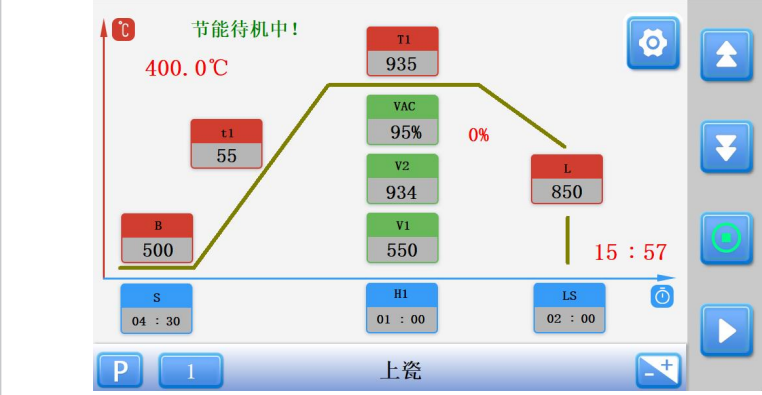
	Start the current program
	Go to the parameter settings page for the current curve program

### 3.2 Program Curve Selection Interface

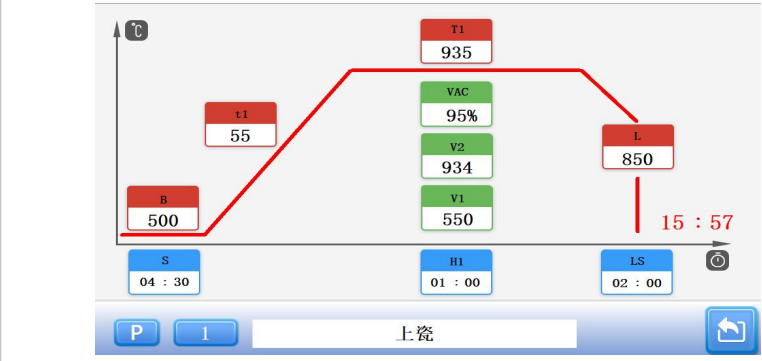


- **P** Tap the program list button on the main interface, select a program, and return automatically.
-   Use up/down arrows to navigate pages;  tap back to return.
- Pages 51–58 contain dedicated two-stage heating profiles for glass-ceramic materials.
- P59: Chamber cleaning program; P60: Temperature calibration program.

### 3.3 First-Order Sintering Interface and Parameter Settings Interface

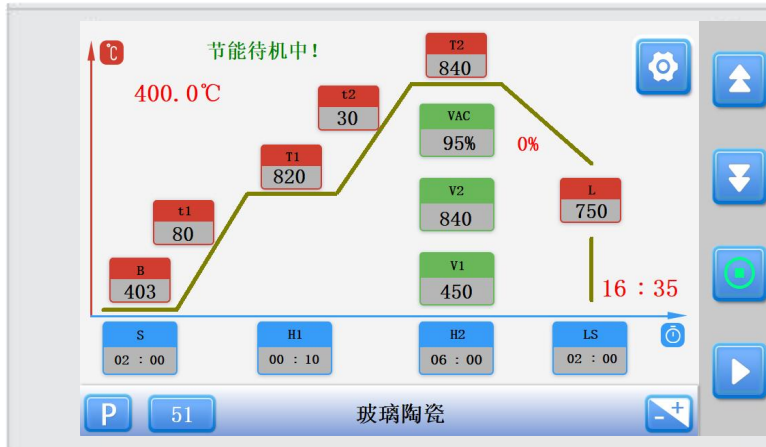


Displays the current furnace chamber temperature, vacuum level, all parameters and the name of the program being executed, as well as the remaining time and control buttons.



This screen is the parameter settings screen. You can name the program as you like; pressing the Back button saves the data.

3.4 Second-order sintering interface and parameter settings interface

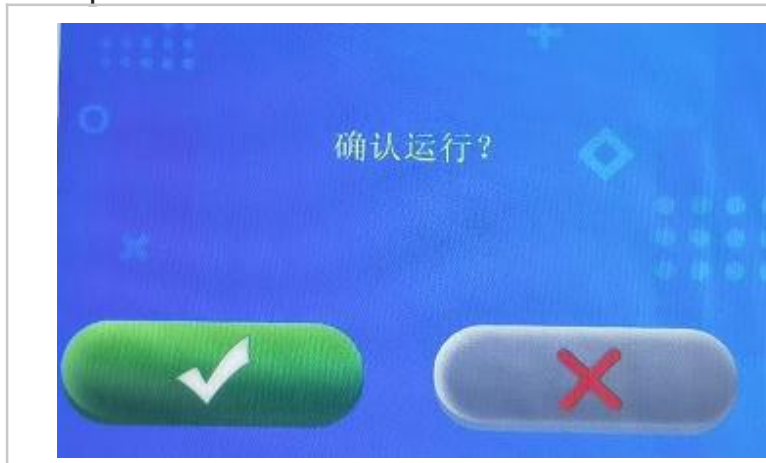


Displays the current furnace temperature, vacuum level, all parameters and the name of the program being executed, as well as the remaining time and control buttons.



This screen is the parameter settings screen. You can name the program as you like; pressing the Back button saves the data.

3.5 Operation Confirmation and Exit Interface



Click ✓ to run the current program;  
Click X to return to the main screen



Click ✓ to stop the program and return to the main screen;

Click X to continue running the current program and return to the main screen.

### 3.6 Curve Parameter Settings

Code	Description	Details
VAC	Vacuum mode	>0 = ON; 102 = continuous vacuum; 0 = OFF
V1	Vacuum start temp	0 < V1 < 650°C
V2	Vacuum release temp	680 < V2 < 1050°C; Release at V2 if < T2; Hold until H2 ends if = T2
B	Drying temperature (°C)	Drying temperature parameters, indicating the drying temperature during the sintering process.
S	Drying time (min)	Drying time parameters: the time required to dry the teeth.
t1	Heating rate 1 (°C/min)	First-order heating rate: the rate at which the temperature rises from the initial temperature to the maximum temperature.
T1	Firing temp 1 (°C)	Maximum temperature of the first-order curve, referring to the highest firing temperature of the first-order curve or the maximum temperature of the first-order component of the second-order curve.
H1	Hold time 1 (min)	First-order holding time: the duration during which the first-order curve remains at its peak temperature, or the duration during which the first stage of the second-order curve remains at its peak temperature.
t2	Heating rate 2 (°C/min)	Second-stage heating rate: the rate at which the temperature rises from the maximum temperature of the first stage to the maximum temperature of the second stage during second-stage sintering.
T2	Firing temp 2 (°C)	The maximum temperature of the second stage, referring to the highest temperature reached during the entire second-stage sintering process.
H2	Hold time 2 (min)	Second-stage holding time: the duration during which the highest temperature is maintained throughout the second-stage sintering process.
L	Door open temp (°C)	Furnace door opening temperature, used to set the trigger temperature for opening the furnace door.
LS	Tray down time (min)	Pallet descent time: the time required for the pallet to descend from its highest position to its lowest position.






On the parameter settings screen, you will find parameter descriptions and input range information. If a parameter value exceeds the input range, it cannot be saved or applied.




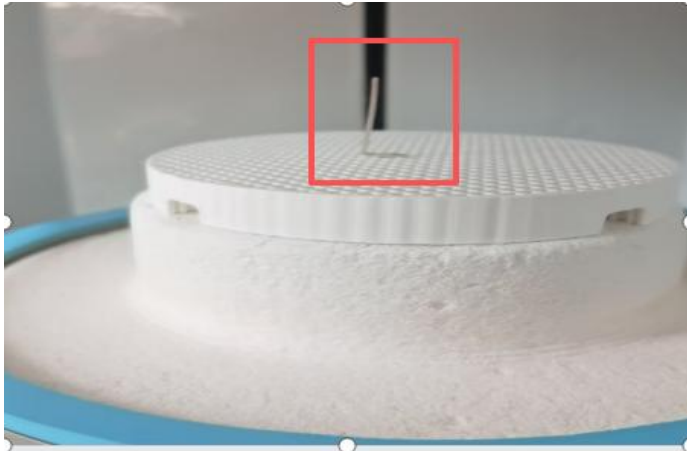

### 3.7 Settings Interface

	<p>The interface includes six modules: Energy-Saving Standby, Temperature Calibration, Vacuum Test, Furnace Cleaning, Language, and Engineer.</p>
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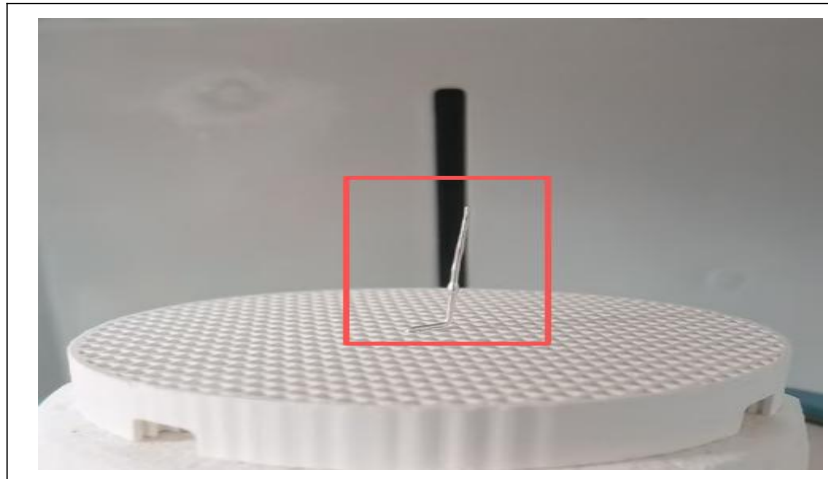
### 3.8 Energy-Saving Standby Interface

 节能待机	<ul style="list-style-type: none"> <li>➤ Default standby temp: 0°C (no heating on delivery). After installing the chamber seal, set the standby temp (0–400°C).</li> <li>➤ Backlight: OFF = always on; set a time for auto-dimming.</li> <li>➤ Displays total operating cycles and supply voltage.</li> </ul>
节能温度 <b>400</b> °C	
背光时间 <b>0</b> s  OFF	
炉体使用次数 <b>5</b> AC <b>220.0V</b>	
	

### 3.9 Temperature Calibration Function

 温度校正	<ul style="list-style-type: none"> <li>➤ Click the “Temperature Calibration” button on the settings screen to access the temperature calibration screen.</li> <li>➤ If the furnace temperature deviates from the set temperature, use the temperature calibration function to ensure temperature accuracy.</li> <li>➤ This furnace uses the melting point of pure silver wire as the temperature calibration point.</li> </ul>
<p style="text-align: center;">节能待机中!</p> <p style="text-align: center;">下降炉台, 把银丝插入承烧网盘中间, 点击运行程序!</p> <p>校准温度  <b>0.0</b> </p> <p>当前温度 <b>400.0°C</b></p> <p style="text-align: center;"><b>15 : 57</b></p> 	<p>Click the “Lower” button to lower the tray to the bottom. Place the silver wire in the center of the sintering disk, then position it in the center of the platform. Click the “Run” button.</p> <p> Once the program has automatically completed, the tray will lower to the bottom. Check the condition of the silver wire. If there is no change, it indicates that the temperature is too low. Click the button to increase the temperature by 5°C, then run the program again.</p>

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If the silver wire melts into a spherical shape, this indicates that the temperature is too high. Please click the button to reduce the temperature by 5°C and run the program again.

Once the silver wire takes on a needle-like shape as shown in the figure, the temperature calibration is complete, and you will return to the main interface.

### 3.10 Vacuum Test Interface

真空测试	
检测计时	0
VAC	0%
93%真空值时间	0
最终真空值	0
真空度下降	0
泄压时间	0
状态	检测停止

Click the “Vacuum Test” button on the Settings screen to open the Vacuum Test screen.

Click here to perform a vacuum test. The vacuum system test takes approximately 4 minutes.

Click to stop the vacuum test.

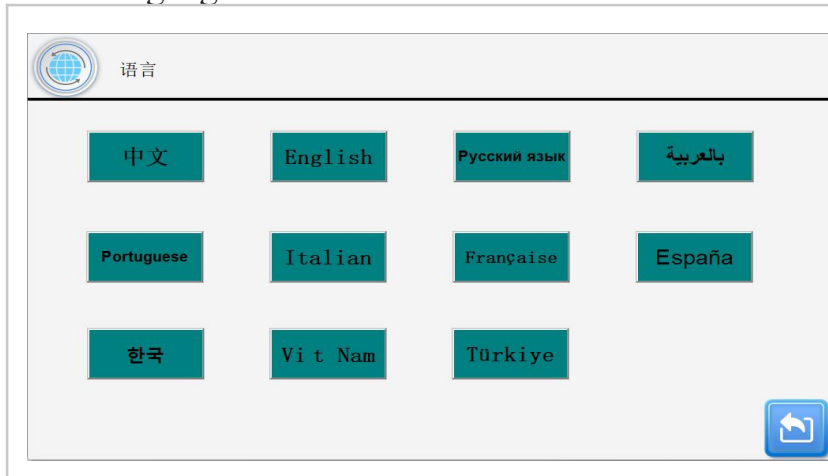
### 3.11 Chamber Cleaning Interface

清洁炉膛	
节能待机中!	
连接好真空泵和炉子的管路和供电接线, 点击运行程序!	
当前温度	400.0°C
15 : 57	

On the function screen, tap the “Clean Furnace” button to access the furnace cleaning screen. Tap the button to start the cleaning program; the entire process takes about 30 minutes.

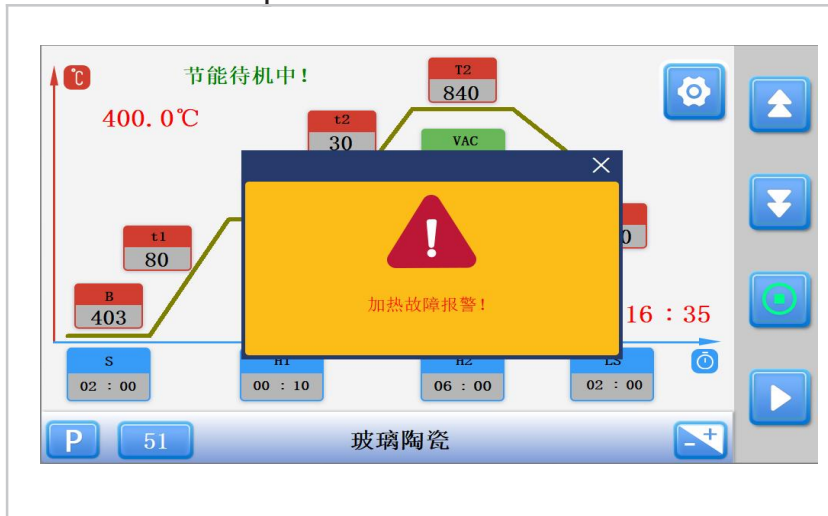
Click the button to stop the program.

### 3.12 Language Selection Interface



Tap “Language” in the Settings menu to access the language settings screen; This version supports 11 languages: Simplified Chinese, English, Russian, Arabic, Portuguese, Italian, French, Spanish, Korean, Vietnamese, and Turkish. Tap the desired language to switch.

### 3.13 Alarm Prompt Interface



Heating Failure: Continuous buzzer. Contact the dealer/manufacturer.



Vacuum Alarm: Check the seal for debris or damaged lines; contact service.

Chapter 3: Operation Instructions



Low Vacuum: Check the seal, tubing, or pump performance; contact service.



Lift Failure: Contact service.



Temperature Error: Thermocouple break or mainboard fault; contact service.

## Conclusion

- Thank you for choosing the YRC-C200 porcelain furnace.
- Always follow the safety guidelines and operating procedures outlined in this manual. Perform regular chamber cleaning, temperature calibration, and vacuum system checks to ensure stable operation, extend service life, and maintain consistent firing quality for your dental restorations.
- In the event of faults, alarms, or operational questions, do not disassemble the equipment yourself. Contact Shenzhen Yurucheng Dental Materials Co., Ltd. at 400-995-8505 for professional technical support and after-sales service.
- Keep this manual in a safe place for future reference. Enjoy your use!



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