

# Installation and Electrical Notes

## Things to know before you install and use your Skutt kiln

While you're deciding which Skutt kiln is right for you, keep in mind the power requirements of each kiln, and what power is available in your kiln room. In most cases, you will need an electrician to install the proper receptacle and circuit. We recommend wire of adequate size is installed for safety and to assure satisfactory performance of the kiln. See the chart on the next page for the electrical requirements of the entire Skutt kiln line. You can contact your local power company or an electrician to determine what voltage you have (208 or 240 volt supplies) and the amperage limitations you may have at your building.

### Power notes:

#### LOW VOLTAGE PROBLEMS

Skutt kilns may not operate correctly if you are receiving low

voltage from your power line. KS kilns may fire slowly and not reach high fire temperatures. KM controllers may display an error message.

#### THREE-PHASE INSTALLATION

The 3-phase models KS1027 and KS1227 require a 3-phase contactor box to be used to shut off the kiln. The contactor box comes with a receptacle for the kiln connected to the bottom of the box. The contactor box is included in the price of the kiln.

The 3-phase Models KM1027 and KM1227 can be plugged directly into a 3-phase (15-50) 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 exceptions are Models KS714 and KM714 which are universal, and will fire with

240V or 208V power (614 and 609 models run on 115V).

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. Similarly, the 240 volt kilns should **not** be used on a 208 volt supply. The elements will not be properly powered and will fail to reach the maximum rated temperatures for that kiln.

#### NOTE ON THE 714

Connecting and testing models KS714 and KM714: the wall outlets for these models must be powered by 3-wire 120/240-208V solid neutral supply—as for an electric range. Consult the kiln manual before installation.

#### A FEW PRECAUTIONS

Please remember that your Skutt kiln reaches high temperatures and should be treated with respect during installation and firing. Read the manual carefully, and follow all recommended safety guidelines. Consult your distributor about installation. They can usually recommend a licensed electrician who has kiln installation experience, which will result in a kiln that can deliver all the performance we design into every Skutt product.

Although automatic controllers allow you to be away from the kiln during firing, we recommend that you monitor the firing periodically and that you always be present near the end of the firing through shutdown.

The metal on the outside of the kiln gets extremely hot when the kiln is firing. Be sure to locate it in an area that is clear of combustible materials and protected from small children and pets. Also if you are locating the kiln in a sprinklered room do not locate the kiln directly under a sprinkler head. You can install the highest temperature sprinkler head possible in accordance with your local building codes and Fire Marshall. Common temperature ratings for sprinkler heads are 165° F, 212° F and 286° F. Hotter ratings are available however they require special permits in most cases.

#### CERAMIC PRODUCTS WARRANTY — LIMITED

**SKUTT CERAMIC PRODUCTS, INC.** warrants this product to be free from defects in materials and workmanship for two full years from the date of the first retail purchase from an authorized Skutt dealer.

**What Skutt Will Do.** Skutt will repair or replace, at its expense, any defective part upon return, freight prepaid, to any authorized Skutt service center.

**What is Not Covered.** This warranty does not cover (1) any defect not reported to an authorized Skutt dealer or distributor within 10 days of discovery; (2) the KILN SITTER® which is separately warranted by its manufacturer, W.P. Dawson, Inc., 399 Thor Place, Brea, California 92621; (3) Type K Thermocouples; (4) any damage caused by overfiring; (5) products subjected to abnormal strain, freight damage, neglect, abuse, improper storage, failure to follow instructions, or products altered from factory standard condition; (6) products whose identification number has been changed; (7) failures of, or failures caused by, parts or accessories not manufactured or supplied by Skutt Ceramic Products; (8) kilns used for purposes other than firing ceramic materials; (9) kilns used for reduction or salt firing; and (10) elements in "PK" model kilns.

**How to Obtain Warranty Service.** Notify your Skutt dealer or distributor within 10 days of discovery of any defect. Deliver any defective part, freight prepaid, to an authorized Skutt service center. A list of Skutt service centers may be obtained from your dealer or from Skutt Ceramic Products, Inc. at the address and telephone number below.

**Other limitations.** ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING PROPERTY DAMAGE, LOST PROFITS, LOSS OF USE, OR OTHER ECONOMIC LOSS, ARE EXCLUDED TO THE FULL EXTENT PERMITTED BY STATE LAW. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Dealers are not authorized to modify this Warranty or to make any additional commitments. Skutt will not be responsible for promises not contained in this warranty.

**State Law Rights.** This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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## ELECTRICAL REQUIREMENTS

MODEL	PHASE	VOLTS	AMPS	WATTS	COPPER WIRE SIZE*	FUSE OR BREAKER	NEMA RECEPTACLE CONFIG
<b>AUTOMATIC KILNS</b>							
KM1627-3 PK	3 PH	240	66.0	23600	4	85	direct wire
KM1627-3 PK	3 PH	208	76.0	23600	4	95	direct wire
KM1627-3 PK - LF	1 PH	240	68.0	16300	4	85	direct wire
KM1627-3 PK - LF	1 PH	208	69.0	14300	4	90	direct wire
KM1627-3 PK - LF	3 PH	240	46.0	16300	6	60	direct wire
KM1627-3 PK - LF	3 PH	208	47.0	14300	6	60	direct wire
KM1231-3 PK	1 PH	240	72.0	17300	2	90	direct wire
KM1231-3 PK	1 PH	208	80.0	16640	2	100	direct wire
KM1231-3 PK	3 PH	240	44.5	17300	6	60	direct wire
KM1231-3 PK	3 PH	208	51.5	17300	6	65	direct wire
KM1227-3 PK	1 PH	240	60.0	14300	4	80	direct wire
KM1227-3 PK	1 PH	208	69.0	14300	4	90	direct wire
KM1227-3 PK	3 PH	240	40.0	14300	6	50	direct wire
KM1227-3 PK	3 PH	208	46.7	14300	6	60	direct wire
KM1227-3	1 PH	240	48.0	11520	6	60	6-50**
KM1227-3	1 PH	208	48.0	9980	6	60	6-50**
KM1227-3	3 PH	240	29.3	11520	8	40	15-50
KM1227-3	3 PH	208	31.7	11000	8	40	15-50
KM1218-3	1 PH	240	48.0	11500	6	60	6-50**
KM1218-3	1 PH	208	48.0	9984	6	60	6-50**
KM1218-3	3 PH	240	33.0	11500	8	40	15-50
KM1218-3	3 PH	208	33.0	9984	8	40	15-50
KM1027/KM1027-3	1 PH	240	48.0	11520	6	60	6-50**
KM1027/KM1027-3	1 PH	208	48.0	9980	6	60	6-50**
KM1027/KM1027-3	3 PH	240	29.3	11520	8	40	15-50
KM1027/KM1027-3	3 PH	208	31.7	11000	8	40	15-50
KM1018/KM1018-3	1 PH	240	39.4	9460	6	50	6-50
KM1018/KM1018-3	1 PH	208	40.0	8320	6	50	6-50
KM818/KM818-3	1 PH	240	27.8	6660	8	40	6-50
KM818/KM818-3	1 PH	208	26.7	5550	8	40	6-50
KM818-30A/30A-3	1 PH	240	21.7	5220	10	30	6-50
KM818-30A/30A-3	1 PH	208	24.0	4990	10	30	6-50
KM714	1 PH	208/240	20.0	3600	10	30	14-30
KM614-3	1 PH	115	20.0	2300	10	30	5-20
KM614-3	1 PH	115	20.0	2300	10	30	5-30 (Canada)
<b>MANUAL KILNS</b>							
KS1227-3	1 PH	240	48.0	11520	6	60	6-50
KS1227-3	1 PH	208	48.0	9980	6	60	6-50
KS1227-3	3 PH	240	29.3	11520	8	40	15-50
KS1227-3	3 PH	208	31.7	11000	8	40	15-50
KS1027/KS1027-3	1 PH	240	48.0	11520	6	60	6-50
KS1027/KS1027-3	1 PH	208	48.0	9980	6	60	6-50
KS1027/KS1027-3	3 PH	240	29.3	11520	8	40	15-50
KS1027/KS1027-3	3 PH	208	31.7	11000	8	40	15-50
KS1018/KS1018-3	1 PH	240	39.4	9460	6	50	6-50
KS1018/KS1018-3	1 PH	208	40.0	8320	6	50	6-50
KS818/KS818-3	1 PH	240	27.8	6660	8	40	6-50
KS818/KS818-3	1 PH	208	26.7	5550	8	40	6-50
KS818-P	1 PH	240	21.7	5220	10	30	6-50
KS818-P	1 PH	208	24.0	4990	10	30	6-50
KS714	1 PH	208/240	20.0	3600	10	30	14-30
KS614-3	1 PH	115	20.0	2300	10	30	5-20
KS614-3	1 PH	115	20.0	2300	10	30	5-30 (Canada)
KS609	1 PH	115	17.0	1950	10	20	5-15

\* Wire Gauge and Breaker Size recommendations are based on National Electric Code Requirements. Consult your electrician for your specific installation.

\*\* Direct Wire (Canada)

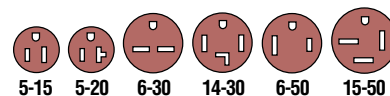
## KILNMASTER SPECIFICATIONS

- Delay Firing start: up to 99 hours and 99 minutes.
- Cone Fire Mode: entry by cone number, 3 firing speeds, Cone 022 to cone 10.
- Ramp / Hold Mode: Entry by temperature, create programs from 1 to 8 segment. Each segment can specify a rate of heating or cooling to a specified temperature with an optional hold, to maximum temperature of 2,400° F (not recommended to fire over 2350 F).
- Memory holds up to 6 firing programs.
- Safety Features: Power Failure Detection, Thermocouple Failure Detection, Microprocessor Fault Detection.
- Electronic Cone Table: Converts cone numbers to temperature. Digital Readout: Fahrenheit or Centigrade. Program Review: Review program and current segment during firing.
- Temperature Alarm: Adjustable to desired temperature.
- Control Panel: Sealed Touch Pad, washable.
- Thermocouple: Type K.
- Designed and manufactured in the USA.

## ENVIROVENT SPECIFICATIONS

- Materials: Stainless steel plenum and duct, steel blower housing.
- Electrical: 115V household current.
- Shipping weight: 25 lbs.
- Kit includes: Integral blower unit with in-line switch, 18" stainless steel exit duct, installation and operating instructions, twist drill set.
- Recommended ducting: 4" rigid or flexible aluminum ducting.
- Total airflow: 60 to 80 cfm.
- Maximum ducting distance with 4" ducting: 70 ft.
- Maximum bends: No more than 4 sweeping bends.
- Motor UL and CSA listed. Complete system UL listed when used on a Skutt UL listed kiln.

## NEMA-RECEPTACLE GUIDE



## UL/CSA LISTING

UL/CSA listing is present on all kilns except: KM614-3 (CSA only), KS714 (UL only), KS614 and KS609.



INSTALLATION AND ELECTRICAL NOTES