

The National K-12 Ceramic Exhibition

The ceramic pieces featured on the front cover were exhibited in the National K-12 Ceramic Exhibition. This is an annual juried ceramic competition for Kindergarten through Grade 12 (K-12) students in the United States. Designed to showcase the best K12 ceramic work made in the country, the exhibition takes place in a different city each year in conjunction with the annual conference of The National Council on Education for the Ceramic Arts (NCECA). For more information, see www.k12clay.org.

Hear from a Pro

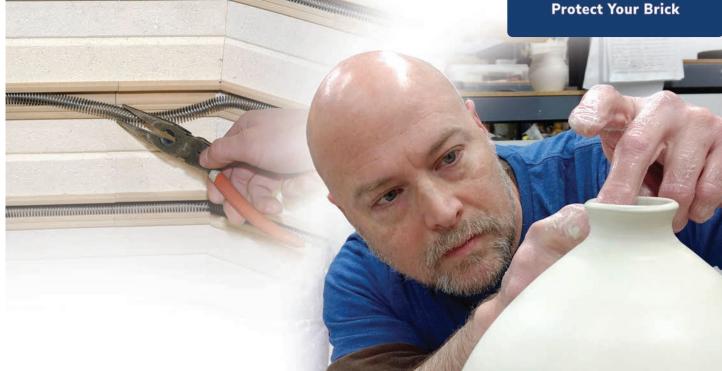
Time, Efficiency, Reliability

After 20 years in the kiln repair business, I can say that L&L kilns last longer than other brands, and the cost of ownership is much lower. General maintenance like replacing elements can be done in half the time of most other brands, and they typically need fewer repairs because they are so durable. That can add up to a savings of several hundred dollars per kiln per year.

> -Neil Estrick -20+ years of kiln repair

Hard Channels





Why Teach Ceramics?

Impacts on Student Learning

Improve	May Reduce	Encou	rage
Problem-Solving SkillsHand-Eye CoordinationFine Motor SkillsFocus	AnxietyDepressionPTSDAnger	Self ExpressionCuriositySelf-Discipline	Story-TellingCommunicationSocial Skills

Accessible For All

Inclusive Education

Sensory Stimulation: Working with clay and ceramics involves tactile experiences, which can provide sensory stimulation. For individuals with learning disabilities, this hands-on activity may help in managing hyperactivity and improving focus.



Wedging To Remove Air



Wheel Throwing



Trimming & Defining Forms



Hand-building



Painting & Glazing Forms

Core Skills Impact

Beyond Fine Motor Skills

STEM Skills	Language Skills	Cross-Curriculum
 Geometry Measurements Fractions Patterns & Symmetry Chemistry 	Storytelling & WritingVocabulary DevelopmentPresentation SkillsSymbolism & Metaphor	Spark Student EngagementDiverse Learning Styles

Easy for Teachers Be a Pro

Touch-Screen Control

- Simple, Intuitive Interface
- Pre-Programmed Firings
- Phone App To Monitor
- Customizable Options



Genesis Touchscreen Video Guides

hotkilns.com/ support/videos







"These kilns keep looking new for decades because of the element holders. Now with the zone control, they fire absolutely evenly from top to bottom. All of this excellent engineering, along with their reasonable prices, make L&L the best electric kiln on the market."

- Lisa Orr - lisaorr.com



Easy to Load

Features for Durability



- Strong Kiln Furniture
- Protected Thermocouples
- Protected Brick



Easy to Troubleshoot

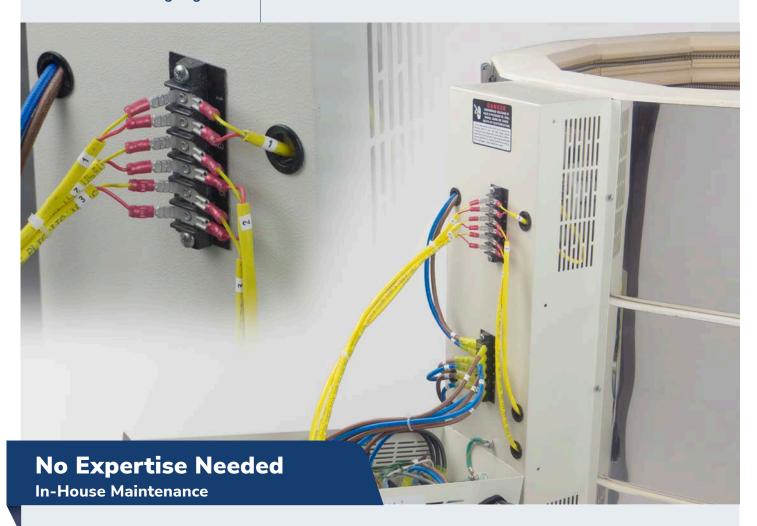
Time = Money, Save Both

Easy Maintenance

L&L Solutions

- Easy Element Changes
- Clean, Trouble-Free Interior
- Easy Trouble-Shooting
- Automatic Firing Logs

- Hard Ceramic Channels
- Self-Supporting Panels
- Ceramic Terminals
- Insulated Controls
- Quick-Ship Parts
- Online Parts Database
- Quick, Expert Service
- Instructional Videos



No other kiln manufacturer places so much emphasis on easy and safe maintenance.

This can be crucial not just for artists but for schools and institutions - because you will save time and money and keep your program running smoothly. L&L has unique features, like self-supporting, hands-free control panels, labeled wiring, hard channels, and no-crimp element connections to make it easy and possible for in-house maintenance personnel, without kiln expertise, to maintain your kilns.

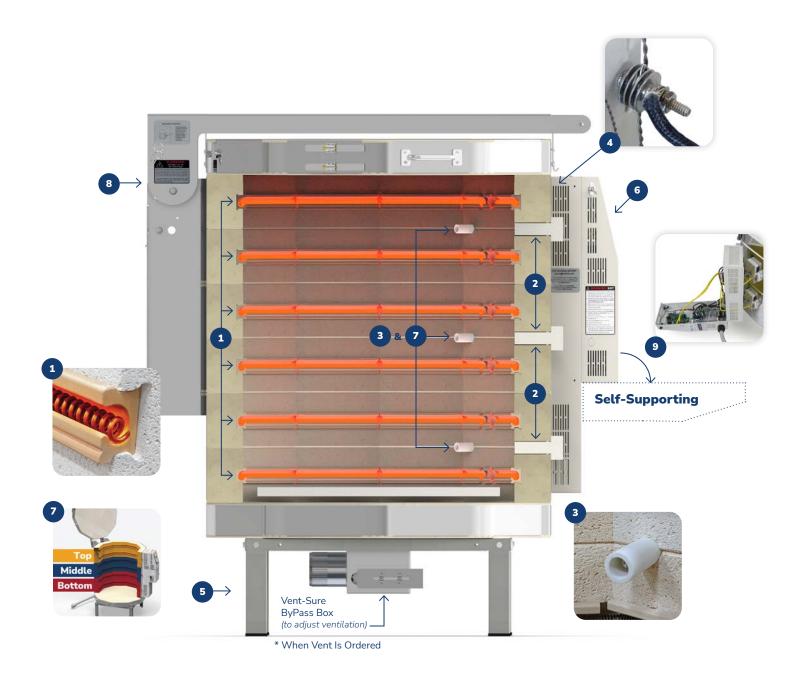
Easy to Fix

Time = Money, Save Both

- 1 Hard Ceramic Element Channels
- 4 "No Crimp" Element Connections
- 7 Automatic Zone Control (on most models)

- 2 Straight-View Peephole Plugs
- 5 Full-Support Stand
- 8 Easy-Open Spring Hinge

- 3 Protected Thermocouples
- Genesis Touch Screen Control on angled panel
- 9 Easy Service Control Panel



Elementary & Middle

For Low-Fire Programs

School-Master SM23T-3

Standard L&L Features

- Genesis Mini Touch Screen Control with Kiln Aid app
- Hard Ceramic Element Channels protect your elements and kiln
- Type K Thermocouple (1) with protection tube
- 3" K23 Brick
- Top Loading Spring assisted lid
- Solid, Straight-View Peephole Plugs
- Full-Support Stand rolling option available
- Easy-Access Control Panel with Easy-View tilted display
- c-MET-us listed to UL499 Standards

Unique to School-Master

- Designed for Low Fire (Cone 1) Max Cone 6 (2232°F)
- Multi-Voltage (208v 240v)
- Five-Year Limited Warranty
- **Single Zone** graded elements for uniformity









School-Master Package

- 1 School-Master Kiln
- 1 -Vent-Sure Downdraft Vent System
- 1 Furniture Kit
- 1 Vent Controller







SM23T-3 Package

School-Master Package
hotkilns.com/SM23T-3-Package

L&L Model Comparisons

School-Master vs e23T-3 vs e28S-3

Model No.	No. Shelves F=full, H=half	Inside Diam	Inside Height	Cubic Feet	Exterior Dim (in)	240/1 KW~Amp~Fuse	240/3 KW~Amp~Fuse	208/1 KW~Amp~Fuse	208/3 KW~Amp~Fuse	Lbs Kiln	Lbs w/Kit
SM23T-3-A	20" (8H)	22.3"	27"	6.7	30W x 68H x 40D	11.5~48.0~60	11.5~27.8~40	9.0~43.2~60	9.0~27.9~40	380	470
e23T-3	20" (8H)	22.3"	27"	6.7	30W x 68H x 40D	11.5~48.0~60	11.5~27.7~40	10.0~48.0~60	11.0~30.5~40	380	470
e28S-3	25-1/2" (6H)	28"	18"	6.8	35W x 65H x 46D	11.5~47.9~60	11.5~41.5~60	10.0~48.0~60	10.0~41.6~60	410	520

See the kiln pages for other voltages

SM23T-3 & e23T-3 Kiln Capacity

Example: 6" Diam x 3"Height Bowl

Approximately 38 Bowls

SM23T-3

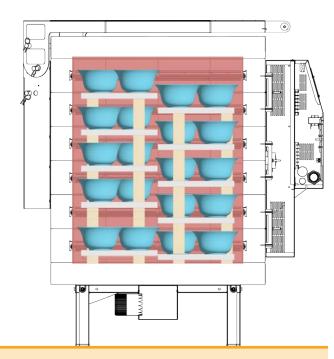
Temp Rating: Cone 1 (6 Max)

• Volume: 6.7 Cubic Feet

Brick Thickness: 3" Brick

Inside: 22.3" Diam x 27" H





Alternatives to School-Master

For More Advanced Programs

Easy-Fire e23T-3 hotkilns.com/e23T-3-Package



- Temp Rating: Cone 10
- Volume: 6.7 Cubic Feet
- Brick Thickness: 3" Brick
- Inside: 22.3" Diam x 27" H
- Capacity: Approx 38 Bowls (6" Diam x 3" H)

Easy-Fire e28S-3 hotkilns.com/e28S-3-Package



- Temp Rating: Cone 10
- Volume: 6.8 Cubic Feet
- Brick Thickness: 3" Brick
- Inside: 28" Diam x 18" High
- Capacity: Approx 50 Bowls (6" Diam x 3" H)

eQuad Pro Kilns (3 Sizes Available)

Model Shown: eQ2827-3

- Genesis Touch Screen Control with Kiln Aid app
- Dynamic Zone Control for even firing
- Hard Ceramic Element Channels protect your elements and kiln
- Type K Thermocouples (3) with protection tubes
- 3" K23 Brick
- Top Loading spring assisted lid
- Solid, Straight View Peephole Plugs
- Full-Support Stand rolling option available
- Easy-Access Control Panel branch fusing included
- Three-Year Limited Warranty
- c-MET-us listed to UL499 Standards

Unique to eQuad-Pro

- Quad Element System Comes Standard
 - for extra long element life
- Cone 10 (2350°F) with extra power







eQ2827-3 Package

- 1 eQ2827-3
- 1 -Vent-Sure Downdraft Vent System
- 1 Furniture Kit
- 1 Vent Controller







eQ2827-3 Package

eQ2827 Package

hotkilns.com/eQ2827-3-Package

L&L Model Comparisons

e28M-3 vs e28T-3 vs eQ2827-3

Model	No. of Shelves	Inside	Inside	Cubic	Exterior	240/1	240/3	208/1	208/3	Lbs	Lbs
No.	All Half Shelves	Diam	Height	Feet	Dimensions	KW~Amp~Fuse	KW~Amp~Fuse	KW~Amp~Fuse	KW~Amp~Fuse	Kiln	w/Kit
e28M-3	25-1/2" (6H)	28"	22.5"	8.5	35W x 69H x 46D	11.5~48.0~60	16.6~40.0~50	10.0~48.0~60	14.3~39.8~50	445	555
e28T-3	25.5" (8H)	28"	27"	10.2	35W x 74H x 46D	11.5~48.0~60	16.6~40.0~50	10.0~48.0~60	14.3~39.8~50	475	610
eQ2827-3	25.5" (8H)	28"	27"	10.2	35W x 74H x 49D	15.0~62.3~80	15.0~36.0~50	15.0~71.9~90	15.0~41.5~60	515	650

See the kiln pages for other voltages

e28T-3 & eQ2827-3 Kiln Capacity

Example: 6" Diam x 3"Height Bowl Approximately 74 Bowls

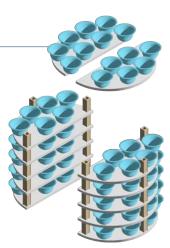
eQ2827-3

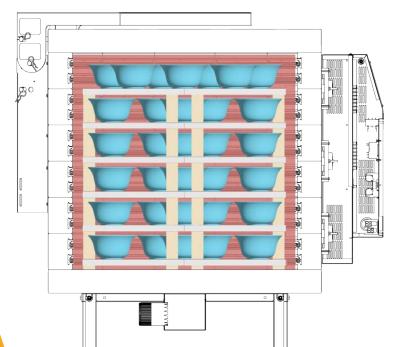
• Temp Rating: Cone 10

• Volume: 10.2 Cubic Feet

Brick Thickness: 3" Brick

Inside: 28" Diam x 27" H





Alternatives to eQ2827-3

Cost, Size, & Power Alternatives

Easy-Fire e28M-3 hotkilns.com/e28M-3-Package



- Temp Rating: Cone 10 (Cone 8 on 208V/1Ph)
- Volume: 8.5 Cubic Feet
- Brick Thickness: 3" Brick
- **Inside:** 28" Diam x 22.5" H
- Capacity: Approx 62 Bowls (6" Diam x 3" H)

Easy-Fire e28T-3 hotkilns.com/e28T-3-Package



- Temp Rating:
- Cone 10 on 3-phase models
- Cone 8 on 240V/1Ph
- Cone 5 on 208V/1Ph
- Volume: 10.2 Cubic Feet
- Brick Thickness: 3" Brick
- Inside: 28" Diam x 27" H
- Capacity: Approx 74 Bowls

eFL Front-loading Kilns (3 Sizes Available)

Model Shown: eFL2635

- Genesis Touch Screen Control with Kiln Aid app
- Dynamic Zone Control for even firing
- Hard Ceramic Element Channels
 - protect your elements and kiln
- Cone 10 (2350°F)
- Type K Thermocouples (3)
 - with protection tubes
- Solid, Straight-View Peephole Plug
- Easy-Access Control Panel
- Three-Year Limited Warranty
- c-MET-us listed to UL499 Standards

Unique to eFL Series

- 3" K23 Brick balanced front to back with micro-porous backup insulation in door and K25 brick in the back eliminates the need for door elements
- Front-Loading
- Door Switch for safety







eFL2635 Package

- 1 eFL2635
- 1 -Vent-Sure Downdraft Vent System
- 1 Furniture Kit
- 1 Vent Controller







eFL2635 Package

eFL2635 Package hotkilns.com/eFL2635-Package

L&L Model Comparisons

eFL2635 vs Davinci T2327

Model Number	Kiln Shelves	Cubic Feet	Inside Height	Inside Dimensions	Exterior Dimensions	240/1 KW~Amp~Fuse	240/3 KW~Amp~Fuse	208/1 KW~Amp~Fuse	208/3 KW~Amp~Fuse	Lbs Kiln	Lbs w/Kit
eFL2635	(8) 12"x 24"	13.7	35"	26W x 35H x 26D	45W x 72H x 39D	19.2~80.0~100	19.2~52.9~70	19.2~92.3~125	19.2~61.1~80	895	900
T2327	(9) 22" x 11"	14.4	27"	34.75W x 27H x 26.5D	68W x 84H x 47D	19.5~81.3~100	19.5~46.9~60	19.5~93.8~125	19.5~54.2~70	1035	1170

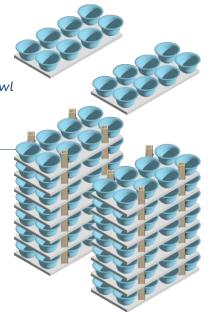
See the kiln pages for other voltages

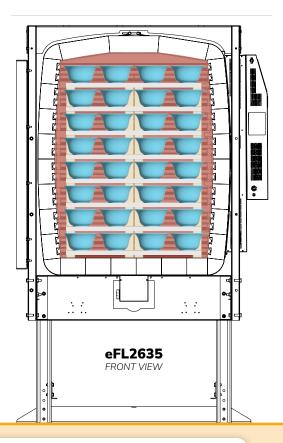
eFL2635 Kiln Capacity

Example: 6" Diam x 3"Height Bowl Approximately 128 Bowls

eFL2635

- Temp Rating: Cone 10
- Volume: 13.7 Cubic Feet
- Inside Dimensions: 26" W x 35" H x 26" D





Alternative to eFL Series

Cost, Size, & Power Alternative

Davinci T2327 hotkilns.com/T2327-Package





T2327 Package

Davinci T2327 Package

- Temp Rating: Cone 10
- Volume: 14.4 Cubic Feet
- Brick Thickness: 3" Brick
- **Inside:** 34.75W x 27H x 26.5D
- Capacity: Approx 108 Bowls (6" Diam x 3" H)

L&L KILNS

Guide to Replacing Your Kiln with an L&L

LOC KILINS		Guide to	Reptacing rour	Kidi Widi ali Edi
	BRAND	MODEL	CU FT	MAX CONE
Easy-Fire	SKUTT	KM1027-3	6.40	10
E23T-3 6.7 CU FT	PARAGON	TNF24-3	7.10	10
CONE 10	OLYMPIC	2327E	7.00	8
School-Master	CRESS	E27	7.00	10
SM23T-3-A 6.7 CU FT	EVENHEAT	RM II 2329	7.50	8
CONE 6	AMACO	EX-270SF	7.00	10
	SKUTT	KMT-1218	6.6	10
	OLYMPIC	2818HE	6.67	10
Easy-Fire	CRESS	ET2818-208	6.6	10
E28S-3 6.8 CU FT	EVENHEAT	HF 2918	7	10
CONE 10	AMACO	EX-1266SF	6.6	10
	CONE ART	2818D	6.66	10
	SKUTT	KM1222-3	8.10	10
	PARAGON	TNF27-3	8.11	10
	OLYMPIC	2823HE	8.34	10
Easy-Fire E28M-3	AMACO	EX-381SF	8.10	10
8.5 CU FT CONE 10	JEN-KEN	AF 2431	8.11	8
	EVENHEAT	RM II 2922	8.70	8
	CONE ART	2822D	8.33	10
	SKUTT	KM1227-3	9.90	8
	PARAGON	TNF28-3	10.57	5
Easy-Fire	OLYMPIC	2827E	10.00	8
E28T-3		ET28		10
10.2 CU FT CONE 10	CRESS	+	9.92	
	JEN-KEN	AF 2829 3"	10.33	8
	EVENHEAT	RM II 2929	11.30	8
	CONE ART	BX-2827D	10.00	10
	SKUTT	KM1227-3PK	9.90	10
eQuad-Pro	PARAGON	VIKING-28	10.57	10
EQ2827-3 10.2 CU FT	OLYMPIC	2827HE	10.00	10
CONE 10	EVENHEAT	HF2927	10.50	10
	AMACO	EX-1099SF	9.92	10
Front-Loading eFL2635	PARAGON	DRAGON	9.00	10
13.7 CU FT CONE 10	OLYMPIC	FL12E	12.00	10
	PARAGON	JANUS OVATION	11.40	10
<i>Davinci</i> T2327 14.4 CU FT	OLYMPIC	2531HE	14.80	10
		DM II 2541	14.40	03
14.4 CU FT	EVENHEAT	RM II 2541	14.40	-
	EVENHEAT JEN-KEN	AF OVAL 27	14.00	8

Durable, Safe, Efficient

Unparalleled Safety

Features & Highlights of L&L Kilns

Features	L&L Kilns	Other Kiln Brands
Integrated Vent System Attached Directly to the Kiln Stand	$\overline{\checkmark}$	Vent Box, Supported From Floor, Can Come Loose
Hard Ceramic Element Channels	\overline{ullet}	Routed Into Fragile Firebrick, Element Changes Can Cause Brick Damage
Easy Access Control Panel Self-Supporting for Solo Maintenance	\overline{ullet}	Often Difficult To Work On, Requires An Expert
Fully Supported Stand	\overline{ullet}	Typically Are Thin Gauge With No Center Support
Safety Guides	\checkmark	\overline{ullet}

Hard Channels Protect Your Brick

Only On L&L Kilns



Reduced Costs Maintenance & Time Savings

Features L&L Kilns **Other Kiln Brands Hard Ceramic Element Channels** Not Available Protect Your Elements and Increase Longevity **Protected Thermocouples** Not Available Protect From Loading Damage **Pin-Free Elements** Time Consuming & Damages Brick Save Time & Brick Integrity **Quick Element Changes** Requires More Care & Expertise Save Time & Money Warranty Included 3 Month - 2 Year 3-5 Year With Purchase Thermocouples Included Varies In Warranty

Vent-Sure DownDraft System

See **hotkilns.com** for all features and options

Ventilation

PRO TIP: Install a room thermometer approximately 6 ft away from the kiln and 6ft off the floor. The room temperature should be 90°F or less when firing.

VENTING KILNS: WHY AND HOW?

Cracking the kiln lid for manual venting is outdated and can be hazardous. Firing clay and glazes produces fumes like carbon, carbon monoxide, sulphur, and water vapor. Powered kiln vents are crucial to safeguard your kiln and pottery, removing these fumes efficiently.

THE VENT-SURE DOWNDRAFT VENT

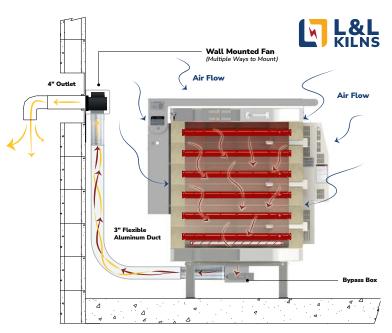
Unlike other systems, this vent attaches directly to the kiln stand. It also enhances kiln uniformity, extends element life, and improves glaze colors by maintaining a vacuum for fumes and keeping the motor away from kiln heat.

ROOM HEAT VENTILATION MATTERS

In addition to kiln venting, a room vent or window is key. Aim for 10-25 times the kiln's cubic feet per hour.

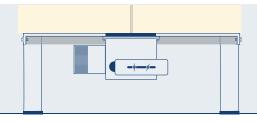
CONTROL YOUR VENTING WITH A VENT CONTROL

Opt for our vent control system to manage venting during the firing process. Most fumes are produced at specific times. A vent control allows you to minimize air vented from the kiln and room until specific times in the firing cycle.

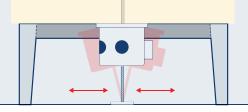


Vent-Sure Downdraft Vent System

Vent Box Attached To Stand



Vent Box Supported From Floor



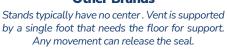
Top View



L&L Kiln Stands

Full center-kiln base support with integrated bolts for direct mounting vent bypass box to the kiln stand. Adjustable slide allows for airflow control.

Other Brands





Quick Overview

Maintenance & Durability



CONSIDER MAINTENANCE COSTS

Opt for a kiln designed for easy maintenance. Schools can save time and money due to L&L Kilns unique durability and maintenance features because our kilns are designed for non-experts to maintain. Schools can find savings without the high cost of scarce kiln repair technicians.

COMMON ISSUES IN OTHER KILNS

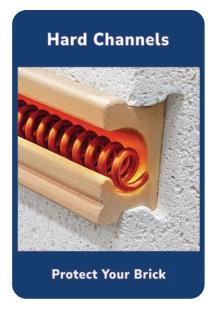
In most electric kilns, elements in soft firebrick grooves deteriorate over time. Pins, often used for support, can damage the kiln. A single mishap with a kiln shelf can permanently harm the element groove.

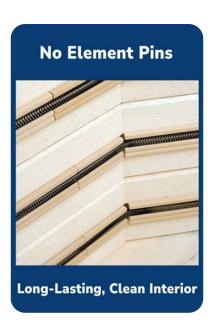
PINS AMPLIFY ISSUES

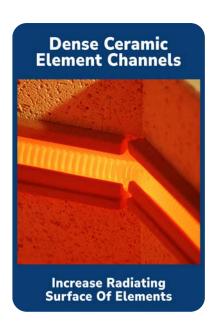
Pins, expanding and contracting differently from brick, worsen firebrick fractures.

L&L SOLUTIONS

L&L's hard ceramic element channels extend kiln life by safeguarding firebrick during changes and accidents. No pins are needed, allowing elements to expand freely, reducing strain and extending their life. Element changes are quick and require no special tools, with no kiln disassembly or difficult crimping.







Fillable Form

Voltage & Power

USA VOLTAGE

Kilns are in 240 or 208 volts, single/three-phase. Household voltage is 240V single phase; institutions may have 208V, 480V, or three-phase. Confirm with an electrician.

ENERGY SAVINGS?

No savings for different voltages/phases.

480V MODELS

L&L offers 28" Jupiter, eFL, DaVinci, and Easy-Load kilns in 480V.

WRONG KILN VOLTAGE = IMPROPER OPERATION RESULTS

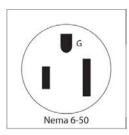
A 240V kiln loses 25% on 208V; a 208V kiln on 240V draws excess power, tripping the breaker. If you mistakenly order the wrong voltage or phase, replacing the elements and power cord is a straightforward process on an L&L kiln.

INTERNATIONAL VOLTAGES

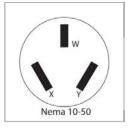
Outside the USA, it's typically 220V single-phase or 380V three-phase. L&L provides special elements for both at no extra cost, and all models work on 50 or 60 Hz.

VOLTS	
PHASE	_(single vs three phase)
CIRCUIT BREAKER	AMPS
DISTANCE FROM BREA	AKERFeet

See each kiln's electrical specs to see which plug is standard to your kiln:



Typical Single Phase 50 Amp Cord



Typical Three Phase 50 Amp Cord

Kiln Size Needed

Determine Kiln Capacity for School Projects

<u>Detailed Description Here</u> hotkilns.com/choosing-school-kiln



Average Project Size	Number of Students		Firings	s Per V	Veek	Kiln Sizes	
	= 1.3 Cubic Feet	4 Firings Per Week 64/4 = 16 cu ft per firing					16 cu ft per firing Option A:
		Mon	Tues	Wed	Thur	Fri	One - e23T-3 = 6.7 cu ft
	48 Students						One - e28T-3 = 10.2 cu ft
	between two classrooms						Option B:
(4 in x 4 in x 6 in) 1728 in	48 x 1.3 per student = 64 cu ft						Two- e28M-3 = 8.5 cu ft

Fillable Form

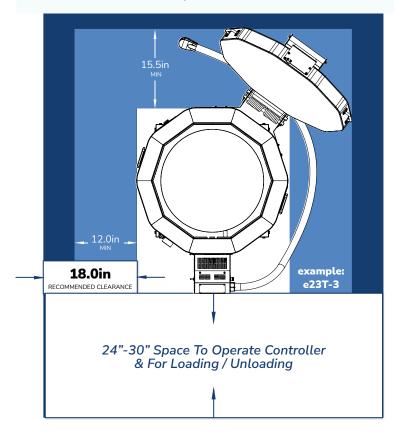
CSI Specifications:

hotkilns.com/support/pdfs/sample-csi-specifications



SPACE CONSIDERATIONS

CLEARANCES, LOADING & OPERATING



Recommended 18" from any wall (12" MIN) Kiln room floor is non-flammable Dedicated "Class C" fire extinguisher Sprinkler system for the kiln room (Optional) 24"-30" clearance for controls & loading

Read CSI Specifications

CSI specification outlines the requirements for kilns in school facilities, emphasizing safety and compliance. It covers design, materials, quality assurance, product specifications, and installation guidelines. The document highlights the importance of proper examination, preparation, and cleaning for optimal performance and longevity of the equipment.

Child Safety

from the hot kiln.
Kiln room that locks or a secure designated space.
Post Signage "Hot Kiln - DO NOT TOUCH" "No Students Allowed", etc.
If possible, "Caution" floor

Children will be protected

tape to map out a safe area.

Ventilation

ventila	don
	Room fan or HVAC sized for the heat of kiln (See hotkilns.com/calculate-venting)
	Downdraft Vent to remove fumes

L&L Kiln Mfg Inc

Founded in 1945, L&L is the oldest school kiln manufacturer in the United States.

Family Owned & Operated For Over 75 Years

L&L focuses exclusively on designing and building the most durable line of electric kilns made today with innovative engineering, superior technical support, and quick, efficient service.





L&L Kiln Mfg Inc

505 Sharptown Rd Swedesboro, NJ 08085

Toll Free: 800-750-8350
Phone No: (856) 294-0077
Email: info@hotkilns.com