

JEN-KEN KILNS - VITRIGRAPH GLASS KILN



Vitrigraph Firing Tips

A Typical Vitrigraph kiln is Set-Up on a sturdy wire rack with some of the metal cut out on one shelf where the hole in the kiln will be.

What you'll need, besides the kiln and stand:

- Bent nosed pliers with long nose and handles
- Non-combustible container or surface to catch glass in. We used a galvanized steel tubs
- Heat resistant, heavy duty gloves.
- Wheeled nippers/ something to cut the glass with.
- Protective eye shields
- Long sleeved, natural fiber shirt
- Long, natural fiber pants
- Closed toed shoes
- Long hair pulled back

The following guide contains tips for safely setting up and operating your new Vitrigraph kiln. While these are great guidelines, there is no substitute for experience and proper instruction! Find a teaching studio near you and take a class. You won't regret it! As always, call with any questions.



Shown above is a slow pull with tweezers and a helper to cut the glass! Work slowly and safely.

The pot of glass needs to be centered over the hole on the bottom, and should have a half inch clearance away from the thermocouple. Kiln posts or fiber blanket can be placed around the base of your pot to help stabilize and keep it centered. Do not cover the bottom element.

In User mode, enter a program to fire 400 degrees per hour to a working temp of 1700, and hold a few hours. Using the Options key, you can adjust the hold temp during the firing. You'll find you go higher for a faster pull with the glass more liquid. Lower for thicker glass and slower pulls. Opalescent glass tends to flow at a higher temp than translucent glass. Overall, these temps are between 1650 and 1750, so 1700 is a great starting point. Below, find an example firing schedule to get you started.

- Pro1 Program 1 under User mode.
- RA1 400 To go slower, use 300 per hour or less. No faster than 400.
- °F1 1700 Adjust between 1625-1675 depending on glass thickness and speed of pulls desired.
- Hld1 3.00 hr This is usually the most time you'll need to soak and make your pulls to empty your pot
- Ra2 0

It's important to give the glass time to absorb the heat before beginning your pull. 400 degrees per hour is as fast as we recommend heating, as shown in our example schedule above. When it's been at peak temp for 40+ minutes, you will begin to see glass sag down out of the hole in the bottom of the pot. When it's almost ready to pull, you'll see the glass around the perimeter of this hole glowing brightly. At this time, you can begin trying to "pull the plug" on the glass with your bent nosed pliers and gloves. Wear safety glasses, heat resistant gloves, closed toed shoes, and a long-sleeved shirt and pants made from natural material like cotton. If you have long hair, pull it back. It is important to have the area around your kiln clear and free of debris. Grasping with your pliers, you can gently twist and pull downward until the "cork" of glass comes free, and you can begin making your pulls. When the red glow has left the glass, you can snip it easily with your wheeled nippers.

If you feel you need to add temp to encourage your glass to be ready to pull, simply press the option key during the hold until you see " CHGt.", for change temp. Press the program key to select it, and then use the up and down arrows to adjust the temp in 25 degree increments for your desired effect. Cooler to slow it down, hotter to speed it up.

On the next page, you'll find a cheat sheet for the options menu on your 3 key controller. It tells you how to add temp, time, etc. We recommend posting it on the wall in the kiln area for quick reference.

Options Menu

During an active firing, the Increase button will activate an options menu and scroll through the available options with each button press. These options allow you to adjust the firing program without stopping the firing. The available options follow.

Change Heating/Cooling Temperature

During an active heating, cooling or hold time, it is possible to change the heating or cooling temperature of the current program step. Press the Increase button until the Change Temperature prompt **CHGt** is displayed. Then Press the Program button to display the current temperature setting. Adjust the temperature setting with the Increase or Decrease buttons. Then Press Program button to return to the normal firing mode. If the Decrease button is pressed while the **CHGt** prompt is displayed, the controller display returns to the normal firing mode.

Add Hold Time

During an active heating, cooling or hold time, it is possible to add more Hold time to the current program step. Press the Increase button until the Hold Time prompt **HLdt** is displayed. Then Press the Program button to display the current hold time. Press the Increase button to add 5 minute increments to the original Hold time. Then Press Program button to return to the normal firing mode. If the Decrease button is pressed while the **HLdt** prompt is displayed, the controller display returns to the normal firing mode.

Skip Step

During an active heating, cooling or hold time, it is possible to skip ahead to the next program step. Press the Increase button to display the Skip Step prompt **SStP**. Then Press the Program button to display the current ramp or hold segment. Press the Program button again to initiate the Skip and the controller display returns to the normal firing mode. If the Decrease button is pressed, the Skip function is canceled and the controller display returns to the normal firing mode.

The Skip function can be used to end a Hold time early or to skip from any heating/cooling step to the next heating/cooling step. The Skip function does nothing during the final program step. To end a final program step, simply press Stop.

Threshold Alarm

During the firing, it is possible to set an audible alarm and display alarm for when the actual temperature reaches a specified value. The buzzer will sound (for 30 seconds) and the display will show the alarm code **ALAr**. **This is good to set to a temperature that is just below your working temperature.**

To set the alarm, Press Increase button during the active firing until the alarm prompt **ALAr** is displayed. Then Press the Program button to display the current alarm temperature setting. Adjust the temperature setting with the Increase or Decrease buttons. Then Press Program button to return to the normal firing mode. If the Decrease button is pressed while the **ALAr** prompt is displayed, the controller display returns to the normal firing mode.

The alarm is disabled (turned off) when the alarm value is set to 32°F (0°C). The alarm value can be reset or changed many times during a single firing. To silence an active alarm, simply press any button. The maximum programmable value for the alarm is 2400°F (1316°C). If the controller does not allow you to program alarm temperatures up to 2400°F/1316°C, it has been factory set by the supplier to a lower safety temperature. This is often necessary to limit the controller to the maximum operating temperature of the system.