

CU14 CONTROLLER BY BLAAUW KILNS



QUICK REFERENCE

Version 1.3
www.blaauwkilns.com

Welcome to the CU14, the most advanced gas kiln controller in the industry. The CU14 is designed intuitively for everyday firings, yet offers features for more complex firings. Use this quick reference to get started.

MENU / INFORMATION BAR

Allows navigation to any area of software, while displaying critical firing information.

The Menu/Information Bar consists of five main navigation buttons: Home, Diagnostics, Start, Programming, and Preferences. Below these buttons is a status bar with four sections: STATUS (Firing), ACTUAL TEMPERATURE (1742°F, -3°F deviation), SETPOINT (1745°F), and ACTIVE PROGRAM (2345 HIGH FIRE REDUCTION). Red lines connect descriptive text to the corresponding elements in the interface.

PROGRAMMING

Write or edit firing programs

LIBRARY WINDOW

The Library Window features a 'New:' field with 'CARBON TRAP SHINO' and an 'Existing:' list containing programs like '1922 BISQUE FIRE' and '2228 MID FIRE GLAZE OXIDATION'. Action buttons include Create, Edit, Delete, Copy, and Start. A 'Delay (h:m)' field is set to 0:0. Red lines and a warning triangle provide instructions on how to use these functions.

PROGRAM WINDOW

The Program Window displays a table with columns: #, Temp, Time, Rate, Mode, Oxid%, Fxd Air%, Fxd Gas%, Ox.Prot, Track, Event, and Loop. Row 8 is selected. Below the table are buttons for DEL, INS, Cancel, and Save and Exit. A title bar at the bottom shows '2228 MID FIRE GLAZE REDUCTION'. Red lines and a warning triangle explain the actions for each button.

#	Temp	Time	Rate	Mode	Oxid%	Fxd Air%	Fxd Gas%	Ox.Prot	Track	Event	Loop
1	140	00:48	150	Drying	Off	Off	Off	No	Off	Off	Off
2	140	00:05	0	Drying	Off	Off	Off	No	Off	Off	Off
3	260	01:12	100	Drying	Off	Off	Off	No	Off	Off	Off
4	550	01:09	252	Firing	Off	Off	Off	No	Off	Off	Off
5	650	00:30	200	Firing	Off	Off	Off	No	Off	Off	Off
6	850	00:48	250	Firing	Off	Off	Off	No	Off	Off	Off
7	950	00:24	250	Main On	95	Off	Off	No	Off	Off	Off
8	1190	00:57	252	Main On	95	Off	Off	No	Off	Off	Off
9	1220	00:12	150	Main On	95	Off	Off	No	Off	Off	Off

LINE WINDOW

Input a destination temperature for the selected program line

Input an amount of time to reach destination temperature, **OR** input a rate of temperature increase. Enter "0" to enable a grayed out field.

Selected a mode for each program line:

- Firing: Select for all lines unless otherwise specified.
- Drying: Use for control during water smoking up to 300°C (570°F).
△ Drying mode has limited power. For steeper rates use firing mode.
- Main on: Use where reduction is required.
- Cooling: Expedites cooling.

Select to create high volume movement in chamber. Leave value at 100%

Advanced feature. Do not select unless in consultation with a Blaauw service provider.

Ratio of air to gas:

- < 100% reduction flame
- 100% neutral flame
- > 100% oxidized flame

Select for critical oxidation firings

Save and exit line window

△ When making any changes to a line, you must save in the line window and program window.

START

Start/stop existing firing

Starts selected program. Fires to temperature in oxidation and reduction automatically.

Starts blower only. Use for cooling the kiln.

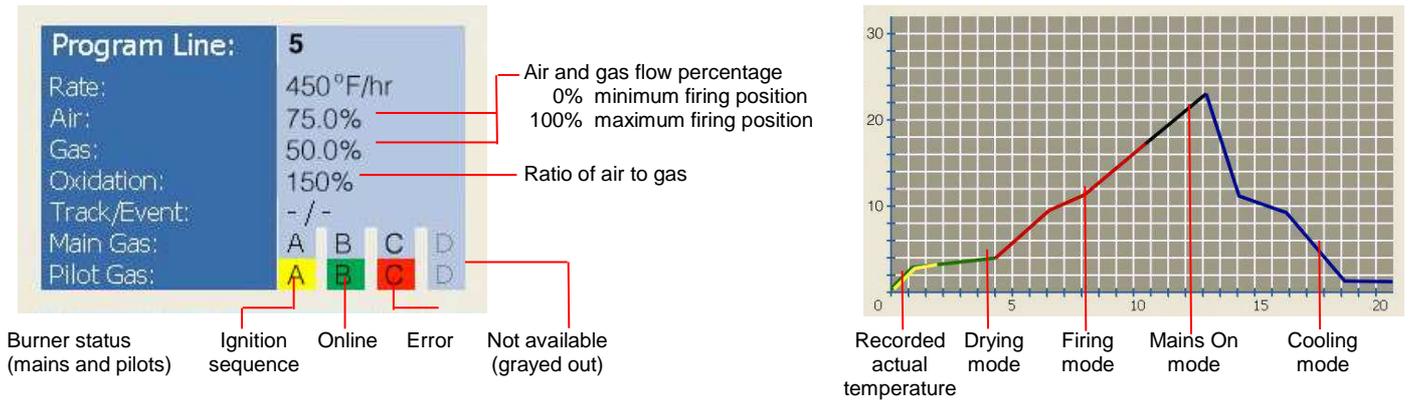
Advanced feature. Do not select unless in consultation with a Blaauw service provider

Countdown delay of program start, or cooling start

Selected program

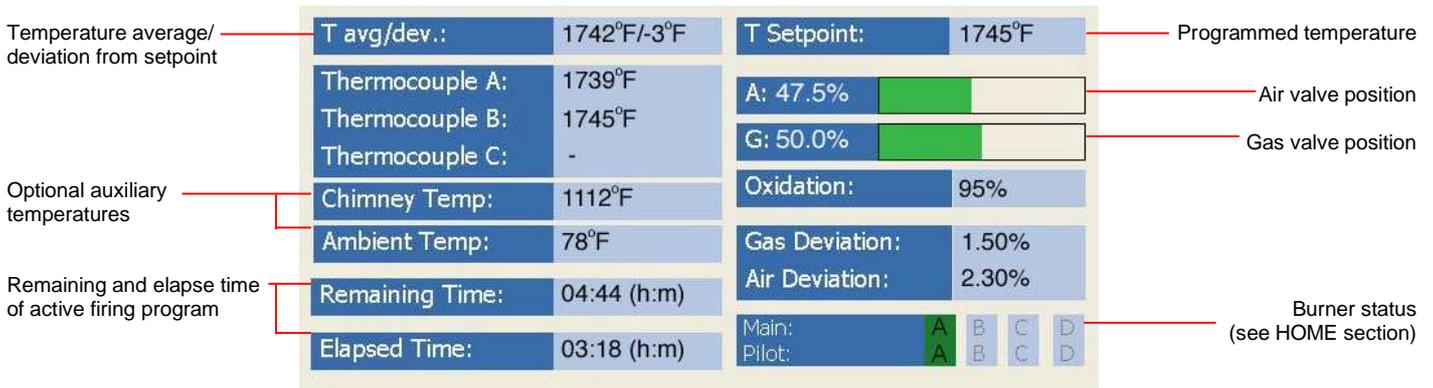
HOME

Displays graphical and numerical data of in-progress firings.



DIAGNOSTICS

Thermocouple, gas and air flow information



GLOSSARY

actual temperature.....the real temperature measure by a thermocouple.
 air flow..... flow of air entering the kiln.
 blower.....supplies air for combustion and for cooling.
 burner..... mixes air and gas together for combustion.
 cooling mode..... a mode in which the kiln uses only the blower.
 Δt (delta t) change in temperature from one program line to the next.
 drying mode..... a mode that limits power.
 event..... advanced option. Use in consultation with Blaauw.
 firing mode..... pilots and mains are used for heating.
 fixed air..... creates high volume movement in the kiln.
 gas flow..... flow of gas entering the kiln (0-100%).
 ignition sequence..... the steps required for igniting a burner.

main gas..... contributes a larger amount of gas flow.
 mains on mode..... Can be used for reduction segments.
 oxidation (factor)..... ratio of air to gas.
 oxidation protection.....for critical oxidation firings.
 pilot gas..... contributes a lower amount of gas flow.
 rate.....firing speed.
 setpoint..... the target temperature calculated by the program.
 temperature average... the average measurement of the thermocouples.
 temperature deviation...the difference between actual temperature and setpoint.
 thermocouple..... measures temperature in the kiln.
 track..... advanced option. Use in consultation with Blaauw.

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