

50L ELECTRIC KILN

Product and operating manual



220 V

RATED VOLTAGE

6 kW

RATED POWER

30 segments

PROGRAM CONTROL

Read before installation or use. Keep this manual with the kiln.

01 / PRODUCT INFORMATION

Product specifications

A front-loading electric kiln with a refractory-brick chamber and automatic temperature programming for compatible ceramic work.

Specification	Value
Nominal chamber capacity	50 L
Rated voltage / power	220 V / 6 kW
Operating current	Approximately 28-30 A
Chamber dimensions	Approx. 350 W × 400 D × 350 H mm
Overall dimensions	Approx. 750 W × 770 D × 1020 H mm
Weight	Approximately 200 kg
Chamber lining	High-temperature refractory brick
Temperature control	Fully automatic programmable controller
Programming capacity	30 segments; custom temperature curves
Factory programs	5 default programs; 3 reference schedules detailed on pages 8-9
Protection	Over-temperature protection
Copper supply cable	Supplier recommendation: ≥4 mm ² ; final selection by the installer (page 4)

Dimensions and electrical values follow the supplied product specification. The stated internal dimensions give approximately 49 L geometrically; 50 L is the nominal capacity. Furniture and loading clearances reduce usable space.

Find what you need

Dimensions and product layout	3	Reference firing schedules	8
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02 / DIMENSIONS

Plan your space

Dimensions are approximate. Allow additional space for the open door, loading, ventilation, electrical isolation and servicing.

**EXTERNAL W × D × H****750 × 770 × 1020 mm****CHAMBER W × D × H****350 × 400 × 350 mm**

Illustrated product view. Confirm the controls and fittings on the delivered kiln. The dimensions above are equipment sizes, not installation clearances.

03 / SAFETY AND INSTALLATION

Prepare the installation

Complete these checks before connecting the kiln. Keep untrained users, children and pets away from the firing area.

WARNING / Electrical shock and high heat

Heating elements and electrical components can cause serious injury. Isolate the supply before loading, cleaning or servicing. STOP on the controller is not electrical isolation.

Location and handling

- Use a dry, dedicated firing area on a level, non-combustible floor that supports the approximately 200 kg kiln plus furniture and ware. Plan lifting and movement with suitable handling equipment.
- Keep the kiln stable and prevent its castors from moving. Never move it while hot or loaded, and do not lift it by the door, latches or control box.
- Keep combustible materials away from the kiln. Obtain the installation clearances from Propick before siting it; cabinet dimensions are not safe-clearance values.
- Provide ventilation that removes firing fumes from occupied areas. Confirm the required exhaust-cap positions and the kiln-specific drying procedure before commissioning.

Electrical connection

- **220 V, 6 kW, approximately 28-30 A.** Use a dedicated, correctly rated circuit with protective earthing and an accessible means of isolation. Have a qualified electrician complete and verify the installation.
- The supplied specification recommends copper conductors of at least 4 mm². This is not a complete circuit design: cable length, installation method, temperature and protection determine the final size.
- The installer must verify the actual nameplate, supply compatibility, connections and protective devices. Do not assume that a domestic socket is suitable. Do not use extension leads, power boards or adapters.

Confirm the operating limit before first use

The supplied product specification does not state a rated maximum temperature. Check the kiln nameplate or obtain confirmation from Propick. The 1245°C example on page 8 is not a rating or permission to exceed the kiln limit.

04 / PREPARATION

Load with care

Start with a cold, electrically isolated kiln. Use only compatible, fully dry ware and kiln furniture suitable for the intended firing temperature.

01 Inspect the chamber

Remove loose debris from the chamber and element grooves without pulling or pressing on the elements. Check for displaced elements, damaged insulation, a loose thermocouple or shipping damage. Do not operate a damaged kiln.

02 Position the shelves and supports

Use stable, correctly supported kiln shelves and posts. Keep the load clear of heating elements, chamber walls, the door lining and the thermocouple. Arrange ware so heat can circulate; do not fill the chamber tightly.

03 Prepare the ware

Dry pieces thoroughly before loading. Remove glaze from the foot of each piece. Keep glazed surfaces clear of other pieces and shelves. Use suitable shelf protection or a catch plate where glaze may run; keep coatings off elements.

04 Check clearances and door movement

Leave gaps between pieces and prevent any piece from projecting towards an element. The source guide suggests roughly one finger between pieces and two fingers from elements; these are loading guides, not installation-clearance measurements. Close the door without forcing it.

Commissioning and the first firing

- Have the installation and protection checked. Confirm the approved first-firing schedule, ventilation arrangement and temperature limit with Propick before operating.
- Read back the complete program, including its start segment and final stop code. Never assume that a factory program is correct for the clay, glaze or kiln furniture being used.
- During the first firing, record the time, PV, SV, current and voltage every 30-60 minutes. Use the record sheet on page 12 and remain available to monitor the kiln.

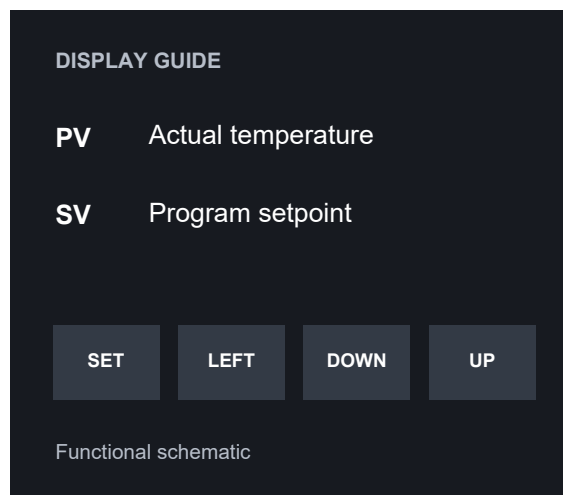
Drying programs do not make wet ware safe to fire

Moisture trapped in ware can turn to steam and damage both the work and the kiln. Do not use the 300°C reference program as a shortcut for firing wet pieces.

05 / CONTROLLER

Understand the controls

The supplied controller guide uses PV, SV, SET and three arrow keys. Read the labels on your fitted controller before following the key instructions.



Read the display

PV is the measured chamber temperature. **SV** is the programmed temperature demand. During a ramp, SV changes with time.

RUN means a program is operating. **HOLD** pauses program progress and may continue heating. **STOP** ends program operation; the kiln can remain hot.

Action	Key operation / result
Start	Press and hold DOWN for about 3 seconds until RUN is shown.
Hold / resume	While running, press and hold DOWN to select HOLD. Press and hold DOWN again to resume; verify RUN on the display.
Stop	Press and hold UP for about 3 seconds until STOP is shown.
Choose a start segment	With the controller stopped, press SET until STEP is displayed. Select the required segment with the arrow keys, then use SET to return to the temperature display.
Enter the curve editor	From the normal temperature display, press LEFT once to show a C parameter. See page 7.
Leave the curve editor	Press LEFT and SET together to return to the normal temperature display.

Keep service settings unchanged

Use short presses to navigate: a long LEFT press can activate AT self-tuning. Leave alarm, output, manual-mode and service settings as commissioned. If the display or keys differ, contact Propick with a controller photo.

06 / PROGRAMMING

Build a temperature curve

Temperature entries C are in degrees Celsius. Time entries T are in minutes. Review and edit a program while the controller is stopped.

How one segment works

C01 is the starting temperature. T01 is the time allowed to move from C01 to C02. T02 then controls the move from C02 to C03, and so on. The time belongs to the transition **from the matching C entry to the next C entry**.



A hold is created by repeating the same temperature in two consecutive C entries and setting the time between them. In this illustration, 200°C is held for 20 minutes.

Enter and check the program

01 Set the starting temperature

Select STEP 1 before editing from C01. Press LEFT briefly. Use UP or DOWN to change a value; LEFT selects its digit where supported.

02 Set the transition time

Press SET to display T01 and enter the required minutes. Press SET again for C02. Continue through each C and T pair in order.

03 Finish with the stop code

At the final temperature entry, set its matching T value to -121. This is a stop instruction, not a temperature or a negative firing duration.

04 Select and verify the start

Exit with LEFT + SET. Select the intended STEP, review the full curve and check the final -121 before starting. Starting at the wrong segment can skip the planned warm-up.

Maximum 30 segments

Keep every temperature within the confirmed kiln, clay, glaze and furniture limits. Back up existing C/T values before changing them. The reference STEP numbers on pages 8-9 work only when that exact sequence is stored.

07 / REFERENCE SCHEDULE

Standard glaze firing

Source-guide example: STEP 1, ending at C11. Use only after confirming compatibility with the kiln rating and the selected clay, glaze and kiln furniture.

STEP	Temperature (°C)	Time (min)	Segment action
01	C01 = 40	T01 = 90	To 200°C
02	C02 = 200	T02 = 80	To 400°C
03	C03 = 400	T03 = 60	To 600°C
04	C04 = 600	T04 = 40	To 800°C
05	C05 = 800	T05 = 40	To 1000°C
06	C06 = 1000	T06 = 40	To 1100°C
07	C07 = 1100	T07 = 40	To 1200°C
08	C08 = 1200	T08 = 30	To 1240°C
09	C09 = 1240	T09 = 30	To 1245°C
10	C10 = 1245	T10 = 20	Hold at 1245°C
11	C11 = 1245	T11 = -121	End program

7 h 50 min

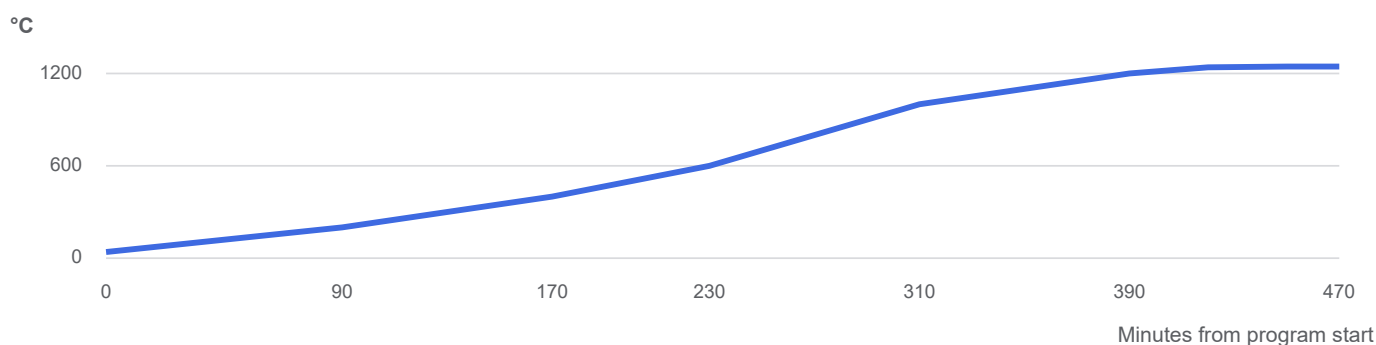
PROGRAMMED HEATING TIME

1245°C

EXAMPLE PEAK

20 min

FINAL HOLD



Reference curve, not a universal firing recipe

The 470-minute total is the sum of positive T values and excludes cooling. Actual elapsed time may differ. The last T entry is -121 (STOP). These temperatures do not establish the kiln's rated maximum temperature.

08 / REFERENCE SCHEDULES

Bisque and drying examples

These are the two additional schedules documented in the supplied controller guide. Validate them for your materials before use.

Bisque firing example

STEP	Temperature (°C)	Time (min)	Segment action
12	C12 = 40	T12 = 300	Ramp to 800°C
13	C13 = 800	T13 = 20	Hold at 800°C
14	C14 = 800	T14 = -121	End program

Start at STEP 12. Programmed time: 320 minutes (5 hours 20 minutes), including a 20-minute hold. The 800°C peak is a source example; use the bisque temperature required by your clay supplier.

Drying example

STEP	Temperature (°C)	Time (min)	Segment action
15	C15 = 40	T15 = 80	Ramp to 300°C
16	C16 = 300	T16 = 20	Hold at 300°C
17	C17 = 300	T17 = -121	End program

Start at STEP 15. Programmed time: 100 minutes (1 hour 40 minutes), including a 20-minute hold. Confirm the approved drying and ventilation procedure before using this example. Ware must already be thoroughly dry.

Factory programs and custom curves

The product specification states 5 default programs, but the supplied guide documents only the 3 schedules on pages 8-9. Confirm the remaining presets on your controller with Propick. Do not assign undocumented STEP numbers.

Before choosing any schedule

- Check the clay and glaze instructions, load thickness and quantity, shelf rating and confirmed kiln limit. A temperature alone does not define a suitable firing.
- Check that the stored C/T values match the selected start segment and that each independent schedule ends with its own -121 stop entry.

09 / FIRING AND COOLING

Run the firing safely

Automatic programming does not remove the need for supervision. Keep the working area clear and ventilation operating during firing and cooling.

01 Complete the pre-start check

Confirm the kiln is stable, the area is clear, the load is dry and secure, and the approved ventilation arrangement is ready. Follow the kiln-specific door and exhaust-cap instructions confirmed at commissioning.

02 Power on and verify the program

Restore the supply only after loading is complete. Check that PV is plausible for a cold kiln, select the correct STEP and verify the stored temperatures, times and final -121 stop code.

03 Start and monitor

Press and hold DOWN until RUN is shown. Record PV, SV, current and voltage, especially on the first firing. Do not touch the cabinet, adjust a hot door or insert anything into the chamber during firing.

04 Respond to abnormal behaviour

If PV and SV differ by 15-30°C, monitor closely and record the trend. If the difference exceeds 30°C and firing is abnormal, stop and contact Propick. Do not use HOLD to compensate for an unexplained supply or heating fault.

05 Confirm the end and cool naturally

At the final -121 entry, confirm STOP. Check that heating has stopped. Keep the door closed and allow the kiln to cool naturally to room temperature. Do not force cooling with a door gap, water or a fan directed into the chamber.

06 Isolate and unload

Once the kiln and ware are cool, isolate the electrical supply before opening. Unload carefully from the top down, avoiding elements and the thermocouple. Use suitable gloves if any residual warmth remains; do not handle hot ware.

If the kiln keeps heating after STOP

Use the external electrical isolator if safe to reach, keep the door closed and prevent access to the kiln. Contact Propick or a qualified electrician. Do not restart until the cause has been found and corrected.

10 / CARE AND TROUBLESHOOTING

Keep the kiln ready

Perform checks only when the kiln is cold and the supply is isolated. Electrical diagnosis and component replacement require a qualified person.

Routine care

- **After each firing:** inspect shelves, remove loose clay or glaze debris, and check that the element grooves and chamber floor are clear. Do not scrape or pull heating elements.
- **Before the next firing:** inspect the lining, door latches, thermocouple, visible wiring and supply cable. Stop using the kiln if components are loose, scorched or damaged.
- **Keep dust contained:** avoid dry sweeping, compressed air and aggressive brushing of the refractory lining. Use an appropriate fine-dust cleaning method and avoid wetting the elements or insulation.

If something is wrong

Symptom	Operator action / next step
PV displays 1705 or an implausible temperature	The source guide identifies 1705 as a missing temperature-input signal. Stop, isolate and let the kiln cool. Have the thermocouple and its connections checked. Do not fire with unreliable temperature feedback.
PV cannot follow SV	Check the selected schedule and record the PV/SV gap. A ramp may be too fast for the load, or the supply or heating system may be faulty. Follow the 15-30°C / over-30°C guidance on page 10.
Breaker trips, burning smell or damaged wiring	Stop and isolate if safe. Do not repeatedly reset a protective device. Have the circuit and kiln inspected before reuse.
Heating continues after STOP	Isolate the kiln using the external isolator if safe. Keep the door closed and arrange service. Do not rely on the controller to disconnect power.
Unexpected HOLD or wrong starting point	Confirm the operating state and STEP. Stop before changing or reviewing the program. Do not restart from a later segment without checking the full firing history.

Do not bypass protection

Do not bridge a sensor, bypass a protective device or change alarm/output limits to hide a fault. Use compatible replacement parts approved for this kiln. Record display messages and the program values before requesting support.

Record each firing

Copy or print this page for each load. During the first firing, record readings every 30-60 minutes and note any unusual behaviour.

Date / operator

Kiln serial number

Clay / glaze

Start STEP / program

Peak / hold

Load / shelf arrangement

Time	PV (°C)	SV (°C)	Current (A)	Voltage (V)	Notes

Finish time / cooling observations / firing result

PROPICK SUPPORT

propick.co.nz

propicknz@gmail.com

When contacting Propick, provide your order or serial number, a controller photo, the C/T program values and the readings above. Include a description of the load and the problem.

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Product data: supplied kiln specification. Controller and schedule reference: 2024 English-panel operating guide. Product illustrations are for identification and dimension reference.