



FOR OVER 50 YEARS... THE KILN TECHNOLOGY LEADER

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K SERIES

SUPPLEMENTAL INSTRUCTIONS

SUPPLEMENTAL INSTRUCTIONS FOR OLD "K" MODEL ECONO-KILN TOP LOADING ELECTRIC KILNS

These instructions are meant as supplementary instructions to go along with the "J" Series instructions. The "J" Series kilns replaced the old "K" Models in the late Seventies.

GENERAL CONSIDERATIONS

The "K" Model kilns were made from about 1965 to 1978. They are sectional polygonal kilns very similar to the newer "J" Series. The "K" Series can be used to Cone 8 (2300°F).

The "J" Series added a number of important features such as separate instrument panels, infinitely variable input switches, pilot lights, separate Dawson Kiln Sitter/Timers, Cone 10 operation and a wider variety of sizes and electrical configurations. See the "J" Series instructions or brochure for more information.

DOOR CHAIN SAFETY SYSTEM

WE STRONGLY SUGGEST YOU ADD THE CHAIN SAFETY SYSTEM TO YOUR OLD K MODEL. THIS WHOLE SYSTEM IS AVAILABLE AS PART NO M-G-SAFE/CN. See the J Series instructions for details.

KILN STAND

We suggest you replace any older corroded stands with one of the newer aluminized steel stands. See the J Series price list for part numbers and prices.

REPLACEMENT ELEMENTS

The elements for J Model kilns and comparable K model kilns are interchangeable. For instance a J18 240 volt element will work in a K18 240 kiln. Replacement Elements made by L&L Kiln Mfg., Inc. are designed for each individual model for long life and superior performance. Good element design is a complex balance of watt density, design voltage, stretch ratio, wire gauge, element length and material. It takes hours and years of experience to design a good element for each model. Do not expect an outside supplier with no interest in your kiln performance or long experience

with L&L kilns to spend the necessary time to do this right. In the end you will not save money.

KILN SECTIONS

The kiln consists of from one to three separate sections. One section has a box where the plug goes into. If there is a Dawson kiln sitter on the kiln it will be in the same box as the power cord. All other sections plug into this main box. Zone switches are located on the individual sections (unlike in the J Series kilns where there is a separate instrument box).

POWER SUPPLY

VOLTAGE

K Series kilns are wired to work on a three wire Edison system (designated as 220/110). This means that either hot leg to neutral will give you 110 volts. There is a separate ground lug on the kiln that must be hooked up to a ground (preferably a cold water pipe) with a separate wire. The plug used on the K model kilns is a NEMA 10-50P. (Unlike in a NEMA 6-50P plug like those used on the newer J Model kilns this neutral wire is part of the plug. A 6-50P never uses the third wire as a neutral.)

POWER HOOK UP

From the wiring diagram, have your electrician install the proper receptacle and safety switch at your kiln location. Note that L&L has available 50 Amp 6-50F receptacles from stock if you can't find them locally. Have receptacle placed in such a manner that the plug in cord can in no way touch the body of the kiln. Some models hook up permanently to power supply. Be sure that your fuse ampere capacity is enough to carry the electrical load required. Also, ensure that your power lines are heavy enough to carry the required electrical load. Anticipate future needs (such as adding an extension) to save yourself from future electrical installation costs. If this is being used in an industrial application or



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environment be sure to follow lock out/tag out requirements and procedures. Be sure to ground kiln properly.

ZONE SWITCHES

Each section of the kiln has an input control switch provided on the instrument panel. The K Model kilns used a four way switch (Low-Medium-High-Off). The original switches that were used are no longer available; however, a replacement switch made by Arkless is available. When changing to this switch you must order the replacement kit. (A diagram comes with the switch telling you how to rewire).

THE FOUR WAY SWITCH WORKS AS FOLLOWS:

OFF: No current goes to the elements.

LOW: Line voltage (208 or 240 volts) goes to two elements in series. This provides about 25% of the normal power of the elements.

MEDIUM: Power goes to one element only (out of two). This provides 50% of the full power of the elements. Normally this is the bottom element.

HIGH: Power goes to both elements in a parallel wiring configuration. Both elements get the full line voltage. This gives you 100% of power.

CAUTION:

When replacing zone switches, replace the electrical connectors. These electrical connectors will typically oxidize over time and this can cause overheating of the switch at the connection spade. This can in turn lead to early failure of the switch. Make certain that the new connectors are firmly crimped onto the wire. A crimping

tool can be easily purchased from an electrical or hardware store. Evidence of this type of switch failure is discoloration at the spade terminals of the switch. This is not a warranty item.

KILN SITTER/TIMER

Many of the K Models had either Dawson Kiln Sitters or Sitter/Timers. This was optional. The cone supports and sensing rods for these older Dawsons are the same as the Dawson Sitter/Timers being used on the J Kilns. However, the tube assembly is a specifically for an LT3K (L&L Part Number N-G-TUBE/00). BE SURE YOUR DAWSON KILN SITTER IS PROPERLY ADJUSTED. Overfiring could result.

OPTIONAL AUTOMATIC CONTROLS AND PYROMETER SYSTEMS

A variety of automatic temperature controls are available for the K Series. Please request separate bulletin for these controls. They can be added at any time. You would specify the same control to be used for a comparable J Model (i.e. K18 = J18). The "TRU-VIEW" Pyrometer system can be used on the "K" Models.

TROUBLESHOOTING

See the separate **TROUBLESHOOTING GUIDE** included with these instructions. BE SURE TO READ THIS ALONG WITH THE SUGGESTIONS FOR IMPROVING ELEMENT LIFE. THERE ARE MANY HELPFUL POINTERS AND SUGGESTIONS.

ELECTRICAL SPECIFICATIONS

MODEL	DIAM	HGT	NUMB OF SECT	QTY OF SWITCHES	VOLTS	WATTS	AMPS	OHMS PER ELEM	QTY OF ELEM
K14 (208)	14-3/8"	13-1/4"	1	2	208	3120	15.0	13.9	4
K14 (240)	14-3/8"	13-1/4"	1	2	240	3236	13.5	17.8	4
KR14 (ring) (208)	14-3/8"	6-1/2"	1	1	208	1560	7.5	13.9	2
KR14 (ring) (208)	14-3/8"	6-1/2"	1	1	240	1618	6.7	17.8	2
K18 (208)	17-1/2"	18"	2	2	208	5520	26.5	7.8	4
K18(240)	17-1/2"	18"	2	2	240	5520	23.0	10.4	4
KR18 (ring) 208)	17-1/2"	6-1/2"	1	1	208	1740	8.4	12.4	2
KR18 (ring) (240)	17-1/2"	6-1/2"	1	1	240	1740	7.3	16.6	2
K23 (208)	23-3/8"	18"	2	2	208	6098	29.3	28.4	4
K23(240)	23-3/8"	18"	2	2	240	7037	29.3	32.7	4
KR23 (ring) (208)	23-3/8"	9"	1	1	208	3000	14.7	28.4	2
KR23 (ring) (240)	23-3/8"	9"	1	1	240	3500	14.7	32.7	2
K230 (208)	23-3/8"	27"	3	3	208	9148	43.98	28.4	6
K230 (240)	23-3/8"	27"	3	3	240	10555	43.98	32.7	6

All K Models are single phase