PROJECT MANAGEMENT

Informal Bid Request

25-26-52

Project:
Kiln Room Enclosure
Jaycee Park Administration Building
Greenville, NC

Scope of Work:
Provide material, equipment, and labor to convert existing covered patio into a fully enclosed, conditioned workspace with plumbing fixtures, insulation, and new roof structure at the Jaycee Park Administration Building.

Special Conditions:
Work must comply with all OSHA safety guidelines.
Contractor is responsible for all needed paperwork to obtain required permits. All permits must be posted prior to the commencement of work.
A mandatory pre-bid meeting will be held on Tuesday, June 23, 2026, at 9:00 AM at the site.

Site Location:
Jaycee Park Administration Building
2000 Cedar Lane
Greenville, NC

Bid Submittal Deadline: **Tuesday, July 7, 2026 @ 2:00 PM**
Via email to: mwatson@greenvillenc.gov

INVITATION FOR INFORMAL BID ON

KILN ROOM ENCLOSURE – JAYCEE PARK ADMIN. BLDG.

INSTRUCTIONS FOR BIDDERS

The person, firm or corporation making a proposal shall submit a bid to *Mike Watson, Project Coordinator*, on or before the hour and day stated on the attached bid request form. The preferred method of delivery of the bid is by email to mwatson@greenvillenc.gov The bid may also be mailed or hand delivered to the Jaycee Park Administrative office located at 2000 Cedar Lane, Greenville, N.C., 27858 and must be received prior to the submittal deadline time and date stated and shall have the words *Bid Enclosed, KILN RM - JCP Attn: Mike Watson* along with the company name on the outside of the envelope.

All mailed or hand delivered bids received in the office will be marked with the date and time they are received by reception staff. Bids will not be opened and read aloud. The bids will be opened and evaluated, and a tabulation sheet will be available upon request once the contract is awarded to the successful bidder.

The bidder shall include the required responses and supply all the information as indicated on the Bid Form, Attachment B. The prices inserted shall be net and shall be the full cost including all factors whatsoever. Any bids not submitted on such forms provided will be considered unresponsive.

No bid may be changed or withdrawn after the time of the opening. Any modifications or withdrawals requested before this time shall be acceptable only when such request in writing is made to *Mike Watson, Project Coordinator*.

The City of Greenville reserves the right to reject any and all bids, to waive any formalities, and to accept the bid or any portion thereof that is deemed most advantageous to the City. Any bid submitted will be binding for 60 days after the opening.

The scope of work attached represents the minimum specification or description of work to be purchased or contracted. These requirements are not intended to prevent fair responses or to eliminate competition, but they are intended for the protection of each and every proposer to insure, if possible, that all bids submitted shall be upon a fair and comparable basis.

It is expressly understood by the bidders that written notice of award and/or receipt of purchase order will constitute agreement by the City to consummate the transaction and will serve together with the proposal, scope of work, and these instructions as the entire form of contract between the parties except in cases where formal contracts are warranted.

All work shall be FOB, Greenville, N.C.

Each bidder shall affirm that no official or employee of the City of Greenville is directly or indirectly interested in this proposal for any reason of personal gain.

Sales taxes may be listed on the proposal, but as a separate item. No charge will be allowed for Federal Excise and Transportation tax from which the City is exempt.

New vendors must register with the City of Greenville's online portal at the following web address: **https://cityofgreenvillenc.munisselfservice.com/vss**

Minority and/or Women Business Enterprise (MWBE) Program:

It is the policy of the City of Greenville to provide minorities and women equal opportunity for participating in all aspects of the City's contracting and procurement programs, including but not limited to, construction projects, supplies and materials purchases, and professional and personal service contracts. In accordance with this policy, the City has adopted a Minority and Women Business Enterprise (M/WBE) Plan and subsequent program, outlining verifiable goals.

The City has established a 10% Minority Business Enterprise (MBE) and 6% Women Business Enterprise (WBE) goal for the participation of MWBE firms in supplying goods and services for the completion of this project. All firms submitting bids agree to utilize minority and women-owned firms whenever possible.

Questions regarding the City's MWBE Program should be directed to Wanda House, Financial Services Manager, at (252) 329-4862.

Equal Employment Opportunity Clause:

The City of Greenville, NC is an equal opportunity employer and strictly prohibits discrimination against any employee or applicant for employment because of the individual's race, color, religion, age, gender, disability, national origin, genetic information, sexual orientation, gender identity/reassignment or expression, military or veteran status, marital status, or any characteristic protected by applicable law.

TITLE VI NONDISCRIMINATION NOTIFICATION:

The City of Greenville, NC in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 US.C. §§ 2000d to 2000d-4) and the Regulations, hereby 1178814- v4 7 notifies all respondents that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this advertisement and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. See Attachment A for more information.

Insurance Requirements:

The following insurance coverages and limits are standard insurance requirements for City contracts. At times the scope of the contracted work may require additional or unique coverages and increased limits.

The name of the contracting party must agree to purchase at its own expense insurance coverages to satisfy the following minimum requirements. A certificate reflecting the following minimum coverages shall be required and accompany the Contract:

1. **Workers' Compensation Insurance:**

   Limits:

Workers Compensation:	Statutory for the State of North Carolina
Employers Liability:	Bodily Injury by Accident $1,000,000 each accident Bodily Injury by Disease $1,000,000 policy limit Bodily Injury by Disease $1,000,000 each employee.

   No sub-contractor may exclude executive officers. Workers Compensation must include **all employees**.

2. **Commercial General Liability:**

   Limits:

Each Occurrence:	$1,000,000
Personal and Advertising Injury	$1,000,000
General Aggregate Limit	$2,000,000
Products and Completed Operations Aggregate	$2,000,000

The aggregate limit must apply per project. The form of coverage must be the ISO CG 00 01 policy as approved by the State of North Carolina Department of Insurance. If a form of coverage other than the CG 00 01 is used it must be approved. Any endorsed exclusions or limitations from the standard policy must be clearly stated in writing and attached to the Certificate of Insurance. Completed Operations coverage must be maintained for the period of the applicable statute of limitations

The City of Greenville must be added as an Additional Insured to the Commercial General Liability policy.

3. **Commercial Automobile Liability:** (If Applicable)

   Limits:

Combined single limit	$1,000.000

The City of Greenville must be added as an Additional Insured on the Commercial Auto Liability policy.

4. **Professional Liability:** (If Applicable)

   Limits:

Each Claim Made:	$1,000,000
Aggregate:	$2,000,000

5. **Builders Risk Coverage:** (If Applicable)

   Limit:

   Minimum limit in the amount of total bid price.

   The Builder Risk policy must be endorsed to increase the limit of insurance for all change orders.

   Policy Form:

   Builder Risk coverage must be on a direct physical loss basis and contain no exclusion for theft, collapse or damage to foundations or underground structures, pipes or conduits.

6. **Named Insured:**

   The named Insured shall be The City of Greenville, P.O. Box 7207, Greenville NC 27835, the Contractor and all sub-contractors with a contractual assumption of responsibility for damage to the project.

   All insurance companies must be admitted doing business in North Carolina and be acceptable to the City of Greenville's Safety Risk Manager. If the insurance company(s) is a permitted surplus lines insurer, the insurance company name, and NAIC number must be submitted to the Safety Risk Manager for approval before commencing work. Contractor shall be required to provide the City no less than thirty (30) days' notice of cancellation, or any material change, to any insurance coverage required by this Contract.

   A Certificate of Insurance (COI) must be issued by an authorized representative of the insurance carrier(s). Certificates of Insurance must have the Insurance Company name and NAIC number clearly identified. The Certificate of Insurance must identify the Contract and contract work, including location, to be completed in the description section.

   The City of Greenville's review or acceptance of Certificates of Insurance shall not relieve contractor of any requirement to provide the specific insurance

coverages set forth in the Contract. Nor shall the City of Greenville's review or acceptance of Certificates of Insurance constitute a waiver of the specific insurance coverage requirements set forth in the Contract or acknowledgement that all insurance coverage requirements set forth in the Contract have been met.

Hold Harmless and Indemnity Agreement:

To the fullest extent permitted by law, the **Contractor** shall indemnify and hold harmless the City of Greenville, its employees, agents and consultants against any liability arising out of or in connection with any of the operations or obligations of the **Contractor**, including but not limited to any said operations or obligations subcontracted or assigned to a different person or entity from claims, damages, losses, and expenses, including but not limited to attorneys' fees, which is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, caused by acts or omissions of the **Contractor** or anyone directly or indirectly employed by them or anyone for whose acts the **Contractor** may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligation of indemnity which would otherwise exists as to a party or person described in this paragraph.

E-VERIFY COMPLIANCE: The Contractor shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes. Further, if the Contractor utilizes a Subcontractor, the Contractor shall require the Subcontractor to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes. By submitting a proposal, The Proposer represents that their firm and its Subcontractors are in compliance with the requirements of Article 2 Chapter 64 of the North Carolina General Statutes.

IRAN DIVESTMENT ACT: Vendor certifies that: (i) it is not on the Iran Final Divestment List created by the NC State treasurer pursuant to N.C.G.S. 147-86.58; (ii) it will not take any actions causing it to appear on said list during the term of any contract with the City, and (iii) it will not utilize any subcontractor to provide goods and services hereunder that is identified on said list.

LIQUIDATED DAMAGES: If the Contractor fails to complete the work within the time specified in the bid package, the Contractor shall pay liquidated damages to the City of Greenville in the amount of *$250.00* for each calendar day of delay until the work is completed or accepted.

The City of Greenville has adopted a Local Preference Policy, Resolution No. 056-13, and a Professional and other Services Policy, Resolution No. 057-13 that may pertain to this project. For more information, please see the City of Greenville's webpage at Purchasing | Greenville, NC.

Any questions regarding any part of this proposal shall be directed via email to Mike Watson, Project Coordinator, at mwatson@greenvillenc.gov

Bids must be submitted using the provided Bid Submittal Form, Attachment B, accompanied by the completed Reference Information Sheet.

Greenville
NORTH CAROLINA

PROJECT MANAGEMENT

EXHIBIT B

Kiln Room Enclosure
Jaycee Park Administration Building

Scope of Work

Scope

The Contractor shall furnish all labor, materials, and equipment required to convert the existing covered patio into a fully enclosed, conditioned workspace with kiln zone, plumbing fixtures, insulation, and new roof structure. All work shall be to industry standards for construction. All OSHA requirements and other safety guidelines associated with the work shall be followed.

Debris

All debris associated with this project shall be removed and properly disposed of offsite.

General Requirements

1. Contractor is responsible for all measurements.
2. All work shall comply with all applicable building codes and regulations.
3. Refer to Attachment C for detailed information and requirements related to the split system, kiln vents, intake louver, lighting, and plumbing fixtures.
4. Protect existing slab and adjacent structures during demolition and construction.
5. Remove and dispose of the existing shingled roof—including roof framing, underlayment, and flashing. Remove and dispose of all dog-eared fencing and posts surrounding the patio perimeter in full. Maintain the existing concrete slab, clean and prep for new wall construction.
6. Construct new exterior walls around the full perimeter using pressure-treated bottom plates anchored to the slab, 2×4 framing, 7/16" OSB or plywood sheathing, a continuous weather-resistive house wrap barrier, and a complete vinyl siding system with all associated components and vented soffit. Provide all required headers, lintels, and structural bracing as part of the wall assembly.
7. Construct a 4-foot wall (4’ H x 4’ L) to the left of the exterior door jamb. Finish the kiln side with cement paneling (Hardie board paneling) and the opposite side with FRP paneling. Cap with 1-by material and paint.
8. Reuse the existing hollow metal door, frame, and hardware. Install new stainless-steel hinges with non-removable pins. Provide and install a new flat threshold, door sweep and weather-strippng. Prep and paint the door and frame.
9. Insulate all exterior walls with R-13 batt insulation and insulate the roof/ceiling assembly with a minimum of R-38 batt insulation installed between rafters at the underside of the roof deck. Seal all penetrations, joints,

and seams with foam or caulk to provide a continuous air barrier throughout the building envelope.

10. Remove the existing roof structure as required and install a complete new roof system, including new rafters or trusses sized per structural load requirements, new roof decking, underlayment, flashing, 30-year architectural shingles, and new drip edge with gutters and downspouts. Ensure the roof tie-in to the existing building is fully flashed and sealed to provide a watertight connection.
11. Install ½" gypsum board on the ceiling and tape, mud and sand for finishing and install a 22” x 30” ceiling access panel.
12. Install 4'×8' FRP wall panels at designated areas, adhered and fastened per manufacturer requirements, with panels set plumb, level, and tight to adjacent sheets, and install FRP panels over a smooth, solid substrate such as drywall, plywood, or OSB prepared per manufacturer requirements. Provide and install all required FRP trim components to create a complete, finished system
13. Install 4 x 8 cement board panels (Hardie Board paneling or equal) from floor to ceiling on all walls adjacent to or behind kilns as directed, maintaining all manufacturers specified clearances to combustibles. Provide non-combustible trim and fire-rated sealants as required to complete a fully compliant, protected wall assembly.
14. Remove the existing hardwiring to each kiln. Install 15-50 plugs for each kiln and connect them to new 15-50R outlets installed in the wall adjacent to each kiln. Attached is the information for each kiln model, including the electrical requirements.
15. Provide electrical hookup for the split system using a dedicated circuit breaker, including all required conduit, wiring, disconnects, and terminations installed in full compliance with NC Electrical Code and the manufacturer’s installation requirements.
16. Install eight new 8" LED ceiling lights using the existing switch leg and lighting control, ensuring all fixtures are mounted, wired, and supported per code. Provide and install two new electrical outlets on a dedicated circuit breaker, including all required conduit, wiring, and terminations in full compliance with NC Electrical Code.
17. Install a new emergency exit light over the rear exterior door, including all mounting hardware and electrical hookups.
18. Furnish and install a ductless mini-split heat pump with remote, sized appropriately for the insulated space, including a wall-mounted indoor head, an outdoor condenser on a pad or wall bracket, and all required refrigerant lines, condensate drain, and electrical disconnect. Test the system for proper operation and charge to ensure full compliance with the manufacturer’s installation requirements.
19. Provide complete plumbing rough-in for a utility sink with hot and cold-water supply. Install new water supply lines, new drain and vent lines—including a Studor Vent—tied into the existing sewer line in accordance with NC Plumbing Code. Provide all required shutoff valves, escutcheons, and fittings, and test all plumbing for leaks and proper drainage to ensure full, code-compliant operation.

20. Hook the kilns to the existing electrical system, providing all required connections and terminations in accordance with manufacturer requirements and NC Electrical Code. Provide mechanical ventilation systems with a new outlet as indicated in Attachment C and maintain all required clearances to combustibles throughout the installation.
21. Paint the drywall ceiling, cement board panels, and all trim with one coat of primer and two coats of interior latex paint, applied to achieve a uniform finish. Provide and install a complete flat-stock trim package using 1-by material with caulking throughout to create a fully finished appearance.
22. ***Timely completion is essential due to the required shutdown of all pottery programs during construction. The Contractor shall commence work in mid-August and shall achieve full completion, weather permitting, within 30 calendar days of the start date. Liquidated damages will be assessed for failure to complete the work within the allotted contract time.***

Warranty

Provide a standard manufacturer's warranty on all materials and a 1-year warranty from the contractor on all labor.

Notes

Contractor will be able to use the facility's electricity, water, and restrooms to complete the work.

The facility will remain open to the public so the Contractor shall make allowances for this and be responsible for providing a safe work site at all times. All egress doors shall not be blocked or restricted under any circumstances.

The laydown area, parking, time of work, access to the building, etc. will be discussed at a pre-construction meeting with the awarded contractor.

Greenville
NORTH CAROLINA
PROJECT MANAGEMENT

Title VI of the Civil Rights Act of 1964 Nondiscrimination Provisions, Appendices A & E.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1) Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation (USDOT), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin, sex, age, creed (religion), low-income, limited English proficiency, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

(3) Solicitations for Subcontractors, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

(4) Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the USDOT to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the USDOT, as appropriate, and will set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the USDOT may determine to be appropriate, including, but not limited to:

(a) withholding payments to the contractor under the contract until the contractor complies; and/or
(b) cancelling, terminating, or suspending a contract, in whole or in part.

(6) Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the USDOT may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

I. During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

Pertinent Nondiscrimination Authorities

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq);
- Federal transit laws, specifically 49 U.S.C. § 5332 (prohibiting discrimination based on race, color, religion, national origin, sex (including gender identity), disability, age, employment, or business opportunity).

ATTACHMENT B

Bid Submittal Form

Kiln Room Enclosure – Jaycee Park Administration Building

Bids Due: Tuesday, July 7, 2026, by 2:00pm

Contractor's Business Name: _____ License #: _____

Address: _____ Zip Code: _____

Contact Person: _____ Title: _____

Phone:_____ Email:_____

Business Type (sole proprietor, partnership, LLC, Inc., Other): _____

We hereby submit our bid to supply all materials and labor required to complete the scope of work.

Bid Amount: ($_____) _____

_____ and _____ / 100 Dollars

Addenda Received (if applicable): _____

Submitted by: _____
(print)

Signature: _____ Date: _____

REFERENCE INFORMATION SHEET

Vendors must include a list of three (3) references from clients they've worked with on similar projects. All client information must be provided in full. This information is to be submitted with the Bid Submittal Form. Contractors should possess relevant experience in comparable construction projects.

Contractor Business Name: _____

Years in business: _____

1. Project Name: _____

   Project Description: _____

   _____

   Client Name: _____ Completion Date: _____

   Phone Number: _____ Email: _____

2. Project Name: _____

   Project Description: _____

   _____

   Client Name: _____ Completion Date: _____

   Phone Number: _____ Email: _____

3. Project Name: _____

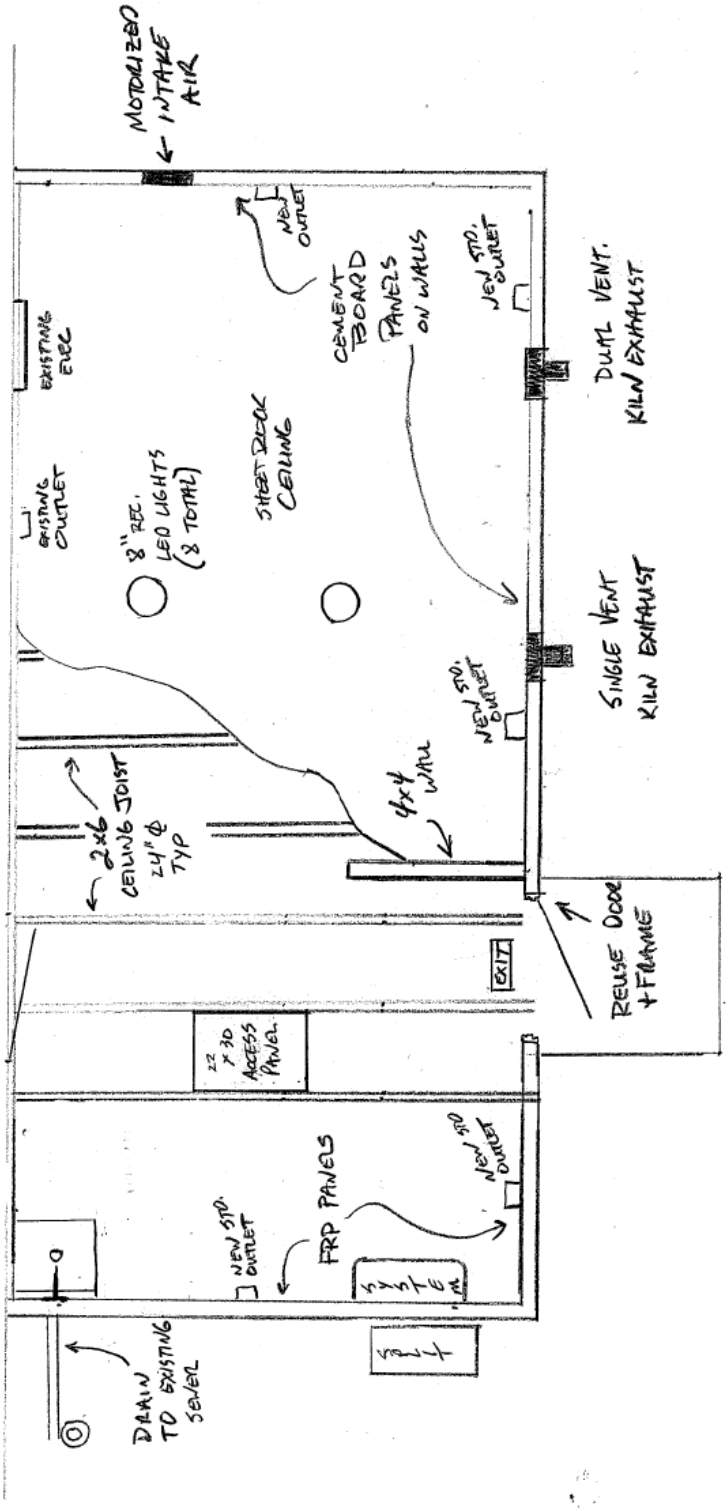
   Project Description: _____

   _____

   Client Name: _____ Completion Date: _____

   Phone Number: _____ Email: _____

Drawing Information



4
12
EAVE
OUTSIDE CORNER
VINYL SIDING
LEDGER
RAFTER
INSULATION TYP.
KILN VENT EXHAUST
HOUSEWRAP
½" PLYWOOD
OSB
15# FELT
RELITE HM DOOR & FRAME
30 YEAR AR SHINGLES
INSULATION TYP.
2x4 FRAMING
TREATED SILL PLATE

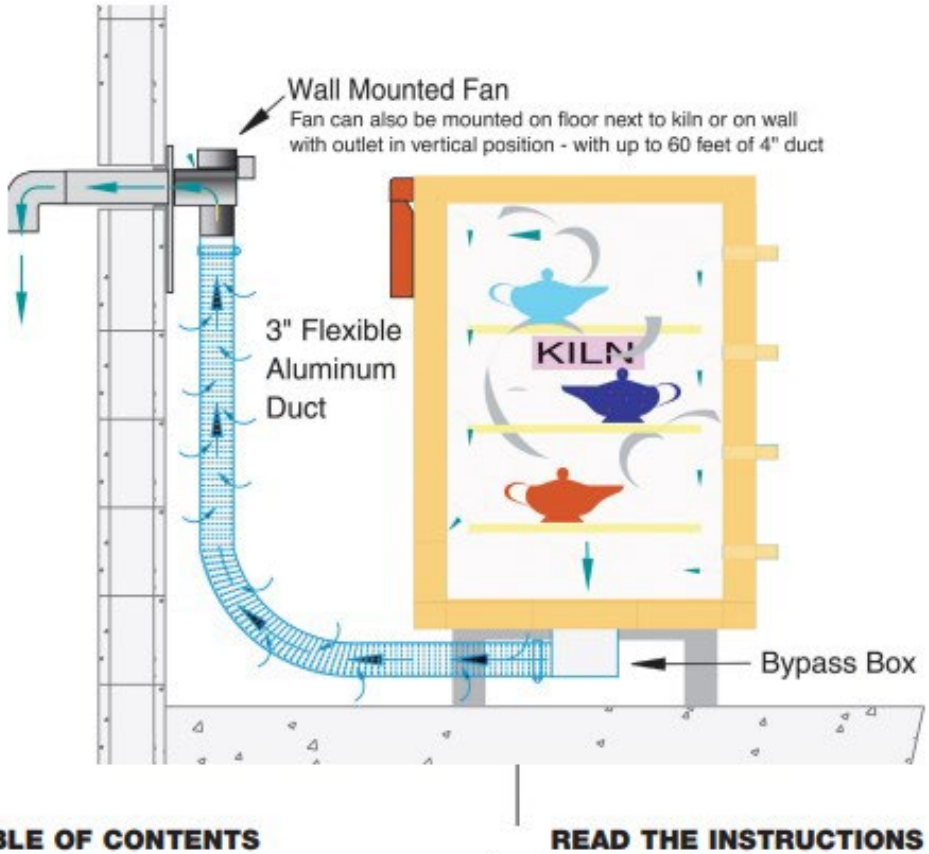
Equipment Specification Information

Equipment	*Manufacture*	*Model Number*	*Qty.*	*Notes*
Split System	Mitsubishi	18,000 BTU R454B 19 Seer	1	Mini split heat pump station with all accessories to operate and mount
Kiln Vents	L&L Kilns	C-250-Vent	2	for 2 ea. JD2927-3 kilns & 1 ea. e23T-208-3P kiln
Kiln Vent	L&L Kilns	C-250-Vent/DB	1	Vent-Sure doubler (to vent two kilns)
Intake Louver	J&D Manufacturing	VRSG12A-PS	1	With accessories and mounting and operation
Lighting	Juno	WF8 SWW5 90CRI MW	8	8” round LED lights
Utility Sink	Proflo	PFLT2123	1	
Utility Sink Faucet	Kingston Brass	GS1241AL	1	

Note:

1. It is the Contractor’s responsibility to ensure all specified materials include all required installation accessories, hardware, and components necessary for a complete and functional installation.
2. The above listed equipment may be replaced with products of equal or better quality, performance, and rating, subject to prior approval.

L&L VENT-SURE DOWNDRAFT KILN VENT INSTRUCTIONS



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READ THE INSTRUCTIONS

You are now the proud owner of an L&L "VENT-SURE" kiln ventilation system, engineered to give you the utmost in performance and results. This is an expensive and potentially hazardous appliance (if not used with proper caution). PLEASE TAKE THE TIME TO READ THESE INSTRUCTIONS. There is important information that you need to understand in order to operate your L&L kiln ventilation system safely and effectively.

USEFUL WEB LINKS

See this video on how to install a vent:
hotkilns.com/install-vent-sure

See this video on how to drill holes for a vent:
hotkilns.com/drilling-vent-holes

See this video on how to install a vent control:
hotkilns.com/install-vent-control

See this video on how to program a vent control:
hotkilns.com/program-vent-control

L&L VENT-SURE DOWNDRAFT KILN VENT INSTRUCTIONS

CHECKING SHIPMENT

Your ventilation system was carefully packed and inspected prior to shipment to make sure that all parts were in perfect condition.

When carrier makes delivery, you should immediately unpack your ventilation system and accessories to determine whether or not any damage has occurred in transit.

If damage has occurred, retain all of the packaging material and notify L&L at once. Retain all papers to ensure that a proper claim can be filed.

WHAT IS INCLUDED WITH VENT

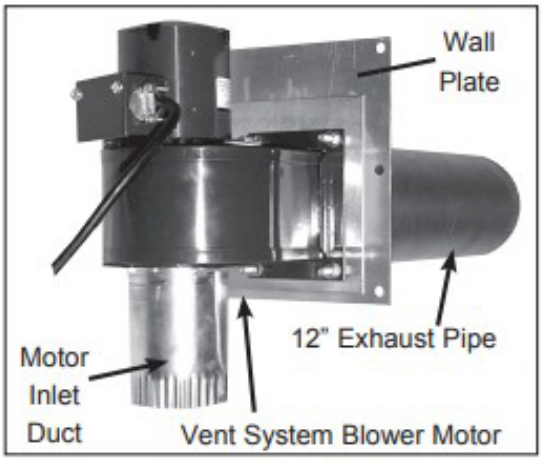
One (1) wall-mounted blower mounted on a bracket with vent pipe to go through outside wall and a Motor Inlet Duct. An 8 foot power cord with an attached On/Off switch plugs into a 120 volt standard receptacle. (Note: 220-240 volt models will have a different cord).

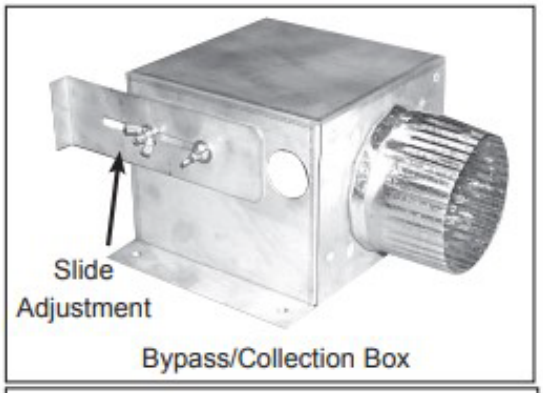
One (1) Bypass Collection Box to be mounted to the kiln stand, with mounting hardware.

One (1) length of flexible aluminum ducting (expands to 15 feet) with two (2) hose clamps.

One (1) 4" diameter 90 degree elbow (for outside the building).

One (1) Multi-Mount Bracket





IMPORTANT CAUTIONS

Check duct occasionally to see if there is wax or other residual build up. Wax could condense in the duct, which is a potential fire hazard. This is especially important if you are using a wax resist.

Be sure that the exhaust of the vent is not being brought back into your building. Keep exit of vent at least four feet away from any open windows or doors.

We recommend the use of a carbon monoxide monitor in your kiln room. These are available from good hardware stores for about $50 (This is another good way to be sure you are getting proper venting).

Disconnect power cord from power source when doing any maintenance on the fan motor. Do not put your fingers inside the blower without disconnecting power. Blower may start unexpectedly because of automatic thermal shut off switch built into the motor.

DO NOT place anything in the blower/motor while powered. Serious injury and/or damage to the motor could result.

INSTALLATION TIP BEFORE STARTING

NOTE: Attach the Bypass Box to the stand and the aluminum duct to the Bypass Box before installing the kiln on the stand because it can be hard to do this when the kiln is on top of the stand.

L&L VENT-SURE DOWNDRAFT KILN VENT INSTRUCTIONS

INTRODUCTION

WHAT DOES THE VENT DO?

The Vent-Sure Kiln Ventilation System is designed to pull air contaminated with carbon monoxide and other fumes including those of volatile metals, decals, sulfur oxide, and others in a down draft fashion out of the kiln and then vent it outside or to a central vent system.

KILN VENTILATION CAUTIONS

VENTILATION IS ESSENTIAL

1. Kilns generate harmful fumes when firing ceramics including: carbon monoxide, sulfur oxides, hydrogen fluoride and metal vapors (all of which can be toxic).
2. Install kiln in a well-ventilated area and never operate in an enclosed space unless you have good airflow.
3. Severe corrosion can be caused by kiln fumes, salt air ,or other environmental conditions.

AMBIENT HEAT AND VENTILATION

1. The kiln should operate in an environment that is between -18°C (0°F) and 38°C (100°F).
2. Kiln vents do not take care of ambient ventilation of the kiln room to remove the heat of the kiln.
3. See the following web page for guidance on how to calculate ventilation requirements for a kiln room: **hotkilns.com/calculate-kiln-room-ventilation**

INSTALLATION

IMPORTANT CAUTION

MAKE CERTAIN KILN POWER IS OFF BEFORE PROCEEDING WITH INSTALLATION.

Step 1. Turn Off Kiln Power

This is critical for safety reasons.

Step 2. Drill Holes (if needed)

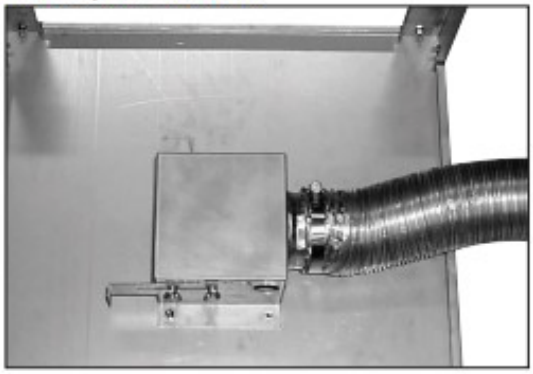
Before mounting the Bypass Box, you should drill the vent holes. (Note: if you bought the vent system with a new kiln, it may be pre-drilled) The easiest way to drill the vent holes is to place the stand upside-down on the kiln bottom, center it, and then drill your holes within the large aperture. Otherwise you can measure out the center of your kiln slab and draw a circle in the middle with a radius of 1.5" Then drill your vent holes within that circle.

Step 3. Install Bypass Collection Box

With the vent holes taken care of, you can install the Bypass Collection Box. Just simply use the studs on the bottom of the stand and secure with the provided hardware.

IMPORTANT: Remember to have the outlet pointed towards your fume exhaust location.

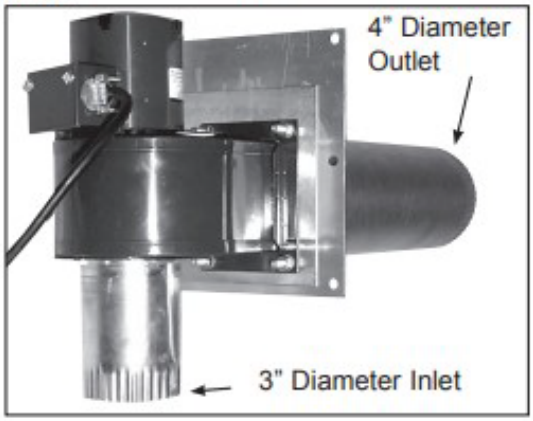
The Bypass Collection Box is mounted to the bottom of the stand with provided hardware.



Step 4. Install Blower System

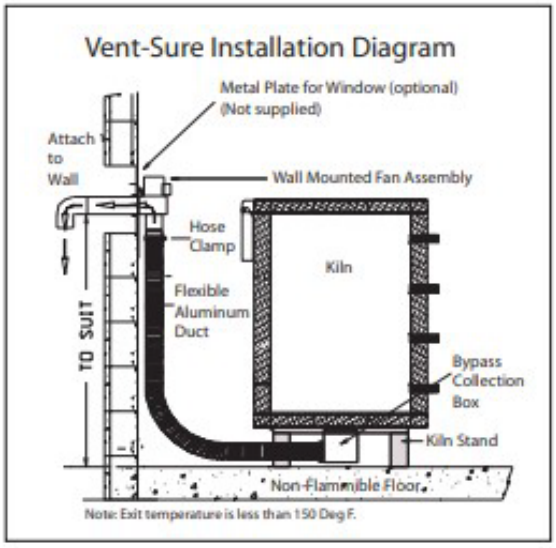
Install blower system by penetrating outside wall or setting into a window with appropriate support. Attach the provided 90 degree elbow to point down on the outside of the building (this is to prevent rain water from getting into the duct). (Note: this procedure will change if you use the Multi-Mount bracket). Mount securely because motor may vibrate over time especially if it builds up any dust in the blower.

The motor assembly comes pre-mounted onto the Wall mount bracket:



L&L VENT-SURE DOWNDRAFT KILN VENT INSTRUCTIONS

CAUTION: Make sure that the vent outlet is at least four feet from any open windows or doors. This is to make sure fumes do not get back into your building. Also the fumes can be hazardous to plants within a few feet.



A CAUTION ABOUT MOUNTING VERTICALLY

If the discharge duct of the vent is mounted pointing up (as shown on the photograph to the left), water that condenses in the duct may drop down and rust the motor. We recommend having a water trap in the bottom of a vertical duct run to drain off the water before it runs into the motor. This is not a problem when the vent has been mounted horizontally. The Multi-Mount bracket will allow you to mount the motor horizontally as well. You can then use 90 degree bends or flexible duct to go vertically. Just remember that there is water in the exhaust that will condense somewhere as it cools after it discharges from the vent motor.

A special Multi-Mount bracket is included with each vent system .This will allow you to mount the vent on the floor or wall with the outlet of the vent pointing up. This is useful when you want to use an existing penetration in a wall that won't support the vent (like a window) or when you want to have the vent go out of a roof or into a central vent system.

Step 6. Connect Flexible Duct

Attach blower system to bypass/collection box by stretching the flexible aluminum duct carefully (it can extend up to 15 feet) and securing to both the blower housing and the bypass/collection box with the provided hose clamps. **NOTE: You may want to firmly attach this to the Bypass Collection Box before installing the kiln on the stand because it can be hard to maneuver under the kiln.**

Step 7. Plug In Vent

Plug in the switched cord to a standard 120 volt receptacle. **If need be you can safely use a grounded extension cord because of the small amperage required.** Be sure to secure cord away from heat of kiln. Note: On 220-240 volt models this may vary.

ROOM AIR REPLACEMENT

ROOM AIR REPLACEMENT:

The Vent-Sure system moves up to 146 cubic feet of air per minute. We suggest opening a window slightly, or bringing another fresh air source into the room, to replace this room air.

L&L VENT-SURE DOWNDRAFT KILN VENT INSTRUCTIONS

DRILL CHART

MODEL		CUBIC FEET	NO OF HOLES	DIA HOLE
FUEGO		1.5	1	1/4"
e18S, JD18, LB18		2.6	1	1/4"
e18M		3.2		1/4"
JD18X, e18T		3.9	1	1/4"
e23S, JD18, LB18		4.7	2	1/4"
e23M		5.5	2	1/4"
e23T, SM23T, eQ23T, JD230		7.0	2	1/4"
JD236		9.4	3	1/4"
JD245		11.75	3	1/4"
e28S, J2918		6.9	2	1/4"
e28M		8.6	3	1/4"
e28T, rQ2827, J2927		10.3	3	1/4"
J2936, eQ2836		13.8	4	1/4"
J2945		17.2	5	1/4"
XB2318		5.0	2	1/4"
X2327		8.1	2	1/4"
X2336		10.8	3	1/4"
X2345		13.5	4	1/4"
XB2818		7.8	2	1/4"
X2827		11.7	3	1/4"
X2836		15.6	4	1/4"
X2845		19.5	5	5/16"
XB3218		10.0	3	1/4"
X3227		15.0	4	1/4"
X3236		20.0	5	1/4"
X3245		25.0	6	1/4"
TB2318		9.7	3	1/4"
T2327		14.6	4	1/4"
T2336		19.4	5	5/16"
T2345		24.3	6	5/16"
TB3418		13.8	4	1/4"
T3427		20.7	5	1/4"
T3436	(use 2 vents)	27.6	4/vent	1/4"
T3445	(use 2 vents)	34.5	5/vent	1/4"
eFL1616		4.0	2	1/4"
eFL1626		6.6	2	1/4"
eFL2026		8.6	2	1/4"
eFL2626		10.2	3	1/4"
eFL2635		13.7	4	1/4"
EL2424		8.0	2	1/4"
EL2427		9.0	3	1/4"
EL2436		12.0	3	1/4"
EL2448		16.0	4	1/4"
EL2848		20.0	7	1/4"
EL3048		25.0	8	1/4"

OPERATION

1. Plug blower cord into 120 Volt receptacle. (Note: 220-240 volt models may be different).
2. Close all kiln apertures such as peepholes unless you very specifically want more air vented.
3. Turn on Vent with the in-line switch on the power cord.
4. Close the lid and fire. For heavy loads with lots of fumes you may want to avoid firing faster than 150°F per hour to prevent the generation of more fumes than the system can eliminate.
5. Use the flow control on the Bypass Box to modify the flow of exhaust - a larger flow control opening reduces the flow of exhaust fumes from the kiln, and a smaller flow control opening increases the exhaust.

ADJUSTING THE BYPASS SYSTEM

The sliding adjuster allows you to fine adjust the amount of venting that is done to your kiln. It is easy to adjust but hard to know just how to adjust it. The problem is that there are many factors that contribute to the amount of "pull" required. For instance, the amount of fumes that are being given off by your specific work is one factor. Some clays have a lot of carbon in them; others do not. Depending on the size of the load, and the ingredients in the clay/glaze, there will be more or less fumes generated. Another factor is the "static pressure" in your vent ducts. If you have a lot of curves, 90 degree bends, or long runs of duct this will increase the static pressure (back pressure) and hence increase the need for more venting force. One suggestion is to start with the valve in the half open position and see what happens.

The Smoke Method:

1) With the kiln off and with the kiln empty, turn the vent on.

2) Start with the bypass valve in the fully closed position. This will give it the maximum suction in the kiln.

3) Light a piece of paper on fire or something that will create smoke. Blow it out, and hold it near the cracks around the closed lid.

4) If the smoke is being pulled into the kiln around these door cracks, open the Bypass (decreasing flow from the kiln) until the smoke stops being pulled in, then back up the valve slightly, so the draw increases just slightly again. Try this again when kiln is at about 100°F.

5) You can do the same test directly at the bottom hole with the kiln open also to test the differential between the pull at the actual suction hole from the kiln and the pull

around the lid. ***(However, if you do htis make sure the kiln is disconnected from the power to avoid the risk of eletrocution).***

For Gross Adjustment:

Remember that the sliding adjuster is for fine adjustment. Drilling or plugging the holes in the floor (and possibly adding or plugging holes in the top) is how you would dramatically change the amount of air vented.

VENTING CODES

OSHA has set standards for carbon monoxide exposure of 35 ppm (parts per million) for long-term exposure and 200 PPM for short-term exposure. Independent testing has shown that fumes near the kiln can exceed 200 PPM near the kiln during the firing of greenware. This can cause headaches, fatigue, sore throats and nausea. When properly installed and operated, a downdraft vent removes all harmful fumes and provides a safer working environment.

Most states and localities have set venting requirements for firing kilns in public places. Your local and state health board should have this information.

The Uniform Mechanical Code says that you must vent ceramic kilns. It says that you can use a canopy-type hood (and gives specific requirements for such use) or that "listed exhaust blowers may be used when marked as being suitable for the kiln and installed in accordance with manufacturer's instructions."

Our Vent-Sure vent is listed to UL499 standards by MET for L&L Kilns and is appropriate to meet this ventilation requirement. L&L takes no responsibility for improperly installed vents or kilns nor do we take responsibility for the use of other vents with our kilns.

REGULAR MAINTENANCE

Occasionally check for leaks in the aluminum duct. Replace if necessary. Check for corrosion especially if you are using clay with a high content of sulfur, phosphorus or fluorine. Check for wax or carbon build up if you are using a wax resist process or a high carbon content clay.

We recommend unmounting the fan and blowing out the squirrel cage with compressed air every two years or so especially if you are in a very dusty or if you have it mounted on the floor where it is more likely to pick up dust.

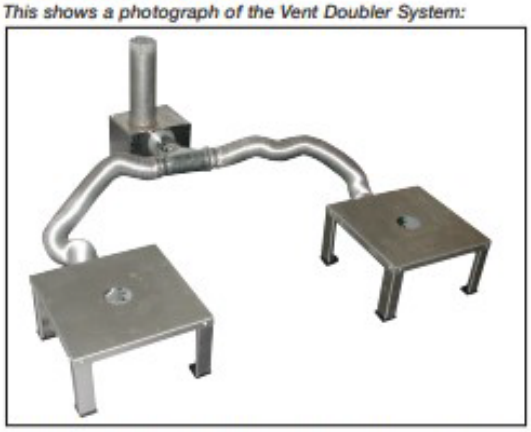
If the discharge duct of the vent is mounted pointing up you may get water that condenses in the duct drop down and rust out the motor. Taking it apart and spraying with WD-40 can restore the motor in some cases. We recommend having a water trap in the bottom of a long vertical duct run to drain off the water before it runs into the motor. This is not a problem when the vent has been mounted horizontally.

INSTALLATION OF MULTIPLE VENTS

For more information see:
hotkilns.com/vent-doubler-system

VENT DOUBLER SYSTEM

This shows a photograph of the Vent Doubler System:



The Vent Doubler system includes an extra Bypass Collection Box, an extra Flexible Aluminum Duct and a "T" Connector with dampers. You can vent two 10 cubic kilns with one Vent-Sure plus this Vent Doubler System.

CENTRAL VENT SYSTEMS

Multiple Vent-Sure systems may be installed individually, or each system may be connected to a central duct. The following information is provided to help the installer make decisions concerning the size and length of the central duct.

CENTRAL DUCT SIZING

QTY OF SYSTEMS	SIZE OF CENTRAL DUCT
1	4"
2	6"
3	8"
4	8"
5	10"
6	10"

EXTENDING DUCT LENGTH

The duct may be 60 feet in length, and include up to four 90° bends, without a significant drop in static air flow or a reduction in kiln air pull. You may use any galvanized, stainless or aluminum duct. The outlet duct size (after the motor) is 4" diameter. The inlet duct (before the motor) is 3" diameter.

L&L VENT-SURE DOWNDRAFT KILN VENT INSTRUCTIONS

OPTIONAL VENT CONTROL

For more information see:
hotkilns.com/vent-control

The Vent Control allows you to automatically control the operation of the Vent-Sure kiln vent with one of the outputs from the DynaTrol (or Genesis).

Construction

The Vent Control consists of a relay that is controlled from output #4 on the DynaTrol (or Genesis).

There is a female 120 volt receptacle to plug the vent into and a cord to plug into a 120 volt wall outlet.

There is a 6 foot wire that connects the control box to the kiln control panel. A grommet is included for non-factory installation.

Where It Can Be Used

It is only available for kilns with DynaTrols and Genesis controls.

It may not be used with kilns with powered bottoms (because the same output on the control is used)

Operation

NOTE: These options are set in the "Hidden Menu" of the DynaTrol. (See *hotkilns.com/hidden-menu* for how to get into the hidden menu on the DynaTrol).

On the Genesis control go to "4-Configuration" on the Main Menu and then to "6-Output 4 Options". The code to get into Factory Configuration, if prompted, is 443.

OPTION A (OP A)

Used to control a vent. Output 4 can be programmed to be on or off during each segment of a Vary-Fire program. During an Easy-Fire program, output 4 comes on at the beginning of the firing and turns off after the kiln has cooled to 150F.

OPTION B (OP B)

Used to control a vent. Output 4 can be programmed to be on or off during each segment of a Vary-Fire program. Output 4 comes on at the beginning of an Easy-Fire program, off at 1450°F, back on after the firing is complete and the kiln has cooled to 1000°F and finally off again when the temperature is below 150°F.

OPTION C (OP C)

Used to control a vent, an alarm, or other atmospheric control. Output 4 can be programmed to be on or off during each segment of a Vary-Fire program. Output 4 is off during Easy-Fire programs.

FREQUENTLY ASKED QUESTIONS

How do I know if the system is working?

See our comments under "Adjusting the Bypass Valve"

How hot does the duct get during the firing?

Not very, for two reasons. One is that the Vent-Sure does not draw out much heat from the kiln. The hotter the kiln gets, the less hot air that is extracted by the vent motor. The other is that the bypass box combines fresh cool air with the hot air from the kiln before passing through the ductwork.

How long can the duct be and how many bends can it have?

Up to 60 feet of ducting containing four 90 degree bends may be safely used with no drop in static air flow at the duct exhaust point or a reduction in draw at the kiln. The ducting can be run either horizontally or vertically. (The Vent-Sure should handle more static pressure than the Orton vent because of the stronger motor. This translates into longer lengths of pipe and more 90 degree bends. If you have a choice run two 45 deg bends rather than one 90 degree bend or use flexible duct which has a gentler bend).

Can I vent through a ceiling and/or roof?

Yes. You will need the multi-mounting bracket (M-V-MULT/00), so that you can position the motor output vertically. Additionally, you need to make sure that you install a water trap. At the bottom of the longest vertical run, install a u-shaped bend to catch any condensation that forms before it enters the motor. Of course if you are going through a roof, you will also need a rain cap and screen.

You do not normally need double wall ducting when going through the roof since the pipe or duct does not reach high temperature. It is always advisable to check your local building codes for their requirements.

How do I determine the size, number, and location of holes in the top and bottom of the kiln?

As a general rule, you should have one 1/4 inch hole for every 4 cubic feet of kiln volume. The holes are normally placed within a 4 inch circle in the center of the kiln floor. Please see our hole chart on page 7. L&L does not normally recommend drilling holes in the top except for certain instances where airflow needs to be increased such as for glazes which need an oxygen rich environment.

Will the fumes coming through the vent damage my plants, the neighborhood pets or disturb the local environment?

For the most part, the fumes have been diluted enough already when they are exhausted, however that depends on how you have your bypass box setup. We do not recommend placing the outlet of the vent below an open window and we have heard of plants near the vent outlet being affected by the vent fumes so keep this in mind when locating vent outlet. Once the fumes are exhausted, they will quickly be diluted by the outside air, so it is only the immediate area around the vent that you need be concerned about.

Will using the vent cause my firing to take longer?

Generally only a little bit longer. The vent system removes only a small amount of heat from the kiln due to the physics of how thin air gets at very high temperatures. (L&L NOTE: We have seen vents overpower smaller kilns - so it is important to adjust the amount of venting in some cases. On the other hand an example of an e23T 7 cubic foot kiln firing an 85 pound load on Fast Glaze program to cone 8 took 7 hours and 4 minutes with a vent on and 6 hours and 24 minutes without a vent. The vent was on the whole time).

What does it cost to operate the vent system?

The vent system should likely cost less than 1 cent/hour to operate (electricity costs). Downdraft vents are still vastly more efficient than hoods which remove tons of air from the kiln room while the Vent-Sure only removes a small amount of air from the kiln. (It does cost more to run the vent because it does take heat out of the kiln. For example an e23T 7 cubic foot kiln firing an 85 pound load on Fast Glaze program to cone 8 took 70 KW hours with a vent on and 62 KW hours without a vent. At 8 cents per KW hour that would be a cost of $0.64 more for the firing. The vent was on the whole time).

Will the cold air entering the kiln damage the product?

No. The amount of air coming in is too small unless you drill holes in the lid, which is not normally recommended. The air coming in is also distributed throughout the kiln evenly.

Will faster cooling crack the ware if I leave the vent on during the cooling Cycle?

No. Most kilns will cool faster with the vent system, but it is achieved at such an even rate and distribution that there would not be any damage to ware. (L&L NOTE: The vent will remove more molecules of air and hence heat as the kiln cools. This is because the density of the air increases the lower in temperature you go. This is one reason why kiln vents are so efficient - they don't remove too much heat when you don't want them too at the higher temperatures).

What should I do if I still smell fumes?

Check all ductwork for leaks and see our comments on "Adjusting the Bypass System".

If using a hood type vent (like the Vent-a-Kiln) do you need a kiln vent (like the Vent-Sure) also?

You need to vent fumes from the kiln and the room and heat from the room. You must have ambient ventilation in a small room for heat and to remove fumes that may not be fully removed by the kiln vent. If you have a very large room that can dissipate heat and trace fumes than you may not need ambient ventilation.

The Vent-Sure is designed to remove fumes that are generated in the kiln from the kiln and therefore from the room. The Vent-Sure downdraft kiln vent does not remove enough heat from a small room to be used for ambient ventilation.

If you have a good overhead vent hood you may discharge the output of the Vent-Sure into that hood.

At what temperature should you turn off the Vent-Sure kiln vent?

A customer writes: When firing glazes what is a good temp to turn off the vent so kiln can hit target temp in my case 2190 Deg F. Do glazes off-gas after say 2000 degrees? Is there a general temperature to turn off vent?

Answer: Generally speaking it is best for your kiln to leave the Vent-Sure on for the entire time the kiln is heating up. Mostly this is to get all of the corrosive fumes before they

get to your elements, wiring, and other metal parts of the kiln.

You can leave it on for the cooling as well if you need it to cool off more quickly.

Usually a slower cool-down is preferred though, so often the fan is turned off for the cool-down.

High-fire clays and glazes out-gas until the kiln begins to cool. Once the glaze has set, and the clay has vitrified no more gasses escape.

The heat in a red-hot kiln is almost all radiant heat. The hotter the kiln gets, the fewer and fewer air molecules are even present inside. Because of this- it is only helping the heating rate a tiny little bit to turn off the vent before the end of the firing.

How long does a Vent-Sure downdraft vent last?

The Vent-Sure downdraft kiln vent is pulling not only air but moisture and the products of hot moisture and the chemicals that are present in the clay. Some of these products are highly acidic (like sulfuric acid, hydrofluoric acid and others). The exact amount and composition of the effluents of your kiln, and hence in the vent, will vary with how dry your work is and what is in the clay to begin with. The Vent life seems to be totally dependent on these conditions. The more moisture and acids created by the materials in the clay and water then the shorter the vent life. If you have good conditions the vent can last for many years - if not - then you will be replacing various parts over the years.

That said - L&L's experience has been very positive. We have sold thousands of Vent-Sures for over 15 years. We sell very few replacement motors and other parts. The most vulnerable part seems to be the thin aluminum flexible duct that goes from the kiln to the vent motor. This is cheap and you can find replacements locally.

The motors hold up very well in terms of lubrication and vibration. The Vent-Sure is warranted for three years.

FEATURES AND SPECIFICATIONS

ADJUSTABLE AMOUNT OF VENTING

A sliding adjuster on the vent Bypass Collection Box adjusts the amount of venting from the system (see photo on page 3). Vent only what you need to vent - don't waste heat and energy by venting more than you need.

EXTERNAL VENTING

External venting is safer and surer than venting to the inside of your kiln room with a filter.

REMOTE MOUNTING OF MOTOR

The vent blower motor is mounted to a wall plate with a 12" length of exhaust pipe that mounts on the wall (see photo). This keeps the heat of the kiln away from the motor (for longer motor life) and keeps the motor vibration away from the kiln. (With the special "Multi-Mounting Bracket" the vent motor may be mounted on the floor or a wall with the outlet pointing up and then connected to an existing vent system or 4" wall outlet. If you decide to mount it this way see the caution on page 5).

MOUNTS ON ANY L&L KILN

The Vent-Sure vent system can be installed on almost any kiln. It requires only that you drill several small vent holes through the kiln floor (note that if mounting the bypass/ collection box to the stand, that four studs are factory installed on the bottom of the stand). Mounting hardware is included.

Note: L&L Vent-Sure vent are not c-MET-us listed for use on any kiln except those made by L&L Kiln Mfg., Inc.

POWERFUL VENT MOTOR

The blower vents up to 146 CFM (cubic feet per minute at 0 static pressure and 110 CFM at 0.500-In. static Pressure). Remember - not all of this air comes from the kiln - some comes from the Bypass Collection Box.

OUTLET TEMPERATURE UNDER 150°F

The outlet temperature of the air is less than 150°F as long as you do not exceed the recommended holes in the kiln.

FLEXIBLE DUCT INCLUDED

15 feet of flexible expandable aluminum 3" diameter duct is included along with necessary hose clamps. Longer lengths or lengths of 3" stove pipe can be used as well.

LOW ELECTRICITY USAGE

The Vent-Sure vent System uses only 0.75 amps at 120 volts.

VENTS UP TO 20 CUBIC FEET OR MORE

The Vent-Sure vent System was designed to be used with all L&L model kilns. We recommend one vent system for kilns up to approximately 20 cubic feet. On larger kilns, depending on how much venting you need, you may need more than one vent system. (This really depends on how

much venting you need for your situation). Note that you can always add another vent if you find you need more venting.

MOTOR SPECIFICATIONS

120 VOLT MOTOR

PSC Blower, Type:Forward Curve, Direct Drive

Wheel Dia. (In.):3-15/16,Wheel Width (In.):2-1/2

CFM @ 0.000-In. SP:146, CFM @ 0.100-In. SP:140, CFM @ 0.200-In. SP:126, CFM @ 0.300-In. SP:124. CFM @ 0.400-In. SP:120, CFM @ 0.500-In. SP:110,

Voltage:115, Hz:50/60, Phase:1, Full Load Amps:0.75, RPM:3100

Bearing Type:Ball, Motor Type:Permanent Split Capacitor, Motor Enclosure:Open, Motor Insulation:Class B, Thermal Protection:Auto

Lead Length (In.):13, Conduit Box:Yes,

Ambient Temp. (Deg. F):104, Max. Inlet Temp. (Deg. F):104

Inlet Dia. (In.):3-1/8, Outlet Height (In.):2-3/16, Outlet Width (In.):3-1/4, Overall Height (In.):5-3/4, Overall Width (In.):6-5/16, Overall Depth (In.):5-3/8, Mounting:All Position, Housing Finish:Gray Enamel, Housing Material:Rolled Steel

Agency Compliance:UL Recognized US and Canada (E47479)

220-240 VOLT MOTOR

Item-PSC Blower,Type-Forward Curve, Direct Drive

Wheel Dia. (In.):3-3/4, Wheel Width (In.):1-7/8

CFM @ 0.000-In. SP:133,CFM @ 0.100-In. SP:128, CFM @ 0.200-In. SP:126, CFM @ 0.300-In. SP:119, CFM @ 0.400-In. SP:112, CFM @ 0.500-In. SP:105,

Voltage:230, Hz:50/60, Phase:1

Full Load Amps:0.33, RPM:2880

Bearing Type:Ball, Motor Type:Permanent Split Capacitor, Motor Enclosure:Open, Motor Insulation:Class B, Thermal Protection:Auto, Lead Length (In.):13, Conduit Box:Yes, Ambient Temp. (Deg. F):104, Max. Inlet Temp. (Deg. F):104

Inlet Dia. (In.):3-1/4, Outlet Height (In.):2-1/2, Outlet Width (In.)2-9/16, Overall Height (In.)6-9/16, Overall Width (In.):5-5/8, Overall Depth (In.):6-9/16

Mounting:All Position, Housing Finish:Gray Enamel, Housing Material:Rolled Steel

The Vent-Sure vent is c-MET-us listed in both the US and Canada for use with L&L listed kilns. UL 499, CSA C22.2, No. 122, CSA C22. Listing No E112742.

PARTS

Prices of all parts are listed at:
hotkilns.com/parts

Complete Vent-Sure Kiln Vent System

M-V-VENT/00 ..... **(see web)**

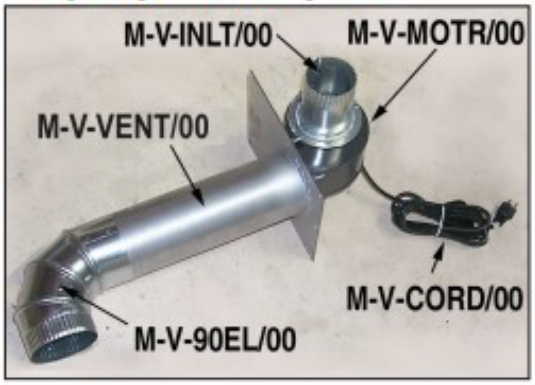
VENT-SURE Vent. 120 Volt. Complete System as described above and on our separate Vent-Sure brochure. This includes the motor, an 8 foot cord with a rocker type On/Off switch mounted in line in the cord, the inlet duct attached to the motor, the wall mounting bracket, a 90 deg elbow for mounting on the end of the outlet pipe (to keep rain water out), the Bypass Collection Box for attaching to the kiln stand or kiln side along with mounting hardware for mounting to an L&L kiln stand and one section of 15 foot flexible aluminum duct with hose clamps.

M-V-VENT/41 ..... **(see web)**

VENT-SURE Vent. 220-240 Volt. Typically used in non-US installations.

You can also purchase individual parts to suit your own configuration or as replacements:

Below shows the vent system blower assembly with the motor, cord and switch set, 3" inlet duct to hold the flexible duct, 12" duct to go through a wall and 90 Degree elbow.



M-V-FANK/00.....**(see web)**

Complete blower assembly. Pictured above ^

M-V-FAN0/00 ..... **(see web)**
Fan/Blower Motor for Vent-Sure. 120 Volts. This is just the motor with no attached brackets or inlets. Cord is not included.

M-V-FAN0/41 ..... **(see web)**
Fan/Blower Motor for Vent-Sure. 220-240 Volts. This is just the motor with no attached brackets or inlets. Cord is not included.

M-V-BRKT/00..... **(see web)**
Steel plate onto which the motor mounts. Includes 4" x 12" outlet pipe and output mounting plate.

L&L VENT-SURE DOWNDRAFT KILN VENT INSTRUCTIONS

M-V-INLT/00.....(see web)
Motor Inlet Duct. This is the piece of duct that attaches to the inlet of the motor. The expandable aluminum duct fits onto this.

M-V-OUTT/00.....(see web)
Motor Outlet Duct. This is the piece of duct that attaches to the outlet of the motor.

M-V-90EL/00.....(see web)
90 Deg 4" elbow. Used for attaching to motor mount duct to the outside to prevent water from getting into duct.

M-V-CORD/00..... **(see web)**
Power Cord for Vent-Sure. Includes a cord mounted on/off switch. (Call factory for non-USA cords)

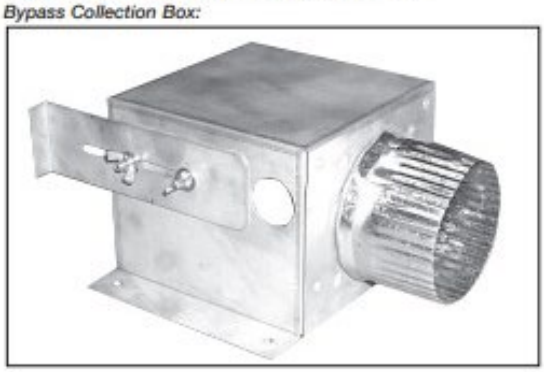
Power Cord with On/Off switch:

M-V-DUCT/00..... **(see web)**
Flexible Vent Duct 2-1/2 to 15 Feet Expandable, Flexible Aluminum 3" duct with two hose clamps.

Flexible Aluminum Duct shown with hose clamps:

M-V-BBOX/00..... **(see web)**
Bypass Collection Box. Includes hardware for mounting and slide control. Note: This has the proper mounting hole configuration to be mounted to any L&L kiln stand. It can also be mounted to the side of other kilns (typically on the bottom section).

Bypass Collection Box:

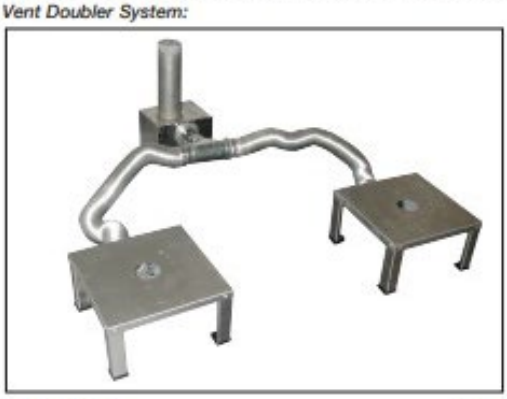


M-V-MULT/00..... **(see web)**
Mult-Mounting Bracket. Comes with six (6) sets of 1/4-20 bolts, nuts and lock washers for mounting this to the "Wall mount bracket" (M-V-VENT/BK).

This special "Multi-Mounting Bracket" will allow you to mount the vent on the floor or wall with the outlet of the vent pointing up. There are mounting holes on the bottom (for floor mounting) and on the side as well (for wall mounting):

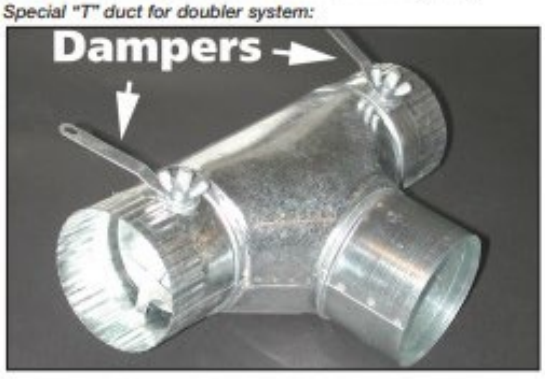
M-V-VENT/DB..... **(see web)**
Vent Doubler System for Vent-Sure. Includes a "T" duct with dampers, an extra Bypass Collection Box, Extra Flexible Duct.

Vent Doubler System:



M-V-TDUC/00..... **(see web)**
"T" DUCT to attach two aluminum flexible ducts to. Includes dampers on the two inlets. The outlet fits onto the Motor Inlet Duct of the Vent-Sure and the Flexible Vent Duct(s) fit onto the inlets of this "T" Duct. (NOTE: The Multi-Mounting Bracket is shown in the photograph but NOT included in the system).

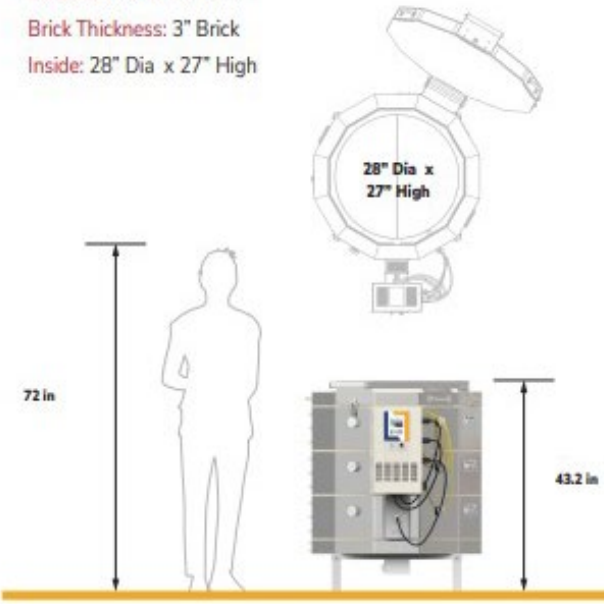
Special "T" duct for doubler system:



Jupiter Kilns

JD2927-3

Temperature Rating: Cone 10
Volume: 10.2 Cubic Feet
Brick Thickness: 3" Brick
Inside: 28" Dia x 27" High



Intertek

The unique plug-in control panel and extreme sectional construction make Jupiter kilns ideal for sculptors and ceramic artists who need flexibility.

- **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 • 1290°C)*
- **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*
- **Plug-in Control Panel** • *480V optional*
- **Three-Year Limited Warranty**
- **c-ETL-us** *listed to UL499 Standards*

See hotkilns.com/JD2927-3 for all features and options

GENERAL DIMENSIONS

Scan OR Visit:
hotkilns.com
/JD2927-3-GD

Hard Channels

Protect Your Brick

TRUST YOUR KILN
hotkilns.com
Manufactured in Swedesboro, NJ
800-750-8350 • sales@hotkilns.com

Bulletin No: BL-JD2927-3 REV: A
Page 1

L&L KILNS

Electrical Specifications for JD2927-3

	Standard Models							Powered Bottom Models					
	Model Number	Part Number	Volt/ Phase	Watts	Amps	Wire Size	Fuse Size	Model Number	Part Number	Watts	Amps	Wire Size	Fuse Size
USA	JD2927-3-240	K-A-292D/31	240/1P	13,680	57.0	4 ga	80	JD2927-3-PB-240	K-A-292B/31	16,720	69.7	3 ga	90
	JD2927-3-240-3P	K-A-292D/32	240/3P	13,680	32.9	8 ga	50	JD2927-3-PB-240-3P	K-A-292B/32	16,720	44.3	6 ga	60
	JD2927-3-208	K-A-292D/21	208/1P	12,480	60.0	4 ga	80	JD2927-3-PB-208	K-A-292B/21	15,253	73.3	3 ga	100
	JD2927-3-208-3P	K-A-292D/22	208/3P	12,480	34.6	8 ga	50	JD2927-3-PB-208-3P	K-A-292B/22	15,253	46.7	6 ga	60
WORLD	JD2927-3-220	K-A-292D/41	220/1P	12,540	57.0	4 ga	80	JD2927-3-PB-220	K-A-292B/41	15,327	69.7	3 ga	90
	JD2927-3-380-3PY	K-A-292D/52	380/3Y	12,540	19.0	12 ga	25	JD2927-3-PB-380-3Y	K-A-292B/52	15,327	31.7	8 ga	40

Control: Full digital touchscreen Genesis control with easy-to-use interface, WiFi enabled app, and simple programs for firing ceramics.

Cone Rating: Cone 10,.

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

Power connection: A six foot cord with a 50 amp NEMA 6-50 for single phase units or a 15-50 plug for 3 phase units is included if the kiln amperage is below 48 amps (if the kiln amperage is above 48 amps the kiln is direct wire only). No neutral is necessary. All kilns may be direct wired by the customer with no effect on warranty or MET listing. World voltage kilns do not include a cord - they are direct wired. All kilns may be direct wired.

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

Elements: All elements are of equal resistance value. Nine elements standard. All Jupiter kilns with the Quad option feature two elements in four rows per section. Powered Bottom adds two elements.

Other voltages for any country in the world are available. Examples are 200V/3 Phase Delta, 220V/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.

Power Bottoms: Power bottoms are special order only. Electrical specifications are shown above.

FURNITURE KIT FOR JD2927-3

Part Number: H-J-K290/00

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.

Easy-Fire Kilns

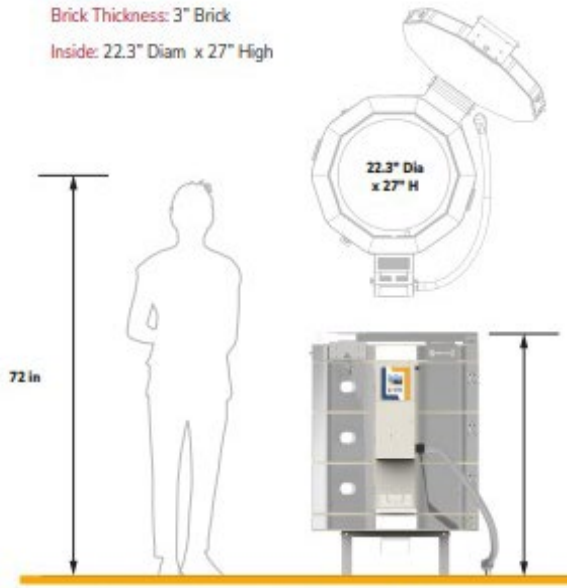
e23T-3

Temperature Rating: Cone 10

Volume: 6.7 Cubic Feet

Brick Thickness: 3" Brick

Inside: 22.3" Diam x 27" High



Intertek

This is the classic L&L pottery kiln used by most of our customers. They include all the signature L&L features.

- **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*
- **Top Loading**
- **Solid, Straight-View Peephole Plugs**
- **Full-Support Stand** • *rolling option available*
- **Easy-Access Control Panel** • *with Easy-View tilted display*
- **Three-Year Limited Warranty**
- **c-ETL-us** *listed to UL499 Standards*
- **See *hotkilns.com/e23t-3* for all features and options**

GENERAL DIMENSIONS

Scan OR Visit:
hotkilns.com
/e23T-3-GD

Hard Channels

Protect Your Brick

TRUST YOUR KILN
hotkilns.com
Manufactured in Swedesboro, NJ
800-750-8350 • sales@hotkilns.com

Bulletin No: BL-e23T-3 REV: A

Page 1

L&L KILNS

Electrical Specifications for e23T-3 SERIES

	Model Numbers	Part Number for 3" Brick	Volt/ Phase	Watts	Amps	Wire Size	Fuse Size	Power Connection
USA	e23T-3-240	K-E-23T3/31	240/1P	11,520	48.0	6 ga	60 Amps	6-50 Cordset
	e23T-3-240-3P	K-E-23T3/32	240/3P	11,520	27.7	10 ga	40 Amps	15-50 Cordset
	e23T-3-208	K-E-23T3/21	208/1P	9,980	48.0	6 ga	60 Amps	6-50 Cordset
	e23T-3-208-3P	K-E-23T3/22	208/3P	11,000	30.5	8 ga	40 Amps	15-50 Cordset
WORLD	e23T-3-220	K-E-23T3/41	220/1P	10,560	48.0	6 ga	60 Amps	Direct Wire
	e23T-3-380-3PY	K-E-23T3/52	380/3PY	11,400	17.3	12 ga	20 Amps	Direct Wire

Control: Full digital touchscreen Genesis control with easy-to-use interface, WiFi enabled app, and simple programs for firing ceramics.

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

Cone Rating: All e23 models are rated to Cone 10.

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

Power connection: A six foot cord with a 50 amp NEMA 6-50 for single phase units or a 15-50 plug for 3 phase units is included. (No neutral is necessary). World voltage kilns do not include a cord - they are direct wired. All kilns may be direct wired.

Elements: All elements are of equal resistance value. T models have six elements. Quad elements are the same resistance and quantity but longer and thicker.

Other voltages for any country in the world are available. Examples are 200V/3 Phase Delta, 220V/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.

Shipping Dimensions: See website for shipping dimensions with various combinations of options.

FURNITURE KIT FOR e23T-3

Part Number: H-E-K23T/30

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