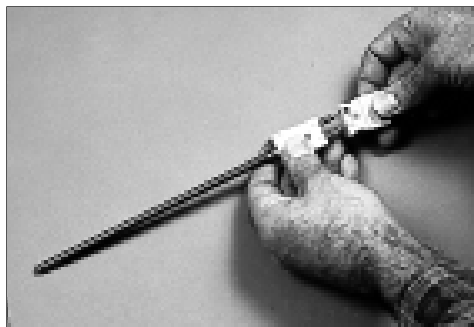




a new MI cable thermocouple into the receptacle mounted on the cord from the Wall Mounted Controller.



If a problem persists, call the factory to make arrangements for return of parts. When the controller is received we will evaluate the problem and call you with a cost estimate.

Send to Skutt Ceramic Products, 6441 S.E. Johnson Creek Blvd., Portland, Oregon 97206-9594. Our telephone number is (503) 774-6000, Fax (503) 774-7833.

See page 35 for details on replacing the thermocouple elements on KM kilns, which have a slightly different mount.

Automatic kiln set up.

PLANNING THE LOCATION OF YOUR NEW KM-SERIES KILN.

Location. For safety and convenience follow these basic rules.

1. Locate your kiln near your present electrical outlet or where a new circuit can be installed with least cost. Position the kiln to the left of your electrical outlet so the cord will have an easy run and will not place a strain on the plug or outlet.
2. Install it in a well ventilated, sheltered area such as a carport, garage, utility or hobby room. It should be convenient to your clay working area, and out of the way of other traffic.
3. Allow at least 18" of space between your kiln and adjacent walls.
4. Keep curtains, aprons, plastic or other flammable materials away from your kiln.
5. Never fire your kiln within a four sided cabinet or closet. The fourth side must always be open to room air to prevent the kiln from overheating surrounding surfaces. It is best to leave at least two sides open for easy access to controls and peep holes. Fully automatic kilns should not be located in a room that exceeds 105½F (41½C) or is less than 30½ F (0½ C) as damage to the electronic components may result.

6. If possible, locate the kiln in a room with a cement floor.
7. When installing a kiln in a room with a fire control sprinkler system, please check the sprinkler head rating to insure that heat emitted from the kiln will not activate the sprinkler system.

UNPACKING AND CHECKING THE KILN

Checking your kiln for damage. Your kiln has usually traveled a long way by rail car or truck to get to you. Even though it was carefully packed at the Skutt factory, it could have been mishandled in shipping. If you find any problems as you unpack, do this.

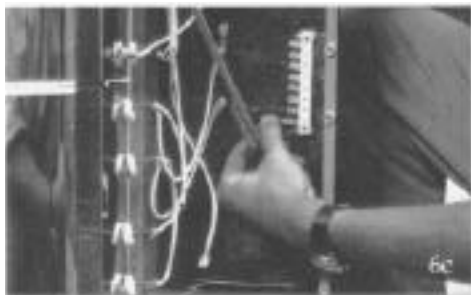
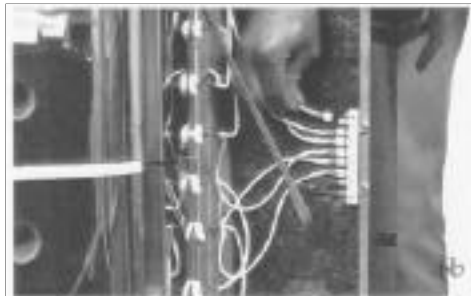
1. Call your freight agent and ask for an inspection.
2. Save all the packing materials.
3. Contact the dealer where you bought your kiln.
4. Don't assemble or fire your kiln until your damage claim has been inspected.

Fortunately, few Skutt owners will experience any problems.

For information on setting up Skutt PK Production Kilns, see Appendix 7 beginning on page 45.

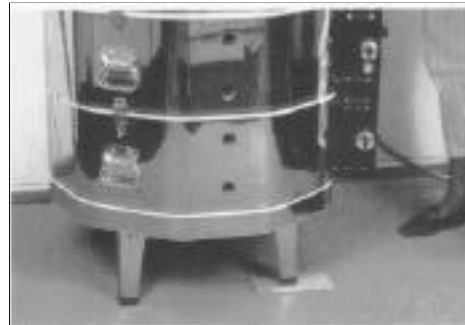
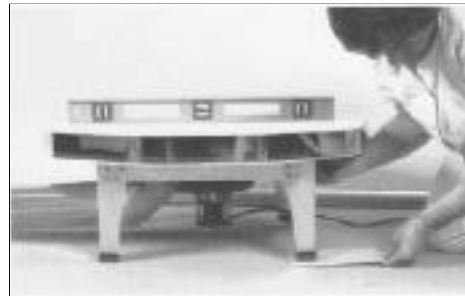
Unpacking the kiln.

1. The bottom tray of each carton is attached to a wooden pallet. The kiln rests on foam packing material which is on the bottom tray. The bottom portion of the carton is stapled to the tray. After removing the staples from the tray, the carton can lift straight up exposing the assembled kiln. There is foam packing material that will fall loose from the kiln when the carton is lifted. Remove the plastic sheet and paper shields.
2. Open the lid, remove the plastic cover and carefully remove the kiln stand and "goodie bag" from the inside of the kiln. Close the lid.
3. For larger, heavier kilns you may choose to remove the lid from the top section. This will reduce the overall weight. To do this remove one cotter pin from the lid rod and slide the lid rod out of the lid hinge assembly. Also remove the thumbscrew and lid brace. Place lid on a clean, flat surface.
4. Remove the black plastic feet from the "goodie bag" and put them on the stand legs. Set the stand in the location you have designated for the kiln. See the section on locating your kiln if you are not sure about the safety requirements for the kiln site.



5. There are section handles on the kiln. With a partner, lift the kiln, using the lower section handles, off the kiln floor and rest on a clean, flat surface.
6. You may separate the kiln into sections if it is too heavy to move as described in step 5.
 - a. The electronic control panel of your kiln has a hinged box for easy removal. Remove the screws on the left side of the box that secure the box to the kiln.
 - b. Swing the panel to the side.
 - c. Slide the connectors off of the terminals noting the placement of the wires. Slide the thermocouple connector off the terminal strip, also.
 - d. Lift the box up to remove it.

7. Position the kiln floor on top of the stand making certain that the weight is evenly distributed.
8. Level the kiln. Make sure the stand and kiln floor are level and do not teeter. Leveling problems may put unnecessary stress on the kiln during firing. To level the stand, place firm shims under the legs (never above them touching the kiln). Center the kiln's bottom slab on the stand and double-check teetering.



9. Again, with a partner, pick the kiln up and rest it on top of the kiln floor.
 10. Replace the kiln control box on the kiln if removed in step 6a above.
 - a. Stack the sections on the kiln floor.
 - b. Return the kiln control box to the side of the kiln.
 - c. Slide the connectors back into place. Plug thermocouple in.
 - d. Close the box and secure it with screws.
- If the lid was removed in step 3 above, place the lid on top of the kiln, replace the lid rod and cotter pin and the lid brace and tighten the thumbscrew.
11. Place peep plugs in all but the top peep hole. Always leave the top peep hole open to allow vapors to exhaust from the kiln *unless* you are using a fan-driven ventilation system such as the Skutt EnviroVent®. The EnviroVent allows you to fire with all peep hole plugs installed.



ELECTRICAL REQUIREMENTS

Most important to proper operation of your new kiln is to make sure it has enough of the correct power to operate it. If this is done, your kiln will give you years of satisfying service; if not, your first firing could be disappointing or even disastrous for your kiln. The chart at right shows the recommended electrical specifications for each kiln model. If you are uncertain about your existing outlets, have them checked by an electrician. If you are installing a new receptacle, have the electrician follow this guide.

instead of #10, use #8. If you anticipate installing any larger kiln in the future, use the heavier wire.

***See special instructions and wiring diagram.*

ADDITIONAL POWER NOTES

Three-phase operation. Only special order Models KM-1027 and KM-1227 will operate on a three-phase supply. However, any Skutt kiln can be properly powered via unbalanced connection to two of the three hot wires of a three-phase supply. Of course, the green safety ground connection provided in all Skutt power cords is also used.

Three-phase installation. Three-phase Models KM-1027 and KM-1227 can be plugged directly into a three-phase (15-

Electrical requirements for Skutt Automatic Kilns and KilnMaster Controller

Model	Volts	Amps	Watts	Copper Wire Size	Fuse or Breaker Size	NEMA Receptacle Configuration
KM-614-3	115	20	2300	10	30	(Canada) 5-30
KM-614-3	115	20	2300	10	30	5-20
KM-714	208-240	20	3600	10	30	14-30
KM-818	240	27.7	6400	8	40	6-50
KM-818	208	26.7	5550	8	40	6-50
KM-818-30A-3	240	21.7	5200	10	30	6-30
KM-818-30A-3	208	24.0	4990	10	30	6-30
KM-1018	240	38.4	9460	6	50	6-50
KM-1018	208	40	8320	6	50	6-50
KM-1027	240	48	11520	6	60	6-50
KM-1027	208	48	9980	6	60	6-50
KM-1027 3ph	240	29.3	11520	8	40	15-50**
KM-1027 3ph	208	31.7	11000	8	40	15-50**
KM-1227	240	48	11520	6	60	6-50
KM-1227	208	48	9980	6	60	6-50
KM-1227 3ph	240	29.3	11520	8	40	15-50**
KM-1227 3ph	208	31.7	11000	8	40	15-50**
KM-1	208-240	Switching Capacity			48	6-50
KM-1 3ph	208-240	Switching Capacity			40	15-50

**For each additional 50 feet use heavier wire, numerically two numbers lower—for example,*

50R) wall receptacle.

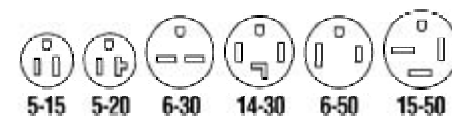
208 versus 240 supplies. As you can see from the chart, most Skutt models are available in either 208 or 240 volt versions. The exception is Model KM-714 which is universal, and will fire with 240V or 208V power.

The “120/208V” supply is increasingly encountered in schools and newly-built communities, because it’s more efficient for heavy 120V loads. This affects Models KM-818, KM-818-30A, KM-1018, KM-1027 and KM-1227 because their elements receive the full 208 (or 240) applied volts.

The 208V versions should never be fired on a 240V supply without first installing a full set of 240V elements. Otherwise, all components will be seriously overtaxed.

Important! Connecting and testing Model KM-714. The wall outlets for Model KM-714 must be powered by 3-wire 120/240-208V solid neutral supply—as for an electric range. Only No. 10 wire is required (or No. 8 for runs over 50 feet). 30 Amp fuses or circuit breakers only—no larger or smaller—are recommended. The U-shaped fourth blade of the 4W30 Amp grounding plug is for the pure green wire grounding of the kiln case. The blade op-

NEMA RECEPTACLE GUIDE.





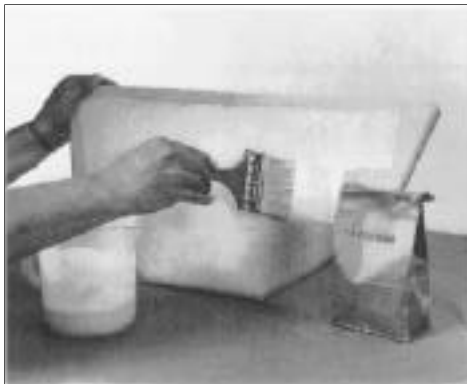
posite this U-shaped one takes the white solid neutral wire. See the photo below and refer to the wiring diagram in Appendix 5 for the 714 plug diagram.

PREPARATION BEFORE FIRING

Remove any brick chips or other foreign matter from around the elements. Bits of bisque and glaze will eat through elements and our warranty cannot cover such accidents. We recommend that you vacuum the inside of the kiln to remove any dust that accumulates during shipment.

Wipe all new shelves clean, and brush coat one side of each with high fire kiln wash. Apply a thin coating of kiln wash in one direction, allow to dry and apply another thin coating in the opposite direction leaving a 1/2" margin from the outside edge of the shelf. A new coat is seldom needed—just spot-patch and sand off the surface evenly with coarse sandpaper wrapped around a wooden block. A fresh coat may be needed before a porcelain firing if glaze has dripped onto the shelf.

Kiln wash the floor of the kiln, being careful to leave a one inch margin unpainted all the way around interior edge. **Never kiln wash the walls or lid of your kiln!**



THE IMPORTANT FIRST TEST FIRING

Now you're ready to fire. Be sure to review the preceding sections, double checking for safety and correct electrical connections.

It is important to the life of your kiln that your first firing be done properly. Before you start, read this entire manual carefully, including the preceding sections and loading and firing instructions.

New elements and foreign matter like dust give off vapors that tend to discolor glazes. Therefore, your first firing should be a Cone 04 *empty* test fire with only your dry shelves in the kiln, posted as though ware were on them. The first time the elements are fired they will give off some smoke. This is normal and expected. This is a good time to use Self-Supporting Cones on the shelves to test the heat accuracy from top to bottom.

A Cone 04 (1944⁰) is recommended for proper pre-oxidation of a new element. The steps to accomplish this firing are the following:

1. Clear the **PF**-message by pressing **Enter**.
2. Press **Cone Fire** mode.
3. Press **0 4** then **Enter**.
4. Press **Medium** speed then **Enter**.
5. Press **Enter** or an amount of time in hours and minutes for **Hold**.
6. Press **Start** to begin the firing. The firing will take approximately 7 1/2 hours.

Even though you have gone through a simple program for a test firing, please continue to read the detailed instructions in the Cone Fire and Ramp/Hold sections of this manual.

Periodically view your Self-Supporting Cone by removing a peephole plug. It should bend to the top of the base (5 o'clock position) and the kiln should turn off about the same time. Watch your kiln throughout the firing. Don't rush through the first firing. Make notes of things that you want to remember and make visual observations of the kiln while it is firing.

Likely, everything will work as it should, and you're ready to go on to production firings. If things go wrong, re-read this manual and contact your Skutt dealer.

You will notice a clicking sound while your kiln is firing. This is normal. The elements are cycling on and off to stay within the temperature parameters you have programmed.

After the first couple of firings, hairline cracks may appear in the floor of a kiln. This is caused by the expansion and contraction of the bottom slab caused by heating and cooling, and is considered normal. It will not affect the firing of your kiln nor the life of the kiln floor.