Installation and Operation Manual





TRADITIONAL SERIES

Stone Hearth Oven

Wood-Fired Models

TRADITIONAL SERIES WS-TS-5-W **TRADITIONAL SERIES WS-TS-6-W**



WOOD STONE CORPORATION

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www.woodstone-corp.com

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Wood-Fired Traditional Series Installation and Operation Manual



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This manual covers Traditional Series Wood-Fired models.

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TRADITIONAL SERIES OVEN

Wood-Fired Traditional Series Installation and Operation Manual



INSTALLATION AND OPERATION MANUAL THE WOOD STONE TRADITIONAL SERIES

STONE HEARTH COOKING EQUIPMENT TS-(5,6)-W **WOOD-FIRED MODELS**

ADDITIONAL COPIES AVAILABLE UPON REQUEST





CAUTIONS & WARNINGS

Wood-Fired Traditional Series Installation and Operation Manual



WOOD STONE TRADITIONAL SERIES WS-TS-(5,6)-W OVEN INSTALLATION AND OPERATING INSTRUCTIONS

RETAIN THIS MANUAL FOR FUTURE REFERENCE

Additional copies of this manual at woodstone-corp.com. For prompt responses to service/maintenance questions, call us at @ 1-800-988-8103.

READ ALL INSTRUCTIONS BEFORE INSTALLING AND USING THIS APPLIANCE

Please read this entire manual before you install the oven. Failure to follow instructions may result in property damage, bodily injury or even death. Contact your local building or fire officials about restrictions and installation inspection in your area.

> WHEN THE OVEN IS NOT PROPERLY INSTALLED, A FIRE MAY RESULT. TO REDUCE RISK OF FIRE, FOLLOW THE INSTALLATION INSTRUCTION.

FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

POUR VOTRE SÉCURITÉ: Ne pas entreposer ni utiliser d'essence ou d'autres vapeurs de liquides inflammables ou des liquides dans les environs de ce ou de tout autre appareil.

Always keep the area under and around this appliance free and clear of any and all combustible materials.

CAUTION: Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or freshen-up a fire in this oven. Keep all such liquids well away from the oven when in use.

USE SOLID WOOD FUEL ONLY DO NOT USE PRODUCTS NOT SPECIFIED FOR THIS OVEN

IMPORTANT: It is recommended that this oven be installed, maintained and serviced by authorized professionals.

Bellingham, WA 98226 USA



CAUTIONS & WARNINGS

Wood-Fired Traditional Series Installation and Operation Manual



A MAJOR CAUSE OF OVEN RELATED FIRES IS A FAILURE TO MAINTAIN REQUIRED CLEARANCES TO COMBUSTIBLE MATERIAL. IT IS OF UTMOST IMPORTANCE THAT THIS OVEN BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.

CAUTION: DISCONNECT POWER TO THE OVEN BEFORE SERVICING OR CLEANING.

WARNING: Improper installation, adjustment, alteration, service or maintenance can result in property damage, injury or death. Read the installation, operation and maintenance instructions thoroughly before installing or servicing this equipment.

AVERTISSEMENT: L'installation, le réglage, la modification, la réparation ou l'entretien incorrect de cet appareil peut causer des dommages matériels, de blessures ou la mort. Lire attentivement les instructions d'installation, de fonctionement et d'entretien avant de procéder à son installation ou entretien.

This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts.

SAVE THE INSTRUCTIONS

Wood Stone ovens
have been tested and approved by Intertek Testing Services and
conform to UL 2162 and UL 737;
are certified to ULC S627;
and to NSF/ANSI 4.

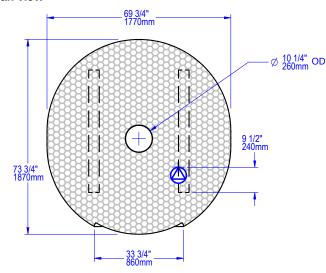


TS-5 SPECIFICATIONS

Wood-Fired Traditional Series Installation and Operation Manual

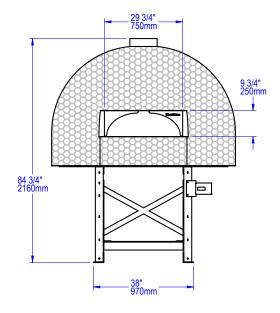


Plan view

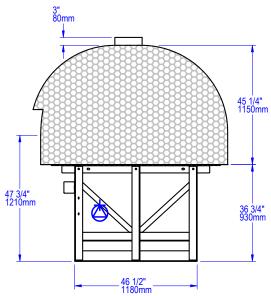


Shipping weight: 3,600 lbs. 1,633 kg

Front view



Side view



UTILITIES SPECIFICATIONS

Electrical

120 VAC, 2 A, 50/60 Hz Optional: 240 VAC, 1 A, 50/60 Hz

Refer to data plate when installing.

Ventina

10-inch O.D. flue collar. Can be direct connected to a power-ventilated, grease-rated chimney, or can be vented with a Listed Type 1 Exhaust Hood, or one constructed in accordance with NFPA 96 and all relevant local and national codes. The oven must be vented in accordance with all relevant local and national codes, and in a manner acceptable to the authority have jurisdiction.

Important: This model must be vented as solid-fuel oven.

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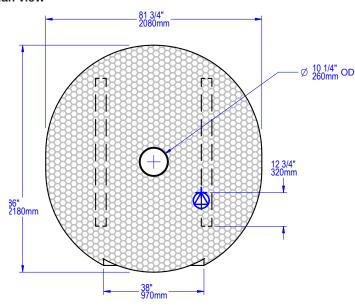
E-MAIL info@woodstone-corp.com woodstone-corp.com

TS-6 TRADITIONAL SERIES

Wood-Fired Traditional Series Installation and Operation Manual

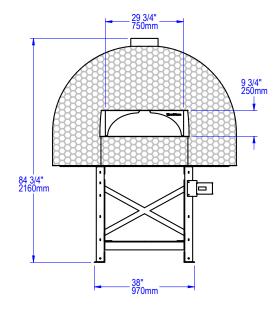


Plan view

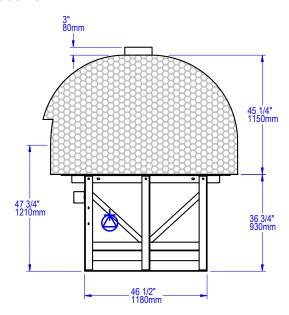


Shipping weight: 4,600 lbs. 2,087 kg

Front view



Side view



UTILITIES SPECIFICATIONS

Electrical

120 VAC, 2 A, 50/60 Hz Optional: 240 VAC, 1 A, 50/60 Hz

Refer to data plate when installing.

Venting

10-inch O.D. flue collar. Can be direct connected to a power-ventilated, grease-rated chimney, or can be vented with a Listed Type 1 Exhaust Hood, or one constructed in accordance with NFPA 96 and all relevant local and national codes. The oven must be vented in accordance with all relevant local and national codes, and in a manner acceptable to the authority have jurisdiction.

Important: This model must be vented as solid-fuel oven.

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UNLOADING & MOVING

Wood-Fired Traditional Series Installation and Operation Manual



USING A FORKLIFT

Use a forklift with adequate fork lengths and lifting capacity. If necessary, fork Extensions must be used so the Forks extend through the fork lift pockets to the opposite side of the stand. Lift from either side as shown in figure a. Do not lift from the front or back. The oven is very top heavy, so spread the forks as far apart as possible.

AWARNING Minimum Required Forklift Capacities						
Model	Approximate shipping weight	Minimum fork length required	Min. required forklift capacity			
WS-TS-5	3,600 lbs.	5'	6,000 lbs.			
WS-TS-6	4,600 lbs.	6'	8,000 lbs.			

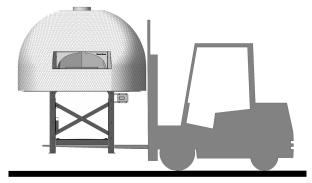
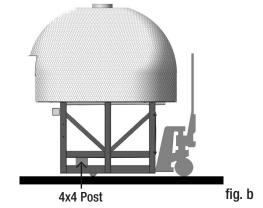


fig. a



USING A PALLET JACK

Once the oven has been removed from the delivery vehicle, it can easily be moved on smooth, flat, level surfaces using a Pallet Jack. To lift the oven with a Pallet Jack, remove the front and rear angle iron stabilizers from the base of the oven stand and place a stout 4x4 post through the Fork Pocket as shown in figure b.

THE OVEN IS VERY TOP-HEAVY. MOVING THE OVEN UP OR DOWN A RAMP OR INCLINE ON A PALLET JACK IS NOT SAFE!

USING A CRANE

The oven arrives with four lifting eyes attached. When craning a Wood Stone oven, use a spreader bar with a two-legged sling rigged on each end. The spreader bar should be of a sufficient length to keep the sling from contacting the oven. See figure c.

DO NOT TURN THE OVEN ON ITS SIDE!

Contact Wood Stone if the oven must be turned on its side for specific instructions. Moving a Wood Stone oven can present challenges to even the most experienced riggers. Take your time, use your head, secure the proper equipment and make safety your first priority. Please don't hesitate to call the factory for technical support.



DELIVERY NOTE: The customer will receive an Oven Shipping Notification when the oven leaves the Wood Stone factory. This will include a PRO# and a trucking company contact number. Wood Stone recommends that you confirm the delivery date/ time with the trucking company before committing to heavy equipment and/or labor. Our goal is a smooth and safe delivery.

An ongoing program of product improvement may require us to change specifications without notice.



INSTALLATION CLEARANCES

Wood-Fired Traditional Series Installation and Operation Manual



CLEARANCES

- 1. The Wood Stone Traditional Series oven must have a minimum 1-inch clearance to combustibles from all sides, and 6-inch clearance to combustibles from the top. If building materials will contact the oven, they must be completely non-combustible. Please note that standard Drywall (or Sheetrock) is considered a combustible. When non-combustible building materials contact the body of the oven, the respective clearances are transferred to those non-combustibles.
- 2. Any facade 6 inches to either side of the oven doorway or above, must be constructed of non-combustible building materials.
- 3. For gas/wood combination models, this oven is suitable for installation on combustible floors (convient à l'installation sur un plancher combustible). The minimum hearth extension area to be covered with a non-combustible floor surface must extend 36 inches in front of and 30 inches to either side of the oven door opening.

NOTICE: The Traditional Series oven is designed to accommodate field application of tile, stucco or other NON-COMBUSTIBLE finishes. Only non-combustible materials may be applied directly to the oven.

IF THIS OVEN IS NOT PROPERLY INSTALLED A FIRE MAY RESULT. TO REDUCE THE RISK OF FIRE, FOLLOW THESE INSTALLATION INSTRUCTIONS. A MAJOR CAUSE OF OVEN RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS OF UTMOST IMPORTANCE THAT THIS OVEN BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.

WARNING: DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIAL.



WARNING: Installation and servicing of this product could expose you to glasswool/ceramic fibers as well as calcium silicate dust. ALWAYS WEAR RESPIRATORY AND EYE PROTECTION WHEN INSTALLING OR SERVICING THIS APPLIANCE. Please read this entire manual before you install the oven. Failure to follow instructions may result in property damage, bodily injury or even death. Contact your local building or fire officials about restrictions and installation inspection in your area.

PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL THE OVEN. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY OR EVEN DEATH. CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

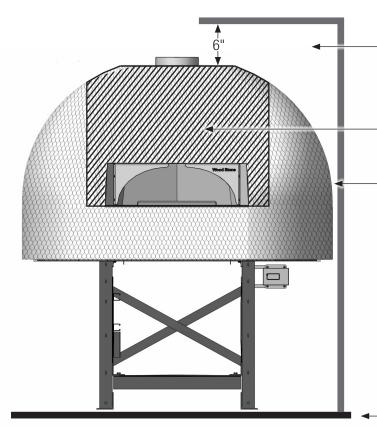


INSTALLATION CLEARANCES

Wood-Fired Traditional Series Installation and Operation Manual



THE FOLLOWING CLEARANCE INFORMATION APPLIES TO ALL WOOD STONE TRADITIONAL SERIES OVENS



6" top clearance to combustible building materials.

If enclosing the oven, any facade materials 6" to either side of the doorway and above must be NON-COMBUSTIBLE.

1" side clearance to combustible building materials.

Note: 0" side and top clearance to non-combustible materials. However, the respective clearances to combustibles are transferred to those non-combustibles.

Combustible building material
Floor



Any facade wall 6" to either side of the oven doorway and above **MUST** be of non-combustible construction with no exceptions.

This oven is suitable for installation on combustible floors (convient à l'installation sur un plancher combustible). The minimum hearth extension area to be covered with a non-combustible floor surface must extend 36 inches in front of and 30 inches to either side of the oven door opening.



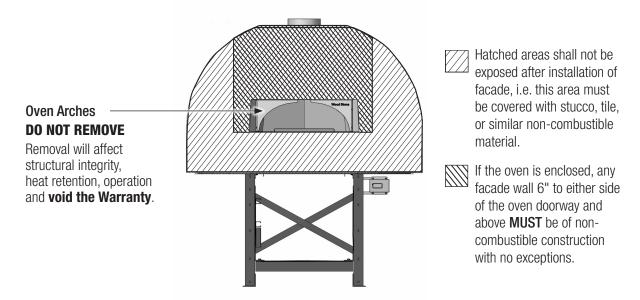
FACADE DETAILS

Wood-Fired Traditional Series
Installation and Operation Manual



Wood Stone Traditional Series (TS-) ovens carry an ETL Sanitation listing. The oven interior only is ETL listed to NSF/ANSI Standard 4. Surfaces of the oven, meant to be left exposed after facade installation, have been evaluated for sanitation and food safety and comply with NSF/ANSI Standard 4. To operate the oven in accordance with NSF/ANSI Standard 4, only pizza and bread products may be cooked directly on the floor of the oven. Other types of food may be cooked on or in pans, or other suitable containers to prevent spillage onto the oven deck.

If using an exhaust hood over the oven, make sure your facade allows proper access for removal of the hood filters.



STUCCO

The hatched areas in the graphic above shows the areas of the oven covered with factory-installed wire mesh, ready for the application of stucco (or tile).

Maintain a minimum of 6" clearance from top and 1" from side of the appliance to all combustible surfaces.

Stucco premix is available at your local contractor supply store. Follow stucco manufacturer's instructions for correct mixing information.

USE NO LESS THAN ONE INCH OF STUCCO COATING TO COVER ALL EXPOSED METAL MESH ON THE OVEN.

TILE

We recommend 1/2" or smaller tiles applied over a suitable non-combustible skim coat. Smaller tiles can more easily conform to the curved shape of the oven. Because of the unique shape of the Traditional Series oven, we recommend employing a skilled tile contractor.

Traditional Series ovens can be finished with any non-combustible decorative material that can be easily affixed to the oven surface, including tile, stone or brick. It is always advisable to consult with the appropriate authority having jurisdiction before proceeding as there may be regulations regarding the suitability of various materials. Temperatures above the oven doorway can reach 200 °F. Select materials and adhesives suitable for that temperature.

The surface area of the TS-5 dome is approximately 72 ft².

The surface area of the TS-6 is approximately 90 ft².

Bellingham, WA 98226 USA

TOLL FREE 800.988.8103

ELECTRICAL SPECIFICATIONS

Wood-Fired Traditional Series Installation and Operation Manual



Incoming power should be connected to the Temperature Readout. The standard oven model comes configured for connection to a 120 VAC circuit. The oven can be ordered configured for connection to a 240 VAC circuit. Always refer to the equipment data plate beneath the oven to verify the proper voltage. Never connect an oven rated 120 VAC to a 240 VAC circuit or vice versa. It is recommended that the oven be connected to its own individual branch circuit. Have a license electrician connect the oven to the appropriate 120 VAC or 240 VAC circuit.

Electrical diagrams are also located near the end of this manual.

ELECTRICAL RATINGS

120 VAC, 1.1 A, 50/60 Hz 240 VAC, 1.1 A, 50/60 Hz

ELECTRICAL CODE LIMITATIONS

Electrical grounding: This appliance must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical code, ANSI/NFPA 70 or the Canadian Electrical Code, CSA C22.1 as applicable.



VENTING

Wood-Fired Traditional Series Installation and Operation Manual



Wood-Only models must be vented as solid fuel.

The following are the manufacturer's recommendations for venting the Wood Stone Traditional Series oven. It is never appropriate to use "B vent" in any part of an exhaust system connected to a Wood Stone oven. All duct material must be manufactured to the specifications of a grease duct. This is a wood-fired oven and must be vented as a solid fuel piece of equipment. Due to the possibility of sparks entering the system, exhaust systems serving solid fuel equipment must be vented separately from other non-solid fuel equipment.

The duct serving this oven should be inspected at least twice a month during the first two months of operation, to establish rate of creosote buildup and necessary cleaning schedule. Submit your venting plans to your local authorities before proceeding with your installation, as there may be additional requirements in your area.

Wood Stone recommends cleaning and inspection at <u>least</u> monthly on any ventilation system serving solid fuel equipment.

There are two venting options:

VENTING OPTION 1

Direct Connection for Wood-Fired Models (-W): A listed building heating appliance chimney, also listed as a grease duct as described in NFPA 96, connected directly to the oven flue collar and provided with a power ventilator listed for restaurant appliance exhaust. The power ventilator should be rated for a minimum of 450 °F. Wood Stone does not recommend the use of an in-line fan. A field built grease duct, constructed and installed to the specifications of a grease duct as detailed in NFPA 96 or the International Mechanical Code, may also be used.

A static pressure of -0.14 inches water column is necessary at the oven flue collar to ensure that flue gas temperatures do not exceed 450 °F at the fan inlet. This measurement may be taken by inserting the probe of the magnahelic gauge through the oven doorway, upwards to the oven flue collar. **NOTE:** Solid fuel burning ovens must be vented separately from non-solid fuel burning equipment.

CFM REQUIREMENTS

Model	CFM Required
WS-TS-5	500
WS-TS-6	500

Install the venting system in accordance with the duct manufacturer's instructions and in accordance with all local codes. All field built components should be built to the applicable codes and standards and are subject to the approval of the authority having jurisdiction.



VENTING

Wood-Fired Traditional Series
Installation and Operation Manual



VENTING OPTION 2

A Listed Type 1 canopy-style exhaust hood or one that is constructed and installed in accordance with all relevant local and national codes. The hood should be installed in accordance with the hood manufacturer's instructions, and with the Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, NFPA 96 and/or the applicable local and national codes. **Solid fuel burning ovens must be vented separately from non-solid fuel burning equipment.**

It is never appropriate to use "B vent" in any part of an exhaust system connected to a Wood Stone oven. All duct material must be manufactured to the specifications of a grease duct. Due to the possibility of sparks entering the duct, exhaust systems serving solid fuel equipment MUST not be combined with exhaust systems serving other (non-solid fuel) equipment. This model is rated as solid fuel equipment and must be vented as such.

VERY IMPORTANT!

WOOD STONE RECOMMENDS THAT YOU CONSULT WITH A QUALIFIED MECHANICAL ENGINEER AND SUBMIT YOUR VENTING PLANS TO LOCAL CODE AUTHORITIES BEFORE PROCEEDING WITH INSTALLATION.

FIRE SUPPRESSION

Check with your local code officials to see if fire suppression is required in your area. If fire suppression is required, you must vent the oven using a Listed Type 1 Exhaust Hood constructed and installed in accordance with NFPA 96. If fire suppression is required, Wood Stone recommends providing protection for the hood duct collar and plenum. The fusible link in the hood must be rated at 450 °F minimum. Wood Stone offers Listed Type 1 Exhaust Hoods for our ovens that are pre-piped for ANSUL R-102 fire suppression. All installations are subject to the approval of the local authority having jurisdiction.

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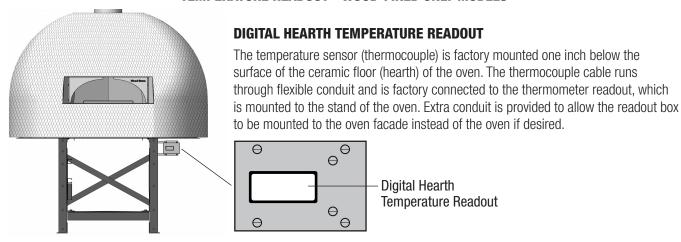


TEMPERATURE READOUT

Wood-Fired Traditional Series
Installation and Operation Manual



TEMPERATURE READOUT - WOOD-FIRED ONLY MODELS



IMPORTANT NOTE: If enclosing the oven in a facade, you must leave an access panel to allow for service of the thermocouple. Wood Stone's oven mounted wood box has an access panel built in.

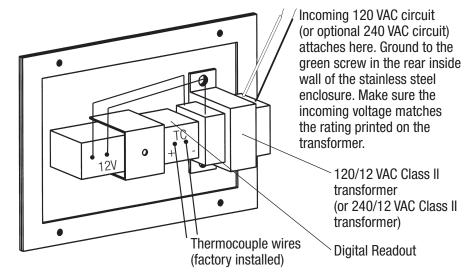
Wood Stone does not supply an electrical connection. The direct electrical connection is to be supplied by others and connected by a licensed electrician.

TO MAKE THE ELECTRICAL CONNECTION TO THE THERMOMETER READOUT

Remove the (4) screws holding the stainless steel faceplate to the readout box and gently pull back the faceplate. The standard oven model comes configured for connection to a 120 VAC circuit. The oven can be ordered configured for connection to a 240 VAC circuit. Have a licensed electrician install the appropriate circuit through the vacant hole in the back of the stainless steel readout enclosure. Attached to the backside of the faceplate is the readout and a 120/12 VAC (or 240/12 VAC) step down transformer. Connect the incoming power supply to the transformer primary leads. Ground the incoming power supply using the green screw on the rear inner wall of the stainless enclosure.

NOTES

- Be sure that the face plate is replaced right-side up.
- There is no need to disconnect the conduit when relocating the temperature readout.
- The mounting brackets for the stainless steel digital readout enclosure can be removed and remounted to accommodate the needs of various installations.
- Take care not to pull on the conduit or thermocouple wires.



FAX 360.650.1166

An ongoing program of product improvement may



INITIAL START-UP

Wood-Fired Traditional Series Installation and Operation Manual



WOOD-ONLY OVENS: INITIAL OVEN START-UP PROCEDURE

Your oven was cured at the factory. However in the course of shipment, storage on site, etc. the ceramic materials will have absorbed moisture. It is critical that the procedure below be followed to ensure that this moisture is driven from the ceramic in a controlled fashion. This will minimize cracking and prevent damage to the oven that could otherwise occur by bringing the oven to temperature rapidly the first time it is used. This initial procedure need only be followed the first time the oven is fired and/or if the oven has not been used for an extended period of time.

DAY ONE

- 1. Build a small kindling fire of 5–7 lbs. of heavy, hardwood. We suggest using a fire starter (paraffin/sawdust stick) to start the fire. Begin with (3) small pieces of wood (about 1–3" diameter and 14–16" in length). Build the fire directly on the floor of the oven against the side or back of the dome. The fire should be built far enough inside and of a size that doesn't permit the flame to go up the flue. Slowly bring the oven temperature up to 300–400 °F. Maintain this fire for 4–5 hours.
- 2. Once the oven temperature has reached 300–400 °F, increase the oven temperature by increasing the size and amount of wood being used. Based on what is already burning, gradually increase the amount of wood per hour. This will bring the oven temperature up to 500–550 °F.

NOTE: THE MORE WOOD ADDED TO THE FIRE, THE HOTTER THE OVEN WILL GET.

It is recommended that on the first day of heat-up, the oven does not exceed 550 °F within the first 8 hours. If your goal is to cook at higher temperatures, the oven should only be brought up to 550 °F on day one. Once the oven has reached the 550 °F, more wood may be added to the fire as necessary to bring the oven to the desired operating temperature. The amount of wood required to bring the oven to the specified temperatures may vary depending on the type and quality of the wood. **Never use any type of flammable liquid or fuel to start a fire in a Wood Stone oven. Doing so could cause a dangerous situation and/or damage to the oven ceramic.**

DURING THE FIRST FEW DAYS OF OPERATION, SMALL AMOUNTS OF WATER MAY APPEAR DRIPPING FROM THE OVEN.
THIS IS NORMAL AND WILL STOP WITHIN A FEW DAYS.

IMPORTANT NOTES

- One pound of properly cured, heavy, hardwood produces the potential of 6,500 BTU/hr.
- The temperature sensor (thermocouple) is located at the center of the floor, one inch under the surface. The thermocouple will give false readings if the fire is placed on top of it.
- If at anytime the oven is allowed to cool to room temperature for an extended period of time, especially outdoor installations, this heat-up procedure will need to be repeated to avoid thermal shocking of the refractory stone which can cause excessive cracking.
- Small "crazing" cracks will occur with normal heating and cooling. They will not effect the performance or durability of the oven. If cracks of 1/8" or more develop, contact Wood Stone for evaluation.

DO NOT POUR OR SPRAY LIQUIDS ONTO THE OVEN DECK OR INTO THE OVEN INTERIOR AS THIS CAN DAMAGE THE CERAMIC AND WILL VOID THE WARRANTY.

Bellingham, WA 98226 USA

1801 W. Bakerview Rd.

DAILY OPERATION

Wood-Fired Traditional Series Installation and Operation Manual



THE FIRE

Use only seasoned hardwoods with a moisture content of 20% or less. Use of soft woods, such as pine, cedar, hemlock etc., and wet or "green" wood, will cause a build-up of residue throughout the exhaust system. (See the FUELWOOD FACTS section later in this manual, or consult factory for information on what types of wood can be used for oven fuel.)

The fire should be ignited a couple of hours before the oven needs to be at cooking temperature, and can be located practically anywhere in the oven. Once the oven is being used daily, the fire can be ignited using still glowing coals from the previous day's fire. The oven is heated more evenly and effectively by the fire positioned on the side rather than in the rear of the oven.

Adding about 5–7 lbs. of wood per hour should bring the oven temperature up about 100 °F per hour (this will vary slightly depending on the type and moisture content of the wood and the size of the oven).

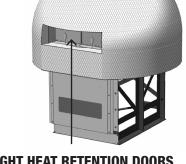
The floor temperature is indicated by the Digital earth Temperature Readout and should not exceed 850 °F. Once the desired temperature is reached, maintain it by the addition of wood as needed. Do not toss or throw wood against back or side walls of oven—this may void the warranty.

At the end of the work day, put into door opening the removable Night Heat Retention Door(s) to hold heat in the oven overnight. **Note:** This option is for heat retention **only**, and should only be used when the oven is turned OFF.

MANAGING THE FIRE / TEMPERATURE

These suggestions will normally produce an oven floor temperature of 500-600 °F. If you need to achieve higher temperatures, use a little more wood. For lower temperatures, use a little less wood.

To maintain temperature: 1–1½ logs with 8–12" of open flame working on the coal bed.



NIGHT HEAT RETENTION DOORS

NOTE: Never operate this oven with the (optional) stainless steel Night Heat Retention Doors in place. This option is for heat retention only, and should only be used when the oven is turned OFF.

DO NOT OVER-FIRE THIS OVEN. IF FLAMES ARE SPILLING OUT OF THE DOOR OPENING, OR IF OVEN FLOOR TEMPERATURE EXCEEDS 850 °F, THEN YOU ARE OVER-FIRING THE OVEN.

ASH DISPOSAL: At the start of the following work day, push glowing coals out of the ash pile with an 8" utility peel. Remove ash with ash shovel, leaving live coals to start the day's fire. Place ashes into metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, a safe distance from all combustible materials pending final disposal. They should be retained in the closed container until all cinders have thoroughly cooled. Check with your dealer about Wood Stone's Ash Dolly.

CAUTION: Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or freshen a fire in this oven. Keep all such liquids away from the oven while it is in use.

DO NOT USE PRESSED WOOD PRODUCTS IN WOOD STONE FOOD SERVICE EQUIPMENT. AS THEY MAY DAMAGE THE CERAMICS AND WILL VOID THE WARRANTY.

Bellingham, WA 98226 USA

TOLL FREE 800.988.8103

BURNING WOOD SAFELY

Wood-Fired Traditional Series Installation and Operation Manual



WS-TS-W models are approved to allow the burning of wood in the cooking chamber in addition to the gas burners. When burning wood, the fire should be placed to one side of the oven chamber, as close to the door opening as is possible (this is often described as the 8 o'clock or 4 o'clock position). **If flames spill out of the doorway, or the oven temperature exceeds 850 °F, you are over firing the oven.**

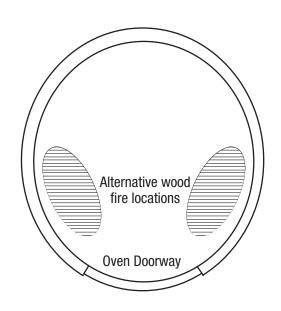
NOTE: Ovens burning solid fuel require a more frequent maintenance schedule. Call with questions regarding maintenance frequency.

See the FUELWOOD FACTS section at the end of this manual for more information on burning wood.

Wood should be stored and handled in accordance with the recommendations outlined in NFPA 96.

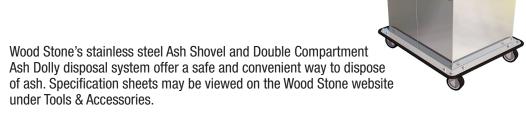
The interior floor and dome of the oven do not require creosote or soot removal. The oven flue and exhaust system will require inspection and cleaning. The exhaust system must be inspected and cleaned per the manufacturer's and or local code official's recommendations.

Wood Stone recommends cleaning and inspection at <u>least</u> monthly on any ventilation system serving solid fuel equipment.



DISPOSE OF ASH PER THE FOLLOWING:

- 1. Place ashes into a metal container with a tight fitting lid.
- 2. Place the closed container of ashes on a non-combustible floor or on the ground.
- **3.** Place the closed container of ashes well away from all combustible materials, pending final disposal.
- **4.** Retain the ashes in the closed container until all the cinders have thoroughly cooled. Ashes can then be disposed of safely.



BURNING WOOD SAFELY

Wood-Fired Traditional Series Installation and Operation Manual



IMPORTANT SAFETY CONSIDERATIONS

Solid fuel exhaust contains creosote and other substances that accumulate in ducting, creating a risk of fire. The rate of accumulation will vary with respect to flue gas temperature, wood type and moisture content. Frequent, regularly scheduled, thorough flue cleaning is the best way to minimize the risk of flue fires.

CREOSOTE - AND THE NEED FOR ITS REMOVAL

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool oven flue of a slow-burning fire. As a result, creosote residue accumulates in the duct. When ignited, this creosote makes an extremely hot fire. The duct serving this oven should be inspected at least twice a month during the first two months of operation, to establish rate of creosote buildup and necessary cleaning schedule. If creosote or soot has accumulated, it should be removed to reduce the risk of a flue fire. The interior floor and dome of the oven do not require creosote or soot removal. The oven flue and exhaust system will require inspection and cleaning.

The exhaust system should be inspected and cleaned per the manufacturer's and or local code official's recommendations. **Wood**Stone recommends cleaning and inspection at least monthly on any ventilation system serving solid fuel equipment.



FUELWOOD FACTS

Wood-Fired Traditional Series Installation and Operation Manual



WHAT TYPE OF WOOD SHOULD YOU USE TO FIRE YOUR SOLID FUEL COOKING EQUIPMENT?

The answer to this question depends on several considerations: geographical location, availability and relative cost of various fuelwood species and individual preferences regarding the flavor qualities of various wood types. There are a wide variety of good fuelwood species in all geographic locations. Each species of wood has different characteristics. The table below should help weigh the pros and cons of various types of wood. Wood from conifers (pine trees) is not recommended due to its poor fuelwood characteristics (low weight, low-med heat, poor coaling, high sparking and high residual creosote).

Weed Tone	Heat	Lls (Os and	I facilities o	Ozalian	Onsulus	F*
Wood Type	Heat	Lb/Cord	Lighting	Coaling	Sparks	Fragrance*
Alder	Med-Low	2500	Fair	Good	Moderate	Slight
Apple	High-Med	4400	Fair	Excellent	Few	Excellent
Ash	High	3500	Fairly Difficult	Good-Excellent	Few	Slight
Beech	High	3800	Difficult	Excellent	Few	Good
Birch (white)	Medium	3000	Easy	Good	Moderate	Slight
Cherry	Medium	2000	Fair	Excellent	Few	Excellent
Elm	High	2300	Very Difficult	Good	Very Few	Fair
Hickory	Very High	4200	Fairly Difficult	Excellent	Moderate	Excellent
Maple (red)	High-Med	3200	Fairly Difficult	Excellent	Few	Good
Maple (sugar)	High	3700	Difficult	Excellent	Few	Good
Mesquite	Very High		Very Difficult	Excellent	Many	Excellent
Oak (live)	Very High	4600	Very Difficult	Excellent	Few	Fair
Oak (red)	High	3700	Difficult	Excellent	Few	Fair
Oak (white)	Very High	4200	Fairly Difficult	Excellent	Few	Fair
Pecan	High		Fair	Good	Few	Good

*The desirability of various fragrances is largely a matter of personal preference.

Whichever type of wood you use, **MAKE SURE YOU KNOW THE MOISTURE CONTENT.** Properly seasoned wood contains 20% moisture or less. If wood contains more than 20% moisture, it should not be accepted for use. Wood should be stored off the ground and out of the rain in an environment that allows good air circulation so that the drying process can continue. Wet wood is the most common operational difficulty associated with wood-fired cooking equipment. Wood Stone's optional Mini-Ligno E Wood Moisture Meter can save you from paying for water when you thought you were paying for wood (see the Tools & Accessories section of woodstone-corp.com).

Calculate your approximate monthly, daily and hourly fuel-wood costs using the following formulas:

The cost of well-seasoned hardwood varies greatly with geographical location.

Cost per month = $A \times C$ Cost per day = $A \times C$

30

Cost per hour =

12 hr dav

A = Cost/cord (from wood supplier)

B = lb/cord (from above table)

C = Cords/mth (from experience, or call Wood Stone for an estimate)

When burned, a pound of any wood releases approximately 6500 BTU/hr, so it is better to compare the price of wood by the pound rather than by the cord. A full cord of wood measures 4' x 4' x 8' when stacked.

Cost per lb =
$$\frac{\mathbf{A}}{B}$$

Do not use pressed wood products in Wood Stone food service equipment, they may damage the ceramics.



TROUBLESHOOTING GUIDE

Wood-Fired Traditional Series Installation and Operation Manual



PROBLEM	CAUSE/SOLUTION
Controller will not turn on	1. Incoming power to oven turned off. Check circuit breaker for circuit supplying the oven. Check that any wall switches external to the oven that control oven power are turned on. Check that any interlocks external to the oven are turned on.
	2. If Controller still does not turn on, please contact Wood Stone for assistance.

Please contact Wood Stone at 1-800-988-8103 should service be necessary, or if you have any questions about your oven. Our service hours are 8am to 5pm Pacific Time. Follow the recorded instructions for Emergency Service if you require assistance during non-business hours. A Wood Stone technician will promptly respond to your call.

TOLL FREE 800.988.8103



LIMITED WARRANTY

Wood-Fired Traditional Series Installation and Operation Manual



ALL WARRANTY SERVICE MUST BE PRE-APPROVED BY WOOD STONE

Wood Stone warrants its equipment to the original purchaser against defects in material or manufacture for a period of one year from the original date of purchase, subject to the following exclusions and limitations.

Please contact the factory first at 1.800.988.8103 or 1.360.650.1111, seven days a week. Our normal business hours are 8am to 5pm Pacific time Monday-Friday. If calling during non-business hours, follow the recorded instructions for emergency service and a Wood Stone technician will get back to you promptly.

EXCLUSIONS

The warranties provided by Wood Stone do not apply in the following instances:

- 1. In the event that the equipment is improperly installed. Proper installation is the responsibility of the installer; proper installation procedures are prescribed by the Wood Stone installation and operation manual.
- 2. In the event the equipment is improperly or inadequately maintained. Proper maintenance is the responsibility of the user; proper maintenance procedures are prescribed in the Wood Stone Installation and Operation Manual. Burner problems resulting from debris or ash in the burner well will not be covered by the warranty. Call with guestions regarding maintenance frequency.
- 3. In the event that the failure or malfunction of the appliance or any part thereof is caused by abnormal or improper use or is otherwise not attributable to defect in material or manufacture.
- 4. In the event that the appliance, by whatever cause, has been materially altered from the condition in which it left the factory.
- 5. In the event that the rating plate has been removed, altered or obliterated.
- 6. On parts that would be normally worn or replaced under normal conditions.
- 7. Normal cracking due to expansion and contraction stress relief in the ceramic firebox.

8. In the event that pressed log products of any type have been burned in the equipment.

9. Damage resulting from the use of chemical cleaning products in the oven, as well as any damage from liquids or chemicals, including water, being poured or sprayed into the oven.

If any oral statements have been made regarding this appliance, such statements do not constitute warranties and are not part of the contract of sale. This Limited Warranty constitutes the complete, final and exclusive statement with regard to warranties.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OR WARRANTY AGAINST LATENT DEFECTS

LIMITATIONS OF LIABILITY

In the event of warranty claim or otherwise, the sole obligation of Wood Stone shall be the repair and/or replacement, at the option of Wood Stone, of the appliance or component or part thereof. Such repair or replacement shall be at the expense of Wood Stone with the exception of travel over 100 miles or two hours, overtime, and holiday charges which shall be at the expense of the purchaser. Any repair or replacement under this warranty does not constitute an extension of the original warranty for any period of the appliance or for any component or part thereof. Parts to be replaced under this warranty will be repaired or replaced at the option of Wood Stone with new or functionally operative parts. The liability of Wood Stone on any claim of any kind, including claims based on warranty, expressed or implied, contract, negligence, strict liability or any other theories shall be solely and exclusively the repair or replacement of the product as stated herein, and such liability shall not include, and purchaser specifically renounces any rights to recover, special, incidental, consequential or other damages of any kind whatsoever, including, but not limited to, injuries to persons or damage to property, loss of profits or anticipated profits, or loss of use of the product.

TO SECURE WARRANTY SERVICE

If you claim a defect covered by this Limited Warranty, contact:

Wood Stone Corporation, Attn: Service Department, 1801 W. Bakerview Rd., Bellingham, WA 98226 USA

WOOD STONE CORPORATION

1801 W. Bakerview Rd. Bellingham, WA 98226 USA Toll Free 800.988.8103 Tel 360.650.1111 Fax 360.650.1166

www.woodstone-corp.com

An ongoing program of product improvement may require us to change specifications without notice.