



The Skutt family of automatic kilns.

INTRODUCTION

Congratulations! You've made a great choice from the proven Skutt kiln line.

First, read this entire manual before you do anything else. At Skutt Ceramic Products, we created and refined the multi-sided electric kiln. And although there are many imitators, frankly we still believe that no kiln is designed with more understanding or manufactured with more care. Even so, for complete safety and consistent results, you must understand the principles behind ceramic firing and how your kiln works.

Whether you have owned an electric kiln before or not, please take the time to read this manual from cover to cover. We think even the most experienced veteran will learn a few new tips.

This manual covers Skutt Automatic Kilns with built-in KilnMaster Controllers and wall-mounted KilnMaster Controllers for conventional kilns. Because both units have the same electronic functions, when we say "KilnMaster" or "controller" we are referring to the touch pad on either the kiln or the wall-mounted version.



Features and benefits of the Skutt KilnMaster controller.

Easy to use. The display guides you through operating steps by a series of messages that ask for information. The internal temperature is displayed during the entire firing and during the cooling. Program by cone number. Simply select a cone number from the table and enter the speed you want for firing. The lower left half of the touchpad controls the Cone Fire functions; the right side controls Ramp/Hold functions. Review is appropriate for either mode.

Firing speed options. When firing from the Cone Fire mode, you can select from three preprogrammed ramp speeds: fast, medium or slow.

Multiple Ramp/Hold segments. When firing in the Ramp/Hold mode you can program up to eight different segments that include rate, temperature and hold time.

Permanent program memory. Permanent memory allows the controller to maintain values in the memory in case of power

failure. This feature also permits you to store up to six Ramp/Hold programs in memory, and to use them later by entering their program number.

Delay firing start. You can delay the start of a firing for up to 99 hours and 99 minutes.

Controlled cooling rate. Now you can program your own rate of cooling to achieve your specific results.

Program Review Option. The program you have entered can be reviewed before and during a firing. View. Pressing this button displays the segment that is currently being executed during Ramp/Hold mode firings.

Cone table. This function shows you the equivalent temperature in degrees Fahrenheit or Centigrade that corresponds to a cone number, which is handy when programming Ramp/Hold firings.

Fahrenheit or Centigrade operation. Select either temperature scale at the touch of a button. Permanent memory allows the temperature scale and values to be continuously displayed until reprogrammed.

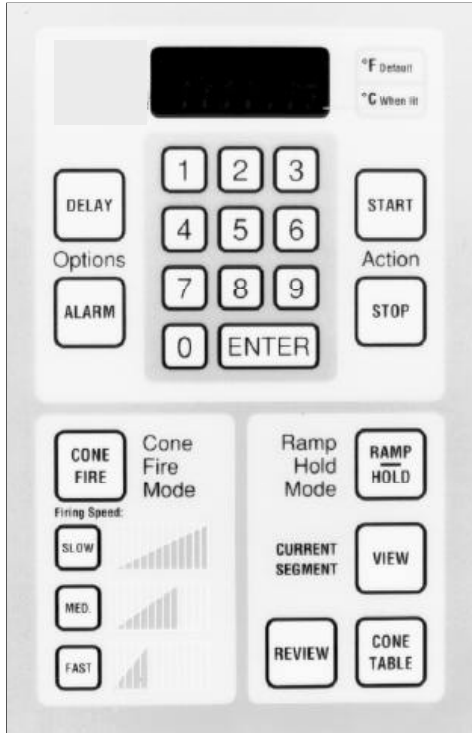
Programmable High Temperature Alarm. The program lets you set an alarm that will alert you when a specified tem-

perature has been reached. This allows you to check firing progress and to be present as shut-off or ramp-down occurs.

Safety Features. Power failure detection. Firing will continue after power interruptions which cause less than a 250½ F drop in internal temperature. Firing will also continue in Cone Fire mode if the interruption causes less than a 100½ F drop during the final 100½ of a firing. **Thermocouple failure detection.** The controller can detect a failed thermocouple and will turn the kiln off automatically. **Controller-operation failure detection.** If a fault is detected in the controller the kiln will turn off automatically.

Designed and Manufactured in the United States. Licensed under Orton's Patent #4461616. In Cone Fire mode, the controller uses Orton's patented method to adjust final temperature to emulate cone "heat work". This is fully described in Appendix 2, Cone Chart and Heat Work.

UL and CSA Listed. The KilnMaster Controller is UL and CSA listed when factory installed in Skutt automatic kilns and when the wall-mounted KM-1 KilnMaster Controller is used with the UL-listed Skutt kiln models listed in Appendix 6.





What you'll find in a quality Skutt kiln—and why.

KilnMaster Controller. At the heart of your new kiln, or wall mounted KM-1, is the KilnMaster controller. This unit allows you much greater control over your kiln than ever before. It is essentially two controllers in one. You can fire by cone numbers or specify your own firing profile with multiple ramps & holds.

Brick. Skutt kilns are constructed of the finest insulating firebrick available today, offering strength, cleanliness and long life. All bricks are precision cut and grooved to assure tight fit, perfect element support and ease of replacement. Because of their porous composition, insulating fire brick are fragile. Always handle your kiln and its brick with care. The brick in your kiln may begin to show some fine cracks after the first few firings, especially after Cone 10 high firings. This is normal and does not harm the structural integrity of the kiln or impair its functioning.

Elements. The highest quality iron-aluminum-chromium (Kanthal-type A-1) element wire is used in all Skutt kilns. All multi-sided Skutt kilns are high fire type and are designed to reach Cone 8 or 10 (except a few 208 volt models and the KM614-3).

Element life will vary depending on whether the kiln is used primarily for low firing of bisque or greenware, or high firing of stoneware and porcelain. Elements will last for many firings if treated carefully.



Remember these points.

1. Keep the element grooves free of debris: bits of bisque, glaze, cones, metal or high fire kiln wash will immediately fuse to an element and proceed to eat through it. Kanthal elements become brittle after repeated firings, so be extremely careful not to scrape against them.
2. Do not attempt to fire beyond the rating on your kiln.

Stainless steel jackets. Only the finest grade stainless steel is used in Skutt kiln jackets, selected for its expansion qualities so that the bricks are never unduly stressed, yet are fully supported during all stages of heating and cooling. Stainless steel may discolor with repeated heating. Stainless steel cleaner is available.

Lid brace. The lid brace holds the lid securely open for loading and unloading the kiln. As you open the lid, allow the lid brace to follow over the anchor pad and screw that is attached to the side of the kiln. Simply allow the notched end of the brace to engage the anchor pad and screw, allowing the lid to rest in a full upright position. Periodically test the thumb-screw for tightness. If loose, tighten.

Modular design. Larger Skutt kilns use stackable ring segments which makes them easier to move and allows better access to elements and firebricks.

The Wall-mounted KilnMaster Controller.

The wall-mounted KilnMaster functions in the same manner as the kiln-mounted version with the exception that it can be moved from one kiln to another. While the wall-mounted version cannot fire more than one kiln at a time, it can control virtually any kiln in a studio which has the proper cord plug and receptacle configuration.

