# eQuad-Pro **Professional Top-Loading Kilns**

This is the kiln to get in the 7 to 13 cubic foot range if you are firing heavy loads to high temperatures consistently. Extra power and Quad elements are the reason.

**Quad Elements for extra long** element life

**Extra Power for consistently** great firings and heavy loads

Hard Ceramic Element Holders protect brick and make element changes fast and easy

**Dynamic Zone Control** keeps temperatures uniform throughout kiln

**Drop-Down Piggy-Back Panel** protects electronics and makes servicing easy

**Protected Thermocouples** 

Spring-Assist Hinge does not need side support bars - makes loading easy from all sides

Super-Strong Aluminized Steel Stand securely supports vent system

Customize to meet your exact needs. Every kiln is built to order





505 Sharptown Road • Swedesboro, NJ 08085 Phone: 856.294.0077 • Fax: 856.294.0070

### **KILNS BUILT TO LAST**

Bulletin No: EQ-0222

# **Unique L&L Features with Lasting Benefits**

### **CONE 10 TEMPERATURE RATING**

Cone 10, 2350°F, 1290°C for all models. The eQuad-Pro models feature extra power for longer lasting elements and heavier loads.

### **3" OF K23 FIREBRICK INSULATION**

3" K23 firebrick for all models.

#### PATENTED CERAMIC ELEMENT HOLDERS

Protect brick from loading damage, keep elements from falling out of grooves, make changing elements easy, and optimize heat transfer to load. Kiln lasts longer! No pins. (hotkilns.com/ceramic-holders)

### **QUAD ELEMENT DESIGN**

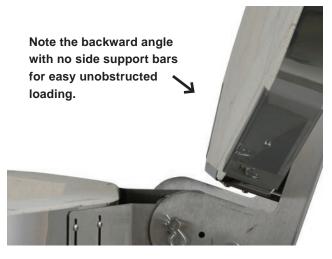
The combination of 1/2" diameter element coils, the doubled surface area of the Quad element design, and superior heat transfer of L&L's patented ceramic element holders, make this the best element system in the world today. (hotkilns.com/quad-elements)

### **EXTRA CASE CLAMPS**

Stainless worm gear case clamps keep case together and allow for adjustment over time. Three per 9" ring, Two on the top and bottom. **(hotkilns. com/case-clamps)** 

### "EASY-OPEN, EASY-LOAD" SPRING-LOADED LID OPENS WIDE FOR LOADING

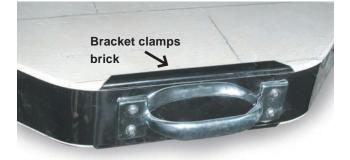
The whole kiln supports the lid (not just one section). Our positive safety pin secures the lid safely. No side support bars get in the way of loading when the lid is fully tilted back. **(hotkilns.com/spring-hinge)** 





### LID BRICK IS SECURED WITH CLIPS

Stainless Steel clips secure lids - not friction. (hotkilns.com/ lid-clips)



### **HEAVY-DUTY FULL-SUPPORT STAND**

Heavy-duty 14 gauge solid stand with multiple bends for strength. Bolt on legs. Feet protectors included. Optional Vent Bypass Collection Box bolts onto bottom of stand with included studs. *Rolling stand is optional. See page 6.* (hotkilns.com/full-stand)



# EASY ASSEMBLY WITH SECTIONAL CONSTRUCTION

Three 9" sections. Sections stack on top of each other. Easy to assemble or disassemble for moving. Bottom is reversible.

(hotkilns.com/sectional-easy-fire)

### **CORROSION RESISTANT CONSTRUCTION**

Stainless steel wrapped around brick. All stainless screws on case. Stand is galvannealed. Vent parts are stainless steel or aluminum. Hinge is stainless steel. Control box is powder coated steel. (hotkilns. com/case)

### SOLID PEEPHOLE PLUGS



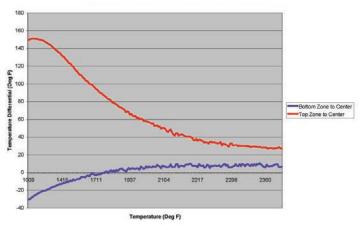
Solid (non-fragile) ceramic plug with heat-locked mushroom head. 3/4" diameter fullview non-tapered. (hotkilns.com/ peephole-plugs)

### EASY MULTI-PROGRAM DYNATROL

The time-tested DynaTrol with 4 Easy-Fire programs, 6 Vary-Fire programs, PreHeat, Delay, Program & Segment Review, and Diagnostics. Control is mounted on an angled panel for easy viewing. Optional Genesis control (see page 8) features touch screen and free Wifi App for monitoring kiln. (hotkilns.com/dynatrol)

### DYNAMIC ZONE CONTROL

This is a *standard* feature with either a DynaTrol or touch-screen Genesis control. The control separately measures temperatures in the bottom, middle, and top of the kiln and automatically adjusts the heat of three zones during the firing. Kiln temperatures are automatically equalized to within 1/2 cone or better. Zone control automatically compensates for many loading issues and element resistance changes. Additionally, L&L kilns are fundamentally uniform because the element holders radiate the heat more evenly. **(hotkilns.com/zonecontrol)** 



#### Zone Differentials in a Three Zone Kiln - Fast Glaze to Cone 8

### SEPARATED COOL-FIRING CONTROL PANEL



All controls and components are mounted in a separate control panel that is piggybacked to the element connection box. In addition a layer of insulation keeps the controls cool - which is critical for long term health of the electronics.

The control panel and element box

are hinged for easy access and maintenance. The control box can be easily removed for servicing. On/ off switch and control fuse are included. (hotkilns.com/easy-fire-panel)

### **BRANCH FUSING**

All models have branch fusing to accommodate the heavier power load of these kilns.

### **CERAMIC ELEMENT CONNECTIONS**

Proprietary all-ceramic element connection block makes changing elements easy. (hotkilns.com/ceramic-terminal)



### **HEAVY-GAUGE TYPE K THERMOCOUPLES**

Type K 8 gauge thermocouple is protected by a open ceramic protection tube. This allows the thermocouple to accurately read the kiln temperature but protects the delicate tip of the thermocouple from damage while loading. Also any metallic flakes from the thermocouple will tend to drop inside the tube where they can be vacuumed out during normal maintenance. (hotkilns.com/ protected-thermocouples)



### **MERCURY FREE RELAYS**

Mercury free relays are standard. See Page 9 for optional electronic SSRs for extra long element life and quiet operation.

### **COMPLETE VISUAL INSTRUCTIONS**

No one has a better or more complete instruction manual. Our visual instructions address the needs of the artist, the installer, and the repair person. You get a fully illustrated operation and service manual. Many instructional videos are available. (hotkilns.com/videos)

### L&L KILNS ARE EASY TO TROUBLESHOOT

Open up any L&L kiln control panel and see how easy it is to check amps, element resistance, and voltage. No other kiln can be serviced as quickly, easily, or inexpensively as an L&L kiln.

### THREE-YEAR LIMITED WARRANTY

See **hotkilns.com/warranty.** Email, web and phone support.

#### **IN-DEPTH SUPPORT**

One customer said: "I am truly impressed with your website, it is more than informative and your products are well designed. The fact that all the information, including repair manuals, are listed, speaks well of your dedication to customer service." Our website has thousands of pages of technical help - all easily searchable - plus we provide expert support with phone and email.

#### **GREEN MANUFACTURING**

L&L Kiln Mfg., Inc. uses solar energy as its prime energy source.

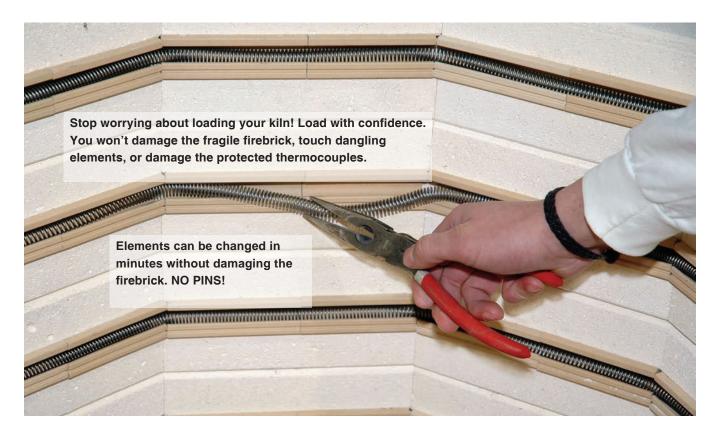
### SUPERIOR PACKAGING

Kilns are securely packed with tubes of foam molded to the kiln. Kilns are shipped in skidded cartons.

### **MET UL499 LISTING**



c-MET-us listed to UL499 standards assures highest safety standards. (hotkilns.com/met)



# **Furniture, Rolling Stands, Element Options**

### **CONE 11 FURNITURE KITS**

Shelves are high alumina cone 11 shelves. Each post kit includes six each 1/2", 1", 2", 4", 6" and 8" high square (1.5" x 1.5") cordierite posts. All furniture kits include one pair heat-resistant gloves. (hotkilns.com/kiln-furniture)



### **ROLLING STAND WITH LOCKING CASTERS**

Allows kiln to be moved out of the way while not firing. L&L's rolling kiln stand features heavy gauge (14 ga) galvannealed steel construction with multiple bends for extra strength, steel swivel locking casters, integrated vent collection box support, and guide rails for the kiln. (hotkilns.com/ rolling-stands)



### **APM ELEMENTS**

Special sintered alloy provides the ultimate in element life. The special sintered alloy inhibits grain growth and resistance change in the elements. (hotkilns.com/apm)

### SEISMIC BRACE

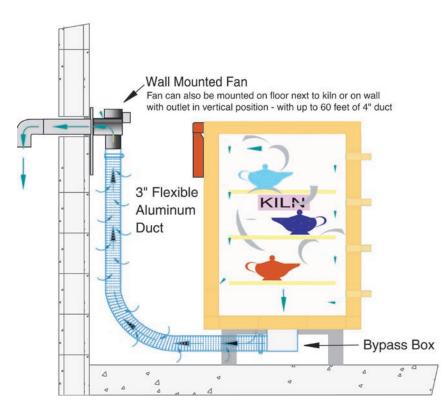
This special stand is designed to prevent a top-loading sectional kiln from falling over during an earthquake. (hotkilns.com/ seismic-brace)

sales@hotkilns.com

# **Ventilation Options & Accessories**

### **DOWNDRAFT VENT SYSTEM**

Vent-Sure downdraft vent vents fumes from kiln out of room and away from kiln. (hotkilns.com/vent)



### **VENT CONTROL**

Allows vent to be controlled with an event switch in the DynaTrol or Genesis. (For use with one kiln.) (hotkilns.com/vent-control)



### **VENT-SURE FEATURES**

Downdraft venting pulls air down to bottom of kiln

Improves temperature uniformity inside the kiln

Powerful 130 CFM fan motor, typically mounted on wall, allows fumes to be under vacuum in your studio

The strong fan motor helps overcome static pressure in long exhaust lines. The duct may be up to 60 feet in length, and include up to four 90° bends

120 volts with on/off switch on cord (240 volts available)

15 foot long flexible aluminum duct

Bypass collection box mounted on kiln allows adjustment of venting.

Fan motor, mounted away from the kiln, stays cool and no vibration is transmitted to the kiln

The included Multi-Mounting Bracket allows you to mount the vent on the floor or, alternately, to mount the vent on a



wall so that the output of the vent is pointing up.

**Three-year Limited Warranty** 

c-MET-us Listed to UL499 standards for use on c-MET-us L&LKilns

### **VENT DOUBLER**

This accessory allows you to connect two kilns to a Vent-Sure vent system. It can be added to an existing vent system or can be ordered with a new vent. In some cases you may be able to fire two kilns at once. The Vent-Sure has enough force to vent at least 25 cubic feet of kiln. That means, for instance, that two eQ2827-3 kilns could be vented while firing at the same time. **(hotkilns.com/doubler)** 

13

# **Genesis Touch Screen Control with App**

### **GENESIS TOUCH SCREEN CONTROL**

The Genesis control includes a touch screen interface and WIFI connectivity added to the proven software of the DynaTrol. More programming options and memory. Free App available to monitor kiln via WiFi. (hotkilns.com/genesis)



### **GENESIS FEATURES**

Touch-screen intuitive technology for easy user interface.

Easy-to-follow screen descriptions.

Different user-interface levels, which can be set to match the user's firing knowledge.

Graphical display of the firing process right at the controller. This means you can graph the firing in real time and compare the program with actual results.

Glass programs included.

Store up to 12 custom user programs.

Up to 32 segments per program.

Ability to make adjustments during a firing such as add segments, add temperature, and skip segments.

Built in diagnostics testing

Alarm

Error Codes

WiFi enabled for easy software updating.

Included Phone App allows you to monitor kiln operation remotely.



The Genesis control fits right into the control box to replace the DynaTrol. That means you can upgrade anytime!



See a graph of your firing!

← Kiln: Test kiln	۰						
Error!							
Status	Firing						
Program	Glaze						
Temperature	152°F						
Set Point	157*F						
Segment	Ramp 1 of 3						
Firing Time	0:00						
Last Update	12/30/19, 10:40 AM						

This shows the view you get on vour phone with the Kiln Aid Phone app. Simply download the Kiln Aid phone app from your Google Play Store or Apple App Store, add your kiln, and begin monitoring as your kiln progresses through a firing. See temperatures, where you are in a program cycle, what program you are firing and error notifications.

Created by Bartlett Instrument Co. Legal | Con

# **More Control & Power Options**

### **TYPE S THERMOCOUPLES**

The best thermocouple for constant high fire applications. No thermocouple drift. Priced per thermocouple. Note that kilns with four or more sections still only have a three zone control. (hotkilns.com/type-s)

### **PYROCIL SHEATHED THERMOCOUPLES**

For greater sensitivity to temperature change. Use below 2200°F for sensitivity (glass is a good example). Priced per thermocouple. These are useful for sensitive industrial applications. (hotkilns.com/pyrocil-tc)

### SOLID STATE RELAYS

Industrial Grade Solid State Relays are quiet and result in longer element life because the switching time is so fast the elements don't expand and contract as much. The whole system includes extra large heat sinks, special fast acting fuses, cooling fan and extra safety relays. c-MET-us listed option. (hotkilns.com/ssr)



A special control panel houses the SSRs and/or High Limit Control The control panel has a hinged door for easy access and maintenance.

### **HIGH LIMIT BACK UP CONTROL**

Bartlett High Limit Control with latching relay acts as a back up to the main control. If the main control fails for any reason then this acts as a "back stop" and shuts the kiln down. (hotkilns.com/high-limit)

### **BACK UP CONTACTORS**

Actuated by the High Limit Back Up Digital Control, back up contactors are completely redundant power contactors so that if one or more contactors fail in a closed position, then the kiln still cannot climb above the High Limit set point. (hotkilns.com/high-limit)

### **120 VOLT POWER SUPPLY**

If there are problems with short power outages, voltage spikes, voltage drops, or excessive environmental line noise, this can cause unpredictable behaviour in the electronic control. With this option the control is powered by a separate 120 volt line (with a standard 6 foot long cord) and that voltage is filtered though an EMI (Electrical Magnetic Interference) noise filter. **(hotkilns.com/noise)** 

Model Numbers	Part	Volt/	Watts	Amps	Wire	Fuse		
	Number	Phase			Size	Size		
eQ2327-3-240	K-Q-2327/31	240/1P	13,440	56.0	4 ga	70 Amps		
eQ2327-3-240-3P	K-Q-2327/32	240/3P	13,440	32.3	6 ga	50 Amps		
eQ2327-3-208	K-Q-2327/21	208/1P	11,648	56.0	4 ga	70 Amps		
eQ2327-3-208-3P	K-Q-2327/22	208/3P	11,648	32.3	6 ga	50 Amps		
eQ2827-3-240	K-Q-2827/31	240/1P	14,950	62.3	3 ga	80 Amp		
eQ2827-3-240-3P	K-Q-2827/32	240/3P	14,950	36.0	6 ga	50 Amp		
eQ2827-3-208	K-Q-2827/21	208/1P	14,950	71.9	2 ga	90 Amp		
eQ2827-3-208-3P	K-Q-2827/22	208/3P	14,950	41.5	6 ga	60 Amp		
eQ2836-3-240	K-Q-2836/31	240/1P	19,000	79.2	1 ga	100 Amps		
eQ2836-3-240-3P	K-Q-2836/32	240/3P	19,000	52.4	4 ga	70 Amps		
eQ2836-3-208	K-Q-2836/21	208/1P	19,000	91.3	1/0 ga	125 Amps		
eQ2836-3-X-208	K-Q-283X/21	208/1P	16,640	80	1 ga	100 Amps		
eQ2836-3-208-3P	K-Q-2836/22	208/3P	19,000	60.4	3 ga	80 Amps		
WORLD VOLTAGES								
eQ2327-3-220	K-Q-2327/41	220/1P	12,321	56.0	4 ga	70 Amp		
eQ2327-3-380-3PY	K-Q-2327/52	380/3PY	12,321	18.7	12 ga	25 Amp		
eQ2827-3-220	K-Q-2827/41	220/1P	14,950	68.0	2 ga	90 Amp		
eQ2827-3-380-3PY	K-Q-2827/52	380/3PY	14,950	22.7	10 ga	30 Amp		
eQ2836-3-220	K-Q-2836/41	220/1P	19,000	86.4	1 ga	110 Amp		
eQ2836-3-380-3PY	K-Q-2836/52	380/3PY	19,000	43.2	6 ga	60 Amp		

### **Electrical Specifications**

MET UL499 Listing: All models are c-MET-us listed to UL499 standard.

**Cone Rating:** All models are rated to Cone 10 and, with the extra power, can easily achieve Cone 10.

Wiring Diagrams: See the Electrical Tab for each kiln model to get the wiring diagram for each voltage.

Power connection: All kilns are direct wired.

**Elements:** All elements are of equal resistance value. 27" High Kilns (eQ2327-3 and eQ2827-3) have six elements. 36" eQ2836-3 has eight elements. All elements are the Quad design with thick wire and four rows per 9" high section.

**Other voltages** for any country in the world are available. Examples are 200V/3 Phase Delta, 415V/3 Phase Wye and 400V/3 Phase Wye. CE Listing available in some countries. See 380 Volt diagrams for electrical specifications for 400V/3 Phase Wye and 415V/3 Phase Wye.

**Moving and installation:** The kiln comes assembled but can be quickly disassembled and reassembled to move through any door or up stairs. It comes packed in a skidded carton with secure foam-in-place packaging.

<b>Dimension</b>	&	Weight	<b>Specifications</b>
------------------	---	--------	-----------------------

Model	Inside	Cubic	Furniture	Furn Kit	Outside	Shipping	Ship	Ship Wght		
Number Dimensions		Feet	Kit Part No.		Dimensions	Dimensions (w Kit and Vent)	Weight Kiln Only	Kiln/Kit/ Vent		
eQ2327-3	22.3"D x 27"H	6.7	(2) 20" full, (4) half	H-J-K23X/30	30" W x 69" H x 40" D	48" W x 61" H x 40" D	395 LBS	485 LBS		
eQ2827-3	28"D x 27"H	10.2	(8) 25.5" half	H-J-K292/00	35" W x 74" H x 49" D	48" W x 61" H x 40" D	515 LBS	650 LBS		
eQ2836-3	28"D x 36"H	13.6	(10) 25.5" half	H-J-K293/00	35" W x 83" H x 49" D	48" W x 70" H x 40" D	605 LBS	770 LBS		
METRIC DIMENSIONS (CM, LITERS & KG)										
eQ2327-3	56.6 D x 68.6 H	190	(2) 50.8 full, (4) half	H-J-K23X/30	76 W x 175 H x 102 D	122 W x 155 H x 102 D	180 KG	220 KG		
eQ2827-3	71.1 D x 68.6 H	289	(8) 50.6 half	H-J-K292/00	89 W x 188 H x 124 D	122 W x 155 H x 102 D	234 KG	295 KG		
eQ2836-3	71.1 D x 91.4 H	386	(10) 50.6 half	H-J-K293/00	89 W x 211 H x 124 D	122 W x 178 H x 102 D	275 KG	350 KG		

**MORE:** See each model page on *hotkilns.com* to download PDF General Dimension Drawings for more outside and inside dimensions, minimum space requirements, BTU ventilation requirements, and kiln weight. See the Shipping Tab on the model page for complete shipping dimension and shipping weight information.



L&L Kiln Mfg Inc

800-750-8350

sales@hotkilns.com

# eQ2327-3

Temperature Rating: Cone 10 Volume: 6.7 Cubic Feet Brick Thickness: 3" Brick Inside: 22.3" Diam x 27" High Outside Dimensions: 30" W x 69" H x 40" D Shipping Dim with Vent & Furn Kit: 48" W x 61" H x 40" D Ship Weight (Kiln): 395 LBS Ship Weight (Kiln, Vent & Furn Kit): 485 LBS



# FURNITURE KIT FOR eQ2327-3

Part Number: H-J-K23X/30

**Includes:** Two 20" (50.8 cm) full and Four half shelves, One post kit with 6 each 1/2", 1", 2", 4", 6", and 8" square posts, and one pair heat resistant gloves.







# eQ2827-3

Temperature Rating: Cone 10 Volume: 10.2 Cubic Feet Brick Thickness: 3" Brick Inside: 28" Diam x 27" High Outside Dimensions: 35" W x 74" H x 49" D Shipping Dim with Vent & Furn Kit: 48" W x 61" H x 40" D Ship Weight (Kiln): 515 LBS Ship Weight (Kiln, Vent & Furn Kit): 650 LBS



### FURNITURE KIT FOR EQ2827-3

Part Number: H-J-K292/00

Includes: Eight 25.5" (64.8 cm) half shelves, One post kit with 6 each 1/2", 1", 2", 4", 6", and 8" square posts, and one pair heat resistant gloves.





L&L Kiln Mfg Inc

# eQ2836-3

Temperature Rating: Cone 10 Volume: 13.6 Cubic Feet Brick Thickness: 3" Brick Inside: 28" Diam x 36" High Outside Dimensions: 35" W x 83" H x 49" D Shipping Dim with Vent & Furn Kit: 48" W x 70" H x 40" D Ship Weight (Kiln): 605 LBS Ship Weight (Kiln, Vent & Furn Kit): 770 LBS

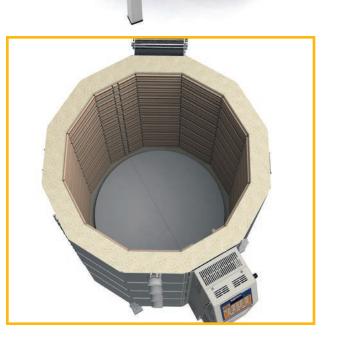


### FURNITURE KIT FOR EQ2836-3

Part Number: H-J-K293/00

**Includes:** Ten 25.5" (64.8 cm) half shelves, One post kit with 6 each 1/2", 1", 2", 4", 6", and 8" square posts, and one pair heat resistant gloves.





# What Makes eQuad-Pro Kilns **Built to Last?**

### Free Zone Control for even firing.

Protected Thermocouples (open tube design)

**Piggy-Back Control** Panel makes servicing easy and safe, keeps electronics cool.

DvnaTrol or Touch **Screen Genesis** Control with free app for easy programming and monitoring.

Spring Assisted Lid for easy opening. Includes safety pin for securing in up position. No side supports makes loading easy.

#### QUAD Elements with Hard **Ceramic Element Channels**

protect elements and fragile firebrick. Improves kiln life dramatically. Provides wider and more reflective surface for infrared heat transmission.

> Heavy-Duty Full-Support Stand makes kiln sturdy.

Extra insulation in panel keeps electronics cool.

**Molded Ceramic Element Terminals** make connecting elements easy and trouble free.

### eQuad-Pro Kilns come with a **Three-Year Warranty because L&L** kilns last longer.

Chest Handles make lifting rings easy when moving or setting up kiln.

#### Solid Ceramic Peephole Plugs with 3/4" diameter straight view have wide viewing area and won't easily fall out or break.



505 Sharptown Road • Swedesboro, NJ 08085 Phone: 856.294.0077 • Fax: 856.294.0070 hotkilns.com sales@hotkilns.com • hotkilns.com

### **KILNS BUILT TO LAST**

Bulletin No: EQ-0222