



# Studio Pro

Pat. Pending

Thank you for purchasing the Studio Pro by Evenheat Kiln. We know you're going to enjoy using it. We certainly do!

## Studio Pro Features

### Dual Access Design

The Studio Pro features a Patent Pending Dual Access Design. The Dual Access Design simply means you have the choice of entering the chamber through the Top or through the Front.

Top entry offers many unique advantages. Top entry allows for the use of forming tools that require a vertical approach. It also offers easy placement of large ware such as slumping molds and forms. The hinged lid, with its built-in venting allows for excellent ventilation opportunities.

Front entry offers its own unique advantages. Front Entry grants wide open access to the kiln floor. This wide open access is excellent for ware placement, particularly for ware that cannot be moved once positioned. The gentle, hinged action brings the chamber back down with precision and confidence. Front Entry also makes possible the use of forming tools that require a horizontal approach.

### Built-In Lid Vent

Venting the lid of the Studio Pro is easy and convenient with its built-in lid vent system. The lid vent is attached to the front of the lid and offers two venting positions: 1/2" and 1". To vent simply lift the lid slightly, rotate the lid vent downward and lower the lid. It's that simple and that convenient.

### Fiber & Brick Construction

The Studio Pro uses a combination of Firebrick and Refractory Fiber construction. Firebrick absorbs and stores heat, it also releases heat. It's also structurally sound. These characteristics make it an excellent choice for annealing and construction purposes. Refractory Fiber, on the other hand blocks heat rather than absorbing it. It's also light in weight. The lid, which is made of fiber does not continue to "throw off" the amount of heat that a brick lid does when opened. On a small kiln such as the Studio Pro this is helpful when accessing through the lid during firing, it's just more comfortable.

### Control System

The Studio Pro uses a combination of Infinite Control Switch and Pyrometer. The Infinite Control Switch regulates the temperature within the chamber while the Pyrometer displays the temperature.

## Cautions / Safety Precautions

Read and follow all Cautions, Precautions and Operating Instructions

Do not touch kiln surfaces when firing. When touching otherwise, approach slowly.

Keep unsupervised children away from kiln.

The kiln should only be placed on a stable, level and noncombustible surface and should be no closer than 12" from any wall or 48" from any ceiling (in both the open and closed positions).

Remove all flammable materials from the kiln work area. Keep combustible material away from kiln.

Fire only in a well ventilated area. Do not fire in small, enclosed, closet type areas.



## Cautions / Safety Precautions cont.

Never use an extension cord with a kiln.

Use protective eyewear when firing. Eyewear should be capable of filtering both Infrared and Ultraviolet light (IR and UV).

Wear protective gloves when operating the kiln. Gloves should be of the type that offer protection up to the chamber temperatures expected during the firing. Also, if possible, choose gloves that give a fair range of motion. Bulky, stiff gloves may not offer much confidence in use.

Always turn the kiln OFF before entering. Making contact with electrically energized heating elements can cause serious injury or death.

Don't touch the elements with anything.

Do not leave the kiln unattended when firing.

Never fire organic materials in the kiln.

When firing is completed always unplug the kiln

## Kiln Setup and Placement

### Pyrometer/Thermocouple Installation

The thermocouple/pyrometer (temperature sensor and indicator) were packaged separately and are included in your Studio Pro shipping container. The thermocouple/pyrometer must be installed before use.

1. Remove the thermocouple/pyrometer from its shipping container.
2. Insert the thermocouple into the hole provided in the back right of the kiln. Insert the thermocouple until only one of the five white insulators is visible from the outside of the kiln.
3. Attach the pyrometer to the red control panel with the provided screws.

### Lid Handle Installation

The lid handle for your Studio Pro was also shipped separately and is included in your Studio Pro shipping container. The handle must be installed before use.

1. Attach the lid handle to the tab located on the left side of the lid with the provided washer and bolt. The handle should be pointing out, away from the kiln.
2. We've set up the lid handle to be operated with the left hand. If you would prefer to lift the lid with your right hand we have included some mounting holes on the right side of the lid. Simply unscrew the handle tab from the left side of the lid and reinstall it on the right.

### Kiln Location

Place your Studio Pro in a location that offers a level, non combustible surface. The Studio Pro should be placed no closer than 12" from any wall or 48" from any ceiling surface in all opened and closed positions. All flammable and combustible materials should be removed from the kiln area. Enjoy your kiln safely.

## Kiln Operation

### Plugging In the Studio Pro

Rotate the Infinite Control Switch, to the OFF position. Plug the Studio Pro's power plug into your standard household outlet. As the Studio Pro requires 12A/120V to operate it's best that it be the only device plugged into the circuit. We have designed the Studio Pro's power cable to run straight out the back of the control panel. Mainly to keep it out of your way but also to help keep it away from the kiln itself. Once you plug it in make sure the power cable is not touching the kiln. *With the switch in the OFF position the pilot light will not come on.*

### Your Firing Surface

You will always want to fire your ware on a kiln shelf prepared with a kiln wash or glass separator. You may also choose to fire on many of the fiber "papers" available. You DO NOT want to fire your ware directly on the base of the Studio Pro. Doing so will most likely allow your ware to stick to the base and damage it, and that's no fun. If you have not prepared your shelf do so now. If you're using Evenheat supplied shelves and wash there are separate instructions included with these items.



## Kiln Operation cont.

### Loading the Studio Pro

As mentioned in the Features Section of this manual the Studio Pro gives you a choice between loading via the Top or Front.

To load via the top, set the infinite switch to the OFF position and simply lift on the lid handle and take the lid back. A built-in stop will hold the lid at the open position. Avoid positioning the shelf or ware directly at the thermocouple. The thermocouple needs some space around it in order to operate properly. When lowering the lid be sure that your ware does not make contact with the lid. This is possible when using tall forming molds and large pieces.

To load via the front, set the infinite switch to the OFF position and simply lift on the front chamber handle and take the chamber back. A built-in stop will hold the chamber at the open position. Place your shelf squarely onto the floor of the Studio Pro. At this point we think it's a great idea to gently lower the chamber to check that the shelf clears the chamber. Reposition if necessary. Position your ware on the shelf as desired and close the kiln. Open the lid and check for clearance, particularly with the thermocouple. Remember we want to give the thermocouple some space.

Note: Do not open the chamber with the lid in the open position.

### Pre Fire

Evenheat suggests that you perform a test fire with your new kiln before putting it into service.

A pre fire gives you an opportunity to become familiar with the features and functions of the kiln before committing to an actual firing. It also allows your element to form a protective oxide barrier. A light lubricant was used in the production of your heating element. The pre fire will burn this off, almost immediately! You may notice a light smoke as this occurs. It's normal.

Step 1 – Vent the lid of the kiln to the 1" venting position (this allows the light smoke to escape) and rotate the infinite switch to the LOW setting. Keep an eye on the pyrometer and get a feel for how fast the temperature increases and where the temperature might settle. Once you've had fun with that go on to Step 2.

Step 2 – Rotate the switch to MED and continue to get a feel for the kiln's performance. Again, you'll want to note how fast the temperatures increase and to what. When you would like to move on to the next step shut the lid completely by closing the vent and go to Step 3. *Use protective measures as described in the Firing Cautions and Tips section of this manual when operating the vent.*

Step 3 – Rotate the switch to MAX and continue to get the feel of the kiln. Once the pyrometer indicates 1600°F you may turn the kiln off. Please let it cool fully before attempting to load and fire.

We would encourage you to repeat this pre fire procedure if you've never fired a kiln of this design before. You won't hurt anything. Kilns are wonderful machines and they're even more wonderful when you know what to expect and how to work them.

### Firing the Studio Pro

The infinite control switch regulates the heat within the kiln. The infinite switch allows you to set the heat anywhere from Low to Max. It's very much like a stove switch that we're all used to. You are not choosing an actual temperature you are choosing a heat setting. As the infinite switch is rotated to any position but OFF the pilot light will illuminate indicating that the kiln is on.

Generally speaking you will begin by setting the infinite switch to the LOW setting for a period of time, how long is up to you and your ware. Most ware likes a gradual type of firing as opposed to full on, so LOW is a good place to start. Once the switch is set to LOW the heating element will begin to warm up and you will begin to see the chamber temperature rise on the pyrometer.

Rotate the infinite switch to a heat setting somewhere around the MED. This brings the temperature of the chamber up beyond the LOW setting yet it's still not full on. Again, how long you leave the kiln at this temperature depends on your ware and your desires.

At some point you will probably find it necessary to increase the heat setting to Max or close to Max. This is fairly typical for most firings. It's at this point that you will really concentrate on your pyrometer, or in the case of glass – the glass itself. Your ware has a temperature or temperatures at which you can expect it to mature or change.

If you're firing glass you will most likely anneal your glass at some temperature much lower than your maximum firing temperature. In this case you will gain experience over time where best to position your infinite switch to accomplish this.

Once your firing is complete. Rotate the infinite switch to the OFF position (the pilot light will go out) and allow the kiln to fully cool before opening and removing the ware.

If the above firing procedures appear to be vague and too basic, it's because they are. What we are trying to convey is a sense that the typical firing is performed in steps. The Studio Pro is capable of firing everything from glass and metal clays to low fire ceramics and annealing. These different types of ware require different temperatures, rates and so forth. For detailed firing instructions you will want to contact your ware supplier. They will have the specific requirements for your ware.



# Firing Cautions and Tips

## Crash or Flash Venting

**Caution:** There is a technique called “Crash Venting” or “Flash Venting” that is used in some firing procedures, most notably glass firing. This involves opening the kiln at high temperature in an attempt to cool it very quickly and to stop any further changes to the glass. It’s a valid and popular technique but it does come with some risk. Specifically: risk of burns. If you attempt this procedure be aware that the hot gases in the kiln will escape very quickly. **First and Foremost – Keep Your Face Away and Stand Back.** Wear eye protection capable of filtering Infrared and Ultraviolet light (IR and UV), gloves capable of surviving expected chamber temperatures and loose fitting cotton clothing. Also be aware of your surrounding environment. Always make sure there are no flammable or combustible materials near. You should be doing this anyway but be aware. When the lid is opened a lot of heat comes pouring out quickly and it needs to go somewhere so give it plenty of room. After the bulk of the heat has escaped you may wish to approach the kiln more closely. If so, do so slowly and with care.

## Ware Manipulation

**Caution:** Some firing techniques involve using manipulation tools or require chamber access during the firing process. Before using any such techniques rotate the control switch to the OFF position. Not doing so creates an unsafe condition. Making contact with energized heating elements is dangerous and may cause serious injury or death. Also please note that there is a burn risk. If you attempt any procedures involving opening and/or entering a kiln that is firing be aware that the hot gases in the kiln will escape very quickly. **First and Foremost – Keep Your Face Away and Stand Back.** Wear eye protection capable of filtering Infrared and Ultraviolet light (IR and UV), gloves capable of surviving expected chamber temperatures and loose fitting cotton clothing. Also be aware of your surrounding environment. Always make sure there are no flammable or combustible materials near. You should be doing this anyway but be aware. When the lid is opened a lot of heat comes pouring out quickly and it needs to go somewhere so give it plenty of room. After the bulk of the heat has escaped you may wish to approach the kiln more closely. If so, do so slowly and with care.

## Venting

Venting: Venting is a fairly common procedure used during the firing process. It helps to bring fresh oxygenated air into the firing chamber while expelling depleted air and burn off. This is particularly useful when color or adhesives are involved. Venting can also be used to speed up the cooling process. Generally speaking, venting usually occurs in the beginning of the firing when burn off from adhesives, decals or other related materials is expected. Once the kiln reaches “Red Heat” (about 1000°F) it’s generally acceptable to close the vent. Keep in mind that venting requires manipulating the lid and vent while the kiln is firing which means it’s going to be hot. **First and Foremost – Keep Your Face Away and Stand Back.** Wear eye protection capable of filtering Infrared and Ultraviolet light (IR and UV), gloves capable of surviving expected chamber temperatures and loose fitting cotton clothing. Also be aware of your surrounding environment. Always make sure there are no flammable or combustible materials near. You should be doing this anyway but be aware. When the lid is vented some heat does come out quickly and you don’t want to be near that without protection.

