



PROGRAMMABLE VACUUM PORCELAIN FURNACE

Touch-screen firing system for dental ceramic restorations



Conceptual vector illustration - not to scale

KEY PUBLISHED RATINGS

1200°C

Maximum firing temperature

200°C/min

Maximum heating rate

99

Stored programs

1500 W

Maximum input power

PRODUCT DESCRIPTION

The PHOENIX 7 is a compact, programmable dental porcelain firing furnace with a color touch-screen controller, automatically adjusted temperature control, a motorized firing platform and a vacuum-capable firing chamber. It is intended for laboratory ceramic processing, including porcelain firing and suitable glazing cycles.

Scope: A 1200°C-class porcelain furnace. Full-density sintering of conventional presintered zirconia blanks typically requires a separate, higher-temperature zirconia sintering furnace.

PRODUCT DATA

Operating and electrical ratings

THERMAL PERFORMANCE & PROGRAMMING

Maximum furnace temperature	1200°C (2192°F)
Maximum temperature ramp	200°C/min (equivalent to 360°F/min rise)
Maximum hold at 1200°C	2 hours
Vacuum range - listing	1-101% (controller scale; pressure units unspecified)
Program memory	99 built-in / stored programs
Control and indication	Color touch screen; optical status display

ELECTRICAL SUPPLY

Voltage options	100-120 V AC or 230 V AC, 50/60 Hz
Rated current - 110 V	14.5 A (as listed)
Rated current - 230 V	7.0 A (as listed)
Maximum input power	1500 W
Permitted mains variation	Within ±10% of rated voltage

DIMENSIONS & MASS

Overall size (W × D × H)	270 × 360 × 530 mm
Firing chamber diameter	90 mm (3.5 in nominal)
Net / gross weight	20 kg / 23.5 kg

SPECIFICATION INTERPRETATION

The printed Fahrenheit equivalents on some retailer pages are inconsistent. The temperature conversions shown here are corrected. "1-101% vacuum" is reproduced as a control-scale range, not an independently verified vacuum pressure in kPa, mbar or inHg.

FUNCTIONAL OVERVIEW

Controller, chamber and motion

The controller supports stored firing programs and automatic temperature adjustment before each cycle. Program parameters must follow the instructions supplied by the ceramic material manufacturer; example process diagrams below are conceptual and do not prescribe firing temperatures.

01

COLOR TOUCH SCREEN

Menu-driven program selection and real-time indication.

02

99 STORED PROGRAMS

Reusable firing program locations for laboratory workflows.

03

STEPPER MOTOR LIFT

Program-adjustable platform movement speed.

04

SPIRAL QUARTZ CHAMBER

Thermal chamber design described for porcelain firing.

05

USB SERVICE PORT

Connection to a computer service program; file transfer features not confirmed.

06

VACUUM-CAPABLE FIRING

Furnace control provides a vacuum setting; external pump performance requires confirmation.

TYPICAL LABORATORY FIRING WORKFLOW

1

Check ceramic

manufacturer's schedule

2

Inspect chamber

and place restoration

3

Select program

and ramp/hold values

4

Run cycle

vacuum when specified

5

Cool safely

before handling

APPLICATION BOUNDARY

Glazing or porcelain-layer firing on already-sintered zirconia restorations may be suitable when the material schedule permits. The furnace's 1200°C ceiling is below the temperature normally used to densify presintered zirconia blanks (often around 1450-1550°C).

INSTALLATION & SUPPLY

Site conditions, delivery and precautions

ENVIRONMENTAL OPERATING LIMITS

Location	Indoor installation only
Ambient temperature	2-40°C
Relative humidity	Up to 80% at 31°C (listed condition)
Installation altitude	Up to 1500 m; special version listed to 3500 m

LISTED PACKAGE CONTENTS

Porcelain furnace	1 × PHOENIX 7 furnace
Firing pan	1 × firing pan
Mains connection cable	1 × power cord
Furnace tweezers	1 × tweezers
Repair kit	1 × kit package

VACUUM PUMP - SUPPLY STATUS

A pump is shown in product photography, but the seller's itemized package list does not mention one. Confirm the pump, vacuum hose and electrical interface are included or ordered separately before installation.

COMMISSIONING CHECKLIST

- ☐ Verify nameplate voltage, grounded power connection and appropriate circuit capacity.
- ☐ Keep cooling openings unobstructed; locate on a stable, nonflammable workbench.
- ☐ Confirm vacuum pump inclusion and check tubing, seals and connections before vacuum use.
- ☐ Follow the restoration material manufacturer's validated firing cycle and cooling instructions.
- ☐ Use heat protection and furnace tweezers; never touch hot chamber or load surfaces.

Technical note: Published specifications describe a listed product configuration; the rating plate, supplied accessories, calibration records and delivered operating manual take precedence for installation and acceptance.