

## SAFETY

Read and understand this installation and operating manual as well as the controls manual before operating your kiln. If you have any questions please contact Evenheat Kiln at 989-856-2281 or at evenheat-kiln.com.

Kilns are as safe as any other electrical appliance when used under normal and proper operating conditions. To create and maintain this safe environment observe all safety precautions.

### Warning Symbol Descriptions

Warning symbols are used throughout this manual. These symbols alert the operator to certain hazards and important information. Pictured below are symbols used along with a description of each.



The Exclamation Point alerts you to particular cautions, hazards and information.



The Lightning Bolt alerts you to specific information regarding the risk of electric shock. Electric shock may result in injury or death.



The Heat Waves alert you to specific information regarding the risk of burn injury.

### Emergency Shut Off Provision



The kilns power supply connection (plug/receptacle, breaker or disconnect) acts as the emergency electrical power shut off. Access to these devices should be unobstructed and safe at all times.

All electrical installations for direct wired models (those without a plug/receptacle connection) must include a power disconnect near the kiln and that is easily accessible and safe for emergency power shutoff.

### Electrical Safety



A licensed electrician should be used for all electrical installation and service. All applicable local, state and federal electrical codes must be followed.

Use correct voltage, wire size and fuse or breakers. Kiln electrical requirements are located on the kiln nameplate. Make sure all electrical connections are tight. Avoid using aluminum wire.

Always use the proper electrical receptacle. Never alter the kiln cordset or cordset plug. Alterations can be dangerous. Alterations will void any warranties along with nullifying any Listing Agency markings.



Evenheat recommends that a voltage check be performed before placing the kiln into service, ideally before actual purchase. Operating voltage varies, with common operating voltages being 208V and 240V. The kilns operating voltage (printed on the kilns nameplate) must match the applied voltage (actual electrical service voltage). If it does not, do not install or operate the kiln as potential electrical and fire hazards exist. Contact Evenheat for guidance in such cases.

The kiln must be properly grounded.



Unplug or disconnect the kiln from the electrical service before accessing the chamber for servicing or vacuuming. Do not attempt to touch or replace the heating elements while the kiln is plugged in or connected to the electrical service. Electric shock may result in serious injury or death.

Never, ever use an extension cord to operate a kiln.

### Kiln Location Safety

The best location for the kiln is a concrete floor. If not available, the kiln must be placed on a minimum of 2" of masonry extending at least 12" beyond the outside perimeter of the kiln.



Do not place or use kiln on combustible surface.

Place only on the metal stand provided by Evenheat Kiln, Inc.

The surface on which the kiln is placed shall be capable of safely supporting the combined weight of the kiln, kiln load and any operating personnel.

Observe all building, fire and safety codes when installing the kiln.

Do not install the kiln closer than 12" (31cm) from combustible wall surface or object or 36" from any ceiling surface in all opened and closed positions.

Install in a covered, well ventilated area.

Never place the kiln in a small, enclosed area such as a closet, cabinet or very small room. The room in which the kiln is placed into service shall be capable of safely dissipating all heat produced by the kiln.

Do not place the kiln in any structure resembling a carport or screened in porch. Avoid areas that are subject to outdoors weather.

Never install a kiln outside. Avoid moisture.

It is the user's responsibility to be knowledgeable regarding any and all contaminants, produced by the ware during firing, and take steps to properly and legally contain and dispose of these contaminants.

It is the user's responsibility to provide ventilation capable of removing all gases, fumes and other airborne contaminants produced by the ware during firing safely from work the area and building structure.



Do not store flammable or combustible products near or in the same room the kiln such as gasoline, paint, aerosol cans, paper, curtains, plastics, etc. Better yet, store these items in another separate structure designed for this purpose.

Position the power supply cables, power supply conduit, controller cables, pyrometer thermocouple leads and other materials in such a way as not to create a tripping hazard around the kiln.

The area around the kiln should be free of obstructions that interfere with the proper and safe operation of the kiln.

Never place anything under or above the kiln for storage. Absolutely nothing should be propped against the kiln.

### Kiln Use Safety



The surface of the kiln is hot and burn injuries are possible. Keep all children and unsupervised personnel away. Always wear protective clothing, gloves and eyewear when operating and handling a hot kiln.



Use extreme care when accessing a functioning and/or hot kiln. Your kiln is equipped with a power interrupt switch assembly that is designed to remove electrical power from all heating elements when either the lid or chamber is opened. This power interrupt switch assembly is a mechanical devise and it can fail. Under no circumstances should you touch the heating elements with your body or any other devises like tools. Electrical shock may result in serious injury or death.



Use care when accessing or looking into a hot kiln, this includes looking through a cracked lid or peepholes. High heat escapes quickly and burn injury may result. When accessing or looking into a hot kiln, approach slowly and wear protective clothing and gloves designed to withstand high heat and eyewear capable of filtering Infrared and Ultraviolet light.

Protective clothing should be worn when operating the kiln and includes, but is not limited to, cotton clothing, heat resistant gloves and eyewear capable of filtering Infrared and Ultraviolet light.

Do not operate the kiln over the maximum temperature rating printed on the nameplate.

Never fire a kiln unattended beyond its anticipated firing time.

Never allow the power cord to touch the kiln. If the cord, plug or receptacle become damaged discontinue use and replace immediately.

Do not remove the heat resistant, fiberglass sleeve affixed to the power cable. This sleeve protects the power cable from heat directed from the firing chamber.

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

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

Be sure that kilns Lid Security Bar and Chamber Security Bar are secured within the wireform catch before releasing the lid or chamber. The hardware used for these safety bars should be inspected periodically for damage and wear. If these devices are not operating properly discontinue kiln use until repair or adjustment is made.

It is recommended that a fire extinguisher, capable of dousing an electrical fire, be accessible in the event of fire. Smoke detectors within the kiln room are also recommended.

Keep the kiln lid and chamber closed when not in use.



It is the user's responsibility to have knowledge of the material intended to be fired. If you are unsure as to the safety of firing a particular material contact your materials supplier for guidance. If you remain unsure as to the safety of firing a particular material do not do it. Firing hazards include materials that explode or produce toxic gases. Finished ware hazards include materials containing lead. Materials containing lead should not be used for articles intended for food use.

Fire all ware according to the material manufacturer's instructions. Improper firing may result in damage to the kiln or ware.

Do not use the kiln to prepare food, heat a living space, dry clothes or ice laden articles or use as a storage devise. The kiln is designed for one purpose and one purpose only: the firing of glass materials.

All kiln models not equipped with an automatic shutoff devise (electronic control or kiln sitter) must not be allowed to exceed the rated operating temperature indicated on the kiln nametag. To prevent kiln from exceeding this maximum temperature disconnect it from the electrical power supply.

A kiln will remain very hot long after the firing is complete. All safety recommendations should be followed, even with the kiln unpowered, to avoid any burn injuries. Keep children and other unauthorized personnel away.

When firing is complete, and during periods of non-use, remove power from the kiln by unplugging or by throwing the disconnect or breakers to the OFF position.

#### **Kiln Maintenance Safety**



Disconnect electrical power from the kiln before performing any kiln maintenance. Failure to disconnect the electrical power supply may result in electrical shock which can cause serious injury or death.

Replace any worn, damaged or defective parts immediately with Evenheat Kiln replacement parts only. Discontinue use until parts are replaced.



When vacuuming the kiln use only HEPA filters on the vacuum. Prolonged expose to brick dust and other refractory materials can cause lung injury.

Inspect all electrical service connections periodically for wear.

Periodically check chamber jacket clamps for tightness. Tighten as necessary.

## Studio Pro 24 Features



### Dual Access Design

The Studio Pro 24 features a Dual Access Design. The Dual Access Design simply means you have the choice of entering the chamber through the Top or through the Front.

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.

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.

### **Wall-Free Design**

The Front Opening concept presents the glass artist a wall-free floor on which to directly build and place the glass work. There's no need to transfer a glass-laden shelf to the kiln floor as it's already there and ready to accept your work.

This wall-free design also gives the glass artist total freedom of movement for glass manipulation and roll-ups. There's nothing to work around or avoid, it's just wide open!

### **Fiber Lid with Suspended Heating Elements**

The lid of the Studio Pro 24 is constructed of a special fiber material that provides excellent thermal properties along with light weight. This design also allows the heating elements to be positioned on the surface for maximum heat transfer and firing efficiency.

### **Spring Assisted Lift**

To assist in front opening the Studio Pro 24 includes a spring assist feature. This well designed mechanism travels cleanly and does not pull the artist into the kiln like lesser designs. In the heat of battle you need a smooth and anxious-free movement and the Studio Pro 24 delivers.

### **Wide and Sturdy Handles**

We've fitted the Studio Pro 24 with two wonderfully wide and sturdy bar handles. These corner mounted handles are placed well away from the kiln for easy, gloved hand operation. You'll enjoy using them.

### **Easy Set-up through Narrow Doorways and Halls**

The Studio Pro 24 is shipped partially disassembled for easy set-up and passage through narrow doorways and halls. The floor and chamber are handled separately allowing for installations where other, comparably sized kilns would not fit.

### **Set-Pro & Rampmaster Controls**

Your Studio Pro 24 was shipped with separate operating and programming instructions for the Set-Pro and Rampmaster controls. Each control style includes our Express Mode programming for quick and easy use along with the ability to define your own, custom programs.

## **Kiln Setup and Placement**

### **Kiln Location**

Before unpacking and setup of your Studio Pro 24 you will need to make sure your kiln location is adequate for unobstructed and safe operation.

Place your Studio Pro 24 in a location that offers a level, non combustible surface. The Studio Pro 24 should be placed no closer than 12" from any wall or 36" 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.

The kiln location must be strong enough to support the weight of the kiln, personnel as well as shelving and ware to be fired. Please note again that the surface on which the kiln is placed should be made of a non-combustible material.

The Studio Pro 24 is equipped with power supply cable fitted with a 240V, 50A plug (NEMA 6-50P). The corresponding 240V, 50A receptacle (NEMA 6-50R) should be located near the kiln's setup location. The position of the receptacle should be such that the kiln's plug easily reaches and plugs in nicely. Stretching the cable to plug it in can cause receptacle failure, avoid this. The power supply cable must also be positioned in such a way as to avoid a tripping hazard.

## Kiln Installation

Your Studio Pro 24 has been shipped in 3 sections for easy placement. Narrow doorways and halls are possible to navigate with each of the 3, individual sections. This allows you to place the kiln where it would be otherwise impossible or impractical to do with a kiln of this size.

We have produced a separate installation manual that is included with your kiln. Please refer to this manual for proper and safe installation.

## Kiln Operation

### Plugging In the Kiln

Throw the kiln control panel power switch down to the OFF position. Plug the Studio Pro 24's power plug into your receptacle. Be mindful that the power cord plug easily reaches the receptacle. If it does not, safely reposition the kiln and/or receptacle until it does.

The power supply cable on the Studio Pro 24 is sleeved with a heat resistant, fiberglass material. This material protects the power supply cable from heat directed from the kiln. Even with this special sleeve it is important that the power supply cable does not make contact with the kiln. Safely reposition the kiln and/or receptacle if necessary.

It should also be noted that the path of the power cable should not create a tripping hazard. It should be positioned in a no-traffic area. Safely reposition the kiln and/or receptacle if necessary.

### 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 heating elements to form a protective oxide barrier. A light lubricant was used in the production of your heating elements. The pre fire will burn this off, almost immediately! You may notice a light smoke as this occurs. It's normal.

A separate control manual is included on the manuals disc included with your kiln. Refer to these manual(s) for controls programming instructions.



*Scan this QR code to view instructional programming videos for both the Evenheat Set-Pro and Rampmaster controls.*

*You will also find these instructional videos and manuals on our web site [www.evenheat-kiln.com](http://www.evenheat-kiln.com)*

Program the control to reach 1200°F as fast as possible and hold for 15 minutes (see the included controls programming manual for instruction). Once the kiln reaches 1200°F it will begin to hold for 15 minutes. As it's holding you will notice audible clicks. These clicks are made by the control relays turning the heating elements on and off and it's a normal and welcome sound.

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.

### 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 floor of the kiln. Doing so will most likely allow your ware to stick to the floor 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.

### Loading the Studio Pro 24 from the Front

To load the kiln via the front, throw the kiln control panel power switch to the OFF position and simply lift on the chamber handle.

Take the chamber back until the chamber support bar catches on the wireform catch located on the kiln support rails.

Place 4 or 5 shelf posts onto the kiln floor. *We recommend using posts to bring your shelf up off the floor. This technique tends to reduce and eliminate bubbles. Typical post heights are 1" and 2".* Place your shelf onto the posts. At this point we think it's a great idea to gently lower the chamber to check that the shelf clears the chamber. Reposition the shelf if necessary.

Place your glass artwork onto the shelf. Avoid positioning the shelf or ware directly at the thermocouple (temperature sensor). The thermocouple needs some space around it in order to operate properly.

To close the chamber, move the chamber support bar from the wireform catch and gently lower.

Open the lid and check for clearance, particularly with the thermocouple. Remember we want to give the thermocouple some space. Reposition your shelf and/or glass if necessary.

### Loading the Studio Pro 24 from the Top

To load the kiln via the top, throw the kiln control panel power switch to the OFF position and simply lift on the lid handle (for best results grasp lid handle in the center).

Take the lid back until the lid support bar catches on the wireform catch located on the kiln chamber.

Place 4 or 5 shelf posts onto the kiln floor and place your shelf onto these posts. *We recommend using posts to bring your shelf up off the floor. This technique tends to reduce and eliminate bubbles. Typical post heights are 1" and 2".*

Place your glass artwork onto the shelf. Avoid positioning the shelf or ware directly at the thermocouple (temperature sensor). The thermocouple needs some space around it in order to operate properly.

To close the lid, move the lid support bar from the wireform catch and gently lower (for best results grasp the lid handle in the center). When closing the lid be sure that your ware does not make contact with the lid or lid heating elements. This is possible when using tall forming molds and large pieces and must be avoided.

### Firing the Studio Pro

Once the Studio Pro 24 has been properly loaded and closed you may now fire the kiln.

Throw the power switch, located on the kiln control panel, to the ON position. The temperature control will illuminate and programming of the control is now possible.

A separate instructional manual for the Set-Pro and Rampmaster controls was included with your new Studio Pro 24. Please refer to these manuals for all programming and operation details.

### Initial Kiln Maintenance (Chamber Tightening)

The Studio Pro 24 uses worm-gear clamps to secure the stainless steel chamber jacket to the brick chamber. During firing, particularly on a new kiln, the stainless steel jacket expands causing the worm-gear clamps to loosen slightly. These worm-gear clamps (located on the left side of the chamber) must be checked for tightness and tightened if necessary. While holding the worm-gear clamp securely with a pair of pliers or channel locks, use a 5/16" socket to tighten each worm-gear. Snug is good, do not overtighten.

Evenheat recommends that these clamps be checked for tightness after each of the first three firings and then after every other third firing.