

Installation and Operation Manual



MOUNTAIN SERIES

Stone Hearth Oven

Wood-Fired Models

MT. CHUCKANUT WS-MS-4-W

MT. ADAMS WS-MS-5-W

MT. BAKER WS-MS-6-W

MT. RAINIER WS-MS-7-W

WOOD  STONE

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**INSTALLATION AND OPERATION MANUAL
THE WOOD STONE MOUNTAIN SERIES**

STONE HEARTH COOKING EQUIPMENT

WS-MS-(4, 5, 6, 7)-W

WOOD-FIRED OVEN

ADDITIONAL COPIES AVAILABLE UPON REQUEST



Shown: WS-MS-5-W

**WOOD STONE MOUNTAIN SERIES WOOD-FIRED 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.

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



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.

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

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 fonctionnement et d'entretien avant de procéder à son installation ou entretien.

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.





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.

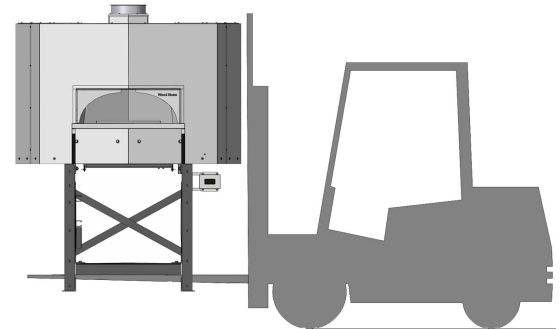
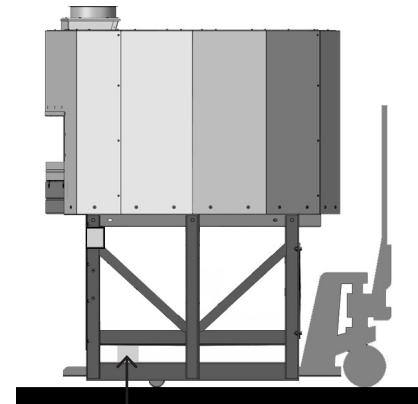


fig. a

⚠ WARNING		Minimum Required Forklift Capacities		
Model	Oven	Approximate shipping weight	Minimum fork length required	Required forklift capacity
WS-MS-4	Mt. Chuckanut	2,400 lbs.	4'	5,000 lbs.
WS-MS-5	Mt. Adams	3,600 lbs.	5'	6,000 lbs.
WS-MS-6	Mt. Baker	4,600 lbs.	6'	8,000 lbs.
WS-MS-7	Mt. Rainier	6,000 lbs.	7'	12,000 lbs.

USING A PALLET JACK

Once the oven has been removed from the delivery vehicle, it can easily be moved on smooth, flat 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.



4x4 Post

fig. 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.

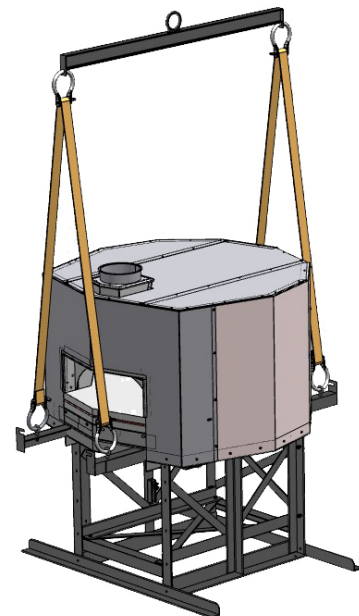


fig. c

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.

**CLEARANCES**

1. The Wood Stone Mountain Series oven must have a minimum 1-inch clearance to combustibles from all sides, and 6-inch clearance to combustibles from the top (see INSTALLATION CLEARANCES section on next page). 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 wood-fired 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: For stucco-ready appliances (model numbers including an "-S"), the same clearances as described above apply. Non-combustible stucco mix must be used and applied to a minimum thickness of 1".

4. If the space between the legs of the stand is used for wood storage, it must be a metal container or box that is covered on top to prevent the possibility of sparks or embers from making contact with the stored wood. An 8-1/2" (eight and one-half inch) air space clearance is required between the bottom of the oven and any wood storage container.
5. When utilizing a combustible material to construct the enclosure, all openings within 30" of either side of the door opening, floor to ceiling, must be sealed to prevent the entry of sparks or embers.

The floor design and construction must be adequate to handle the weight of the oven. See woodstone-corp.com for floor loading information.

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. The oven is fully insulated at the factory and requires no additional insulation.

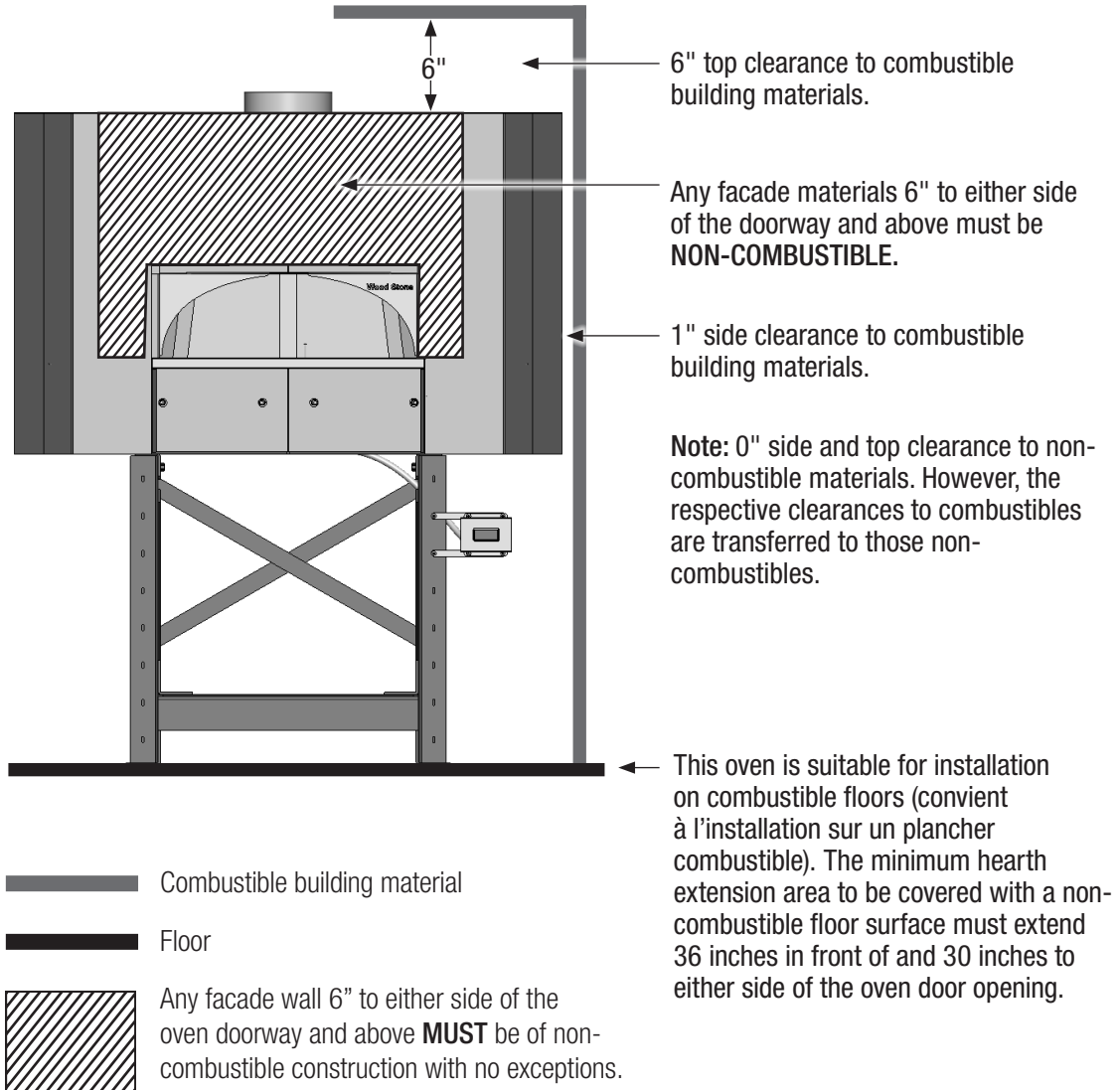


WARNING: Installation and servicing of this product could expose you to glasswool/ceramic fibers as well as calcium silicate dust. **ALWAYS WEAR RESPIRATORY AND EYE PROTECTION WHEN INSTALLING OR SERVICING THIS APPLIANCE.** Please read this entire manual before you install the oven. Failure to follow 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.

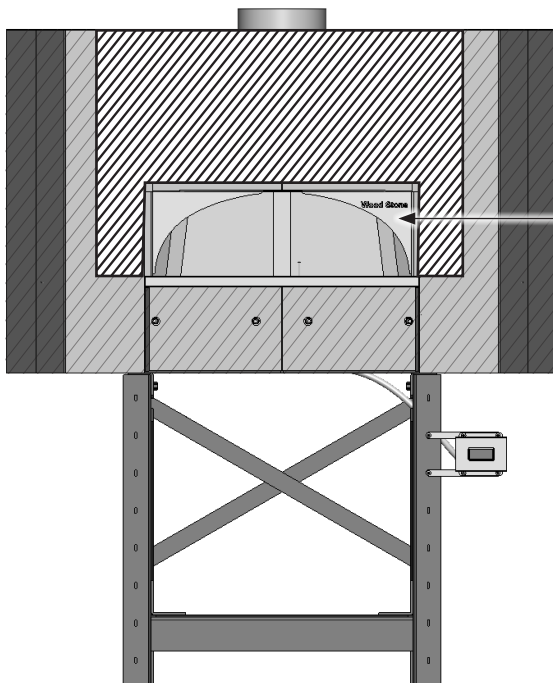


**THE FOLLOWING CLEARANCE INFORMATION APPLIES TO ALL
WOOD STONE MOUNTAIN SERIES OVENS**





Wood Stone Mountain Series (MS-) ovens carry an ETL Sanitation listing. The oven interior only is ETL listed to NSF/ANSI Standard 4. This means that the surfaces of the oven which are meant to be left exposed after the facade has been put in place have been evaluated from the standpoint of sanitation and food safety and found to 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. Go to www.woodstone-corp.com for detailed instructions for constructing a facade around a Wood Stone oven.

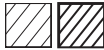



If using an exhaust hood over the oven, make sure your facade allows for the proper access for removal of the hood filters.

Oven Arches
DO NOT REMOVE

Removal will affect structural integrity, heat retention, operation and **void the Warranty.**

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

-  Hatched areas shall not be exposed after installation of facade.
-  Any facade wall 6" to either side of the oven doorway and above **MUST** be of non-combustible construction with no exceptions.



When installed outdoors, the open area beneath the oven must be enclosed to protect internal wiring and thermocouple components. 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. Be sure to maintain all clearances and adhere to the installation requirements included in this manual.

**KEEP THE AREA AROUND AND BENEATH THE OVEN CLEAR OF GRASS, LEAVES
AND OTHER COMBUSTIBLE MATERIALS.**

IMPORTANT: The equipment is required to be sealed to the floor to establish proper sanitary operation. Seal any small gaps between the oven and the floor with silicone. This is intended to prevent liquid spillage on adjacent surfaces of the floor from passing under inaccessible portions of the equipment.



THIS MODEL MUST BE VENTED AS A SOLID FUEL APPLIANCE

The following are the manufacturer’s recommendations for venting the Wood Stone MS (Mountain Series) “-W” (wood-fired) ovens. 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 least monthly on any ventilation system serving solid fuel equipment.

There are two venting options.

VENTING OPTION 1

Direct Connection: 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:** Double door ovens (models ending in -DD), have two flue collars—both must be connected and a static pressure of -0.14 inches must be maintained at each collar. See table below for CFM required to attain the specified static pressure. **NOTE: Solid fuel burning ovens must be vented separately from non-solid fuel burning equipment.**

CFM REQUIREMENTS (DIRECT CONNECT)

Model	CFM required
WS-MS-4-W	420
WS-MS-5-W	500
WS-MS-6-W	500
WS-MS-7-W	550

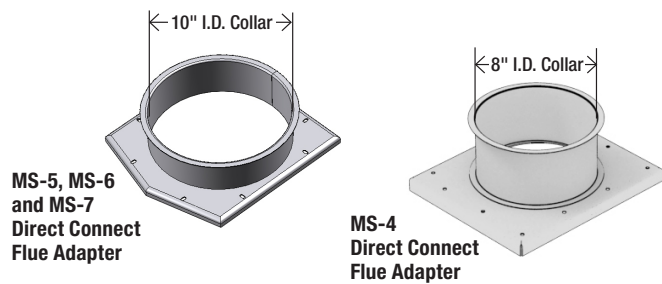
Install the venting system in accordance with the duct manufacturer’s instructions and in accordance with all local codes. All field built components should be built to the applicable codes and standards and are subject to the approval of the authority having jurisdiction.



NOTE: Mountain Series ovens (MS-5, MS-6 and MS-7) intended for direct connection will have a round flue adapter already installed at the factory to facilitate direct connection to a round duct. If the oven is to be installed under a hood, it WILL be necessary to remove the round adapter to properly position the hood and ensure proper flue gas ventilation. This is done by removing the screws that attach the adapter to the oven.

The MS-4 will have a round flue adapter supplied in a separate box. It should ONLY be installed with direct connect installations. DO NOT install if the oven is installed under an exhaust hood.

Instructions are included in the manual. Please contact Wood Stone if you have any questions.



Model	Oven	Flue Collar I.D. (nominal)
WS-MS-4	Mt. Chuckanut	8 inch
WS-MS-5	Mt. Adams	10 inch
WS-MS-6	Mt. Baker	
WS-MS-7	Mt. Rainier	

NOTE: The round collar flue adapter is for direct connection installations ONLY. This adapter should NOT be used with an exhaust hood.

VENTING OPTION 2

A Listed Type 1 exhaust hood (or one that is constructed and installed in accordance with all relevant Local and National Codes). Wood Stone offers eyebrow-type hoods designed specifically for Wood Stone ovens. See specification sheet on ventilators for Wood Stone ovens.

Note that the notch of the hood is even with the front edge of the oven. 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. 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.

It is never appropriate to use “B vent” in any part of an exhaust system connected to a Wood Stone oven. All ducting material must be manufactured to the specifications of a grease duct.

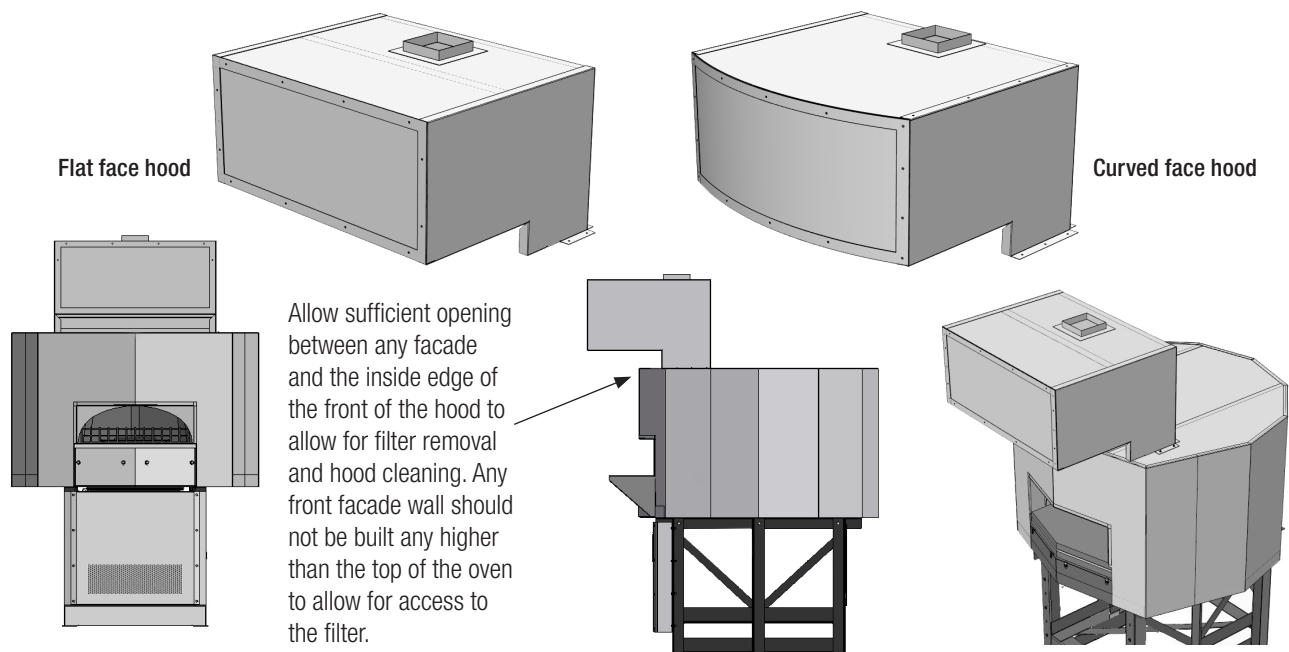
VERY IMPORTANT!
**WOOD STONE RECOMMENDS THAT YOU CONSULT WITH A QUALIFIED MECHANICAL ENGINEER
AND SUBMIT YOUR VENTING PLANS TO LOCAL CODE AUTHORITIES
BEFORE PROCEEDING WITH INSTALLATION.**



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 Type 1 hood constructed and installed in accordance with NFPA 96. The fusible link in the hood must be rated at 450 °F minimum. Wood Stone offers Listed 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.

INSTALLATION VIEWS OF A WOOD STONE HOOD





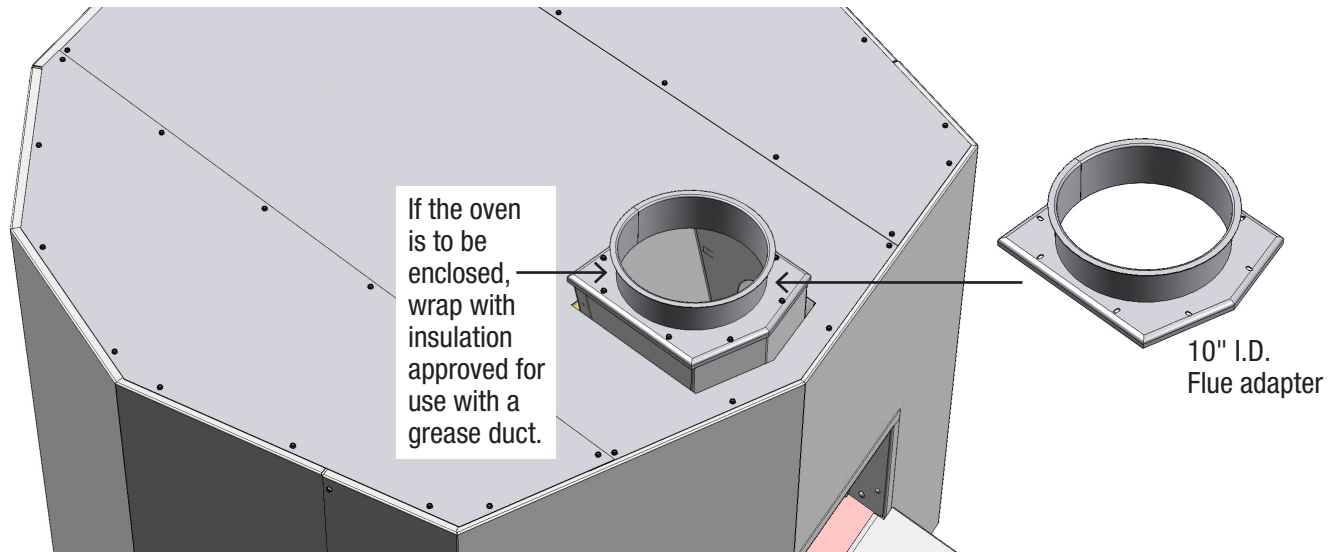
MOUNTAIN SERIES MS-5, MS-6 & MS-7 OVENS: FLUE ADAPTER INSTALLATION

The flue adapter unit is designed to facilitate connection to a round duct. Use the stainless steel screws and sealant provided to attach the flue adapter to the exhaust outlet on the oven if it is not already installed.

Note: If using a Selkirk or other modular-type duct, attach according to the manufacturer’s instructions. Otherwise, the duct must be attached with a full perimeter weld. All duct must be grease-rated duct. If the oven is going to be enclosed, the flue adapter and exhaust outlet must be wrapped with an insulating material approved for use with a grease-duct.

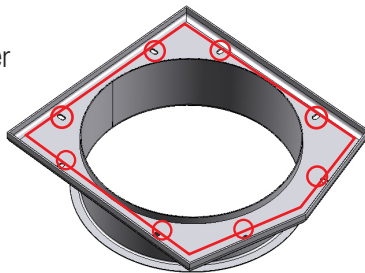
**The flue adapter is for direct connection to a duct system ONLY.
DO NOT install if oven is installed under an exhaust hood.**

FLUE ADAPTER ATTACHED TO OVEN FLUE COLLAR

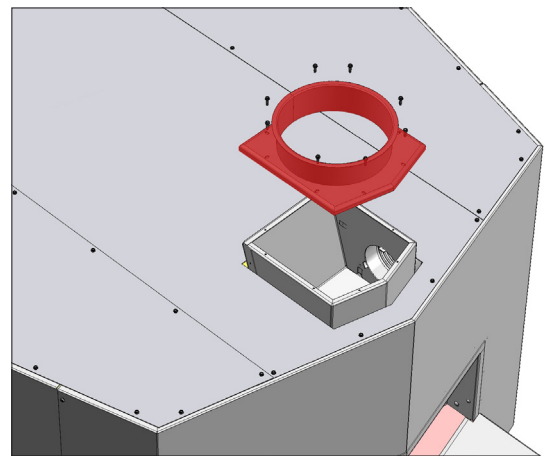


FLUE ADAPTER INSTALLATION (If not already installed)

- Apply the supplied Engineered Grade Ceramic Sealing Compound to the underside of the Flue Adapter with an unbroken bead around the perimeter, and around each individual screw hole.
- Then fasten with the supplied screws.



Underside of Flue Adapter showing where Ceramic Sealing Compound should be applied





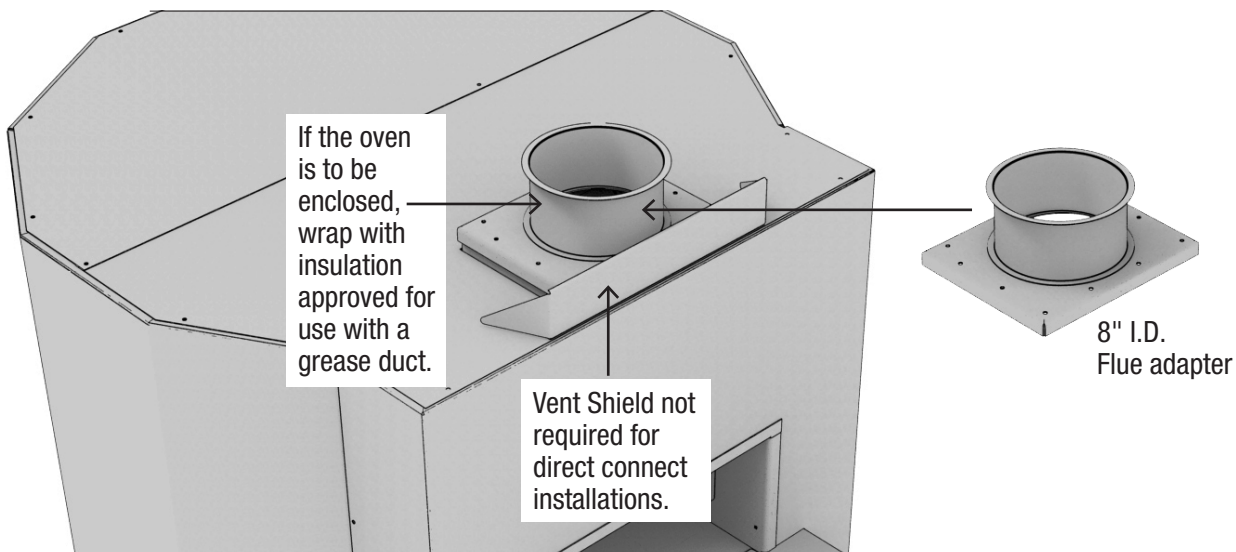
MOUNTAIN SERIES MS-4 OVENS: FLUE ADAPTER INSTALLATION

The flue adapter unit is designed to facilitate connection to a round duct. Use the provided stainless steel screws and sealant provided to attach the flue adapter (8" I.D.) to the exhaust outlet on the oven.

Note: If using a Selkirk or other modular-type duct, attach according to the manufacturer's instructions. Otherwise, the duct must be attached with a full perimeter weld. Grease-rated duct is required throughout the system. If the oven is going to be enclosed, the flue adapter and exhaust outlet must be wrapped with an insulating material approved for use with a grease-duct.

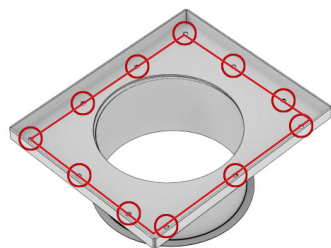
**The flue adapter is for direct connection to a duct system ONLY.
DO NOT install if oven is installed under an exhaust hood.**

FLUE ADAPTER ATTACHED TO OVEN FLUE COLLAR

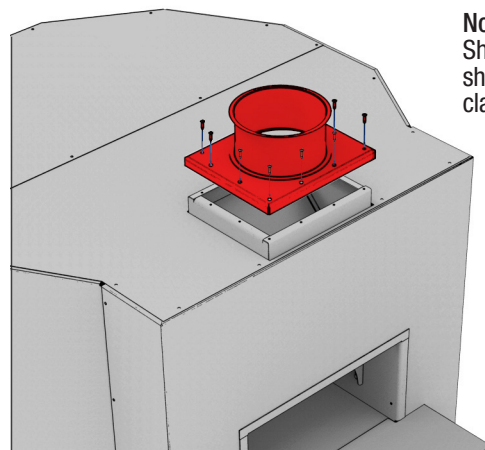


FLUE ADAPTER INSTALLATION (If not already installed)

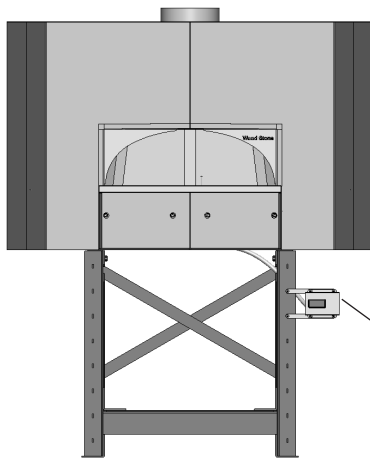
- Apply the supplied Engineered Grade Ceramic Sealing Compound to the underside of the Flue Adapter with an unbroken bead around the perimeter, and around each individual screw hole.
- Then fasten with the supplied screws.



Underside of Flue Adapter showing where Ceramic Sealing Compound should be applied

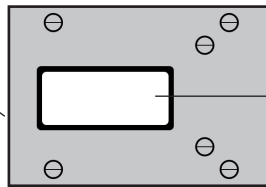


Note: Vent Shield not shown for clarity



DIGITAL HEARTH TEMPERATURE READOUT

The temperature sensor (thermocouple) is factory mounted one inch below the surface of the ceramic floor (hearth) of the oven. The thermocouple cable runs through flexible conduit and is factory connected to the thermometer readout mounted to the stand of the oven. Extra conduit is provided to allow the thermometer box to be mounted to the facade instead of the stand if desired.



Digital Hearth Temperature Readout

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 power cord. The power cord or direct connection is to be supplied by others and connected by a licensed electrician.

ELECTRICAL RATINGS

120 VAC, 1.1 A, 50/60 Hz

240 VAC, 1.1 A, 50/60 Hz

ELECTRICAL CODE LIMITATIONS

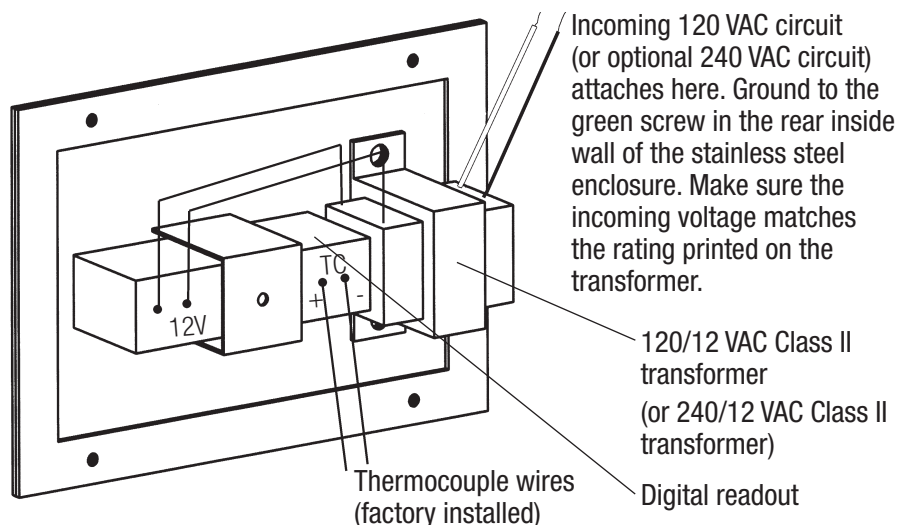
Electrical grounding: This appliance must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical code, ANSI/NFPA 70 or the Canadian Electrical Code, CSA C22.1 as applicable.

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.

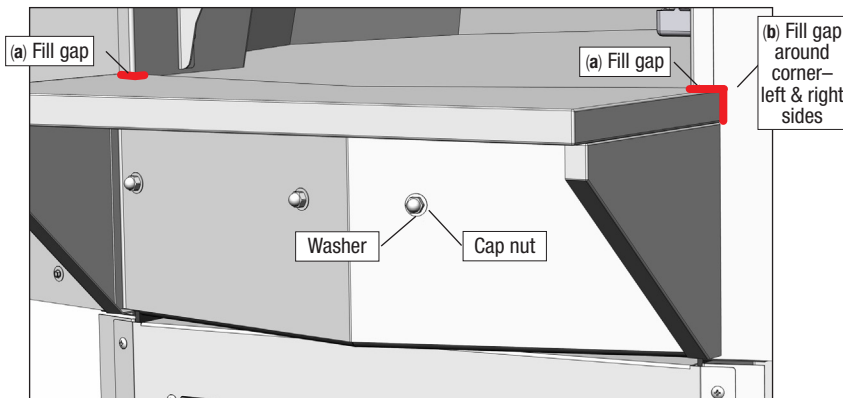
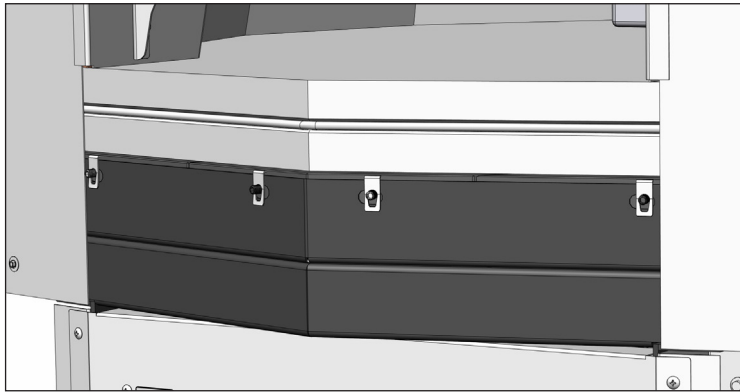
NOTES

- 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.





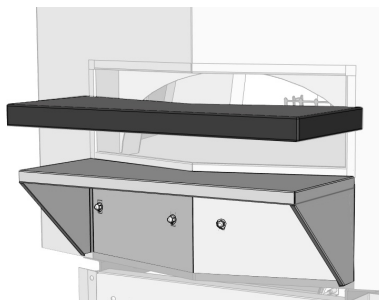
The initial steps are the same for mounting either a stainless mantle or a bracket for a granite mantle.



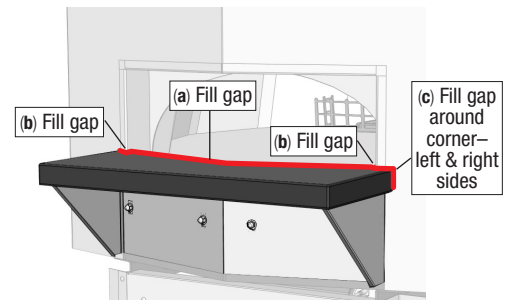
1. Begin by installing the threaded studs into the clip nuts below the oven doorway (3 or 4 turns is sufficient).
2. Position the mantle (or bracket) on the oven, making sure the rear flange rests on the floor of the oven (you may need an extra pair of hands).
Note: Do NOT remove the insulation taped to the back of the mantle.
3. Place one stainless steel washer and a cap nut onto each stud.
 Tighten the cap nuts so the mantle is securely held in place.
4. Using the high temperature silicone (provided), fill any gaps between the oven hearth and the mantle flange.
 Gaps between the mantle flange and the stainless steel doorway frame may also need to be filled with a small amount of the silicone sealant.
 Clean up any sealant before it dries.

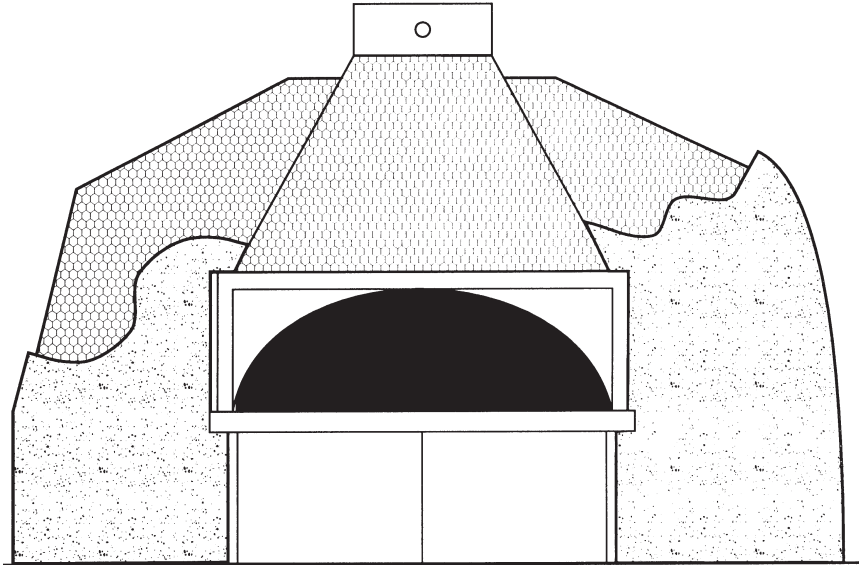
INSTALLATION OF GRANITE

After completing the steps outlined above, apply a generous amount of silicone adhesive (provided) to the top of the steel mantle bracket.



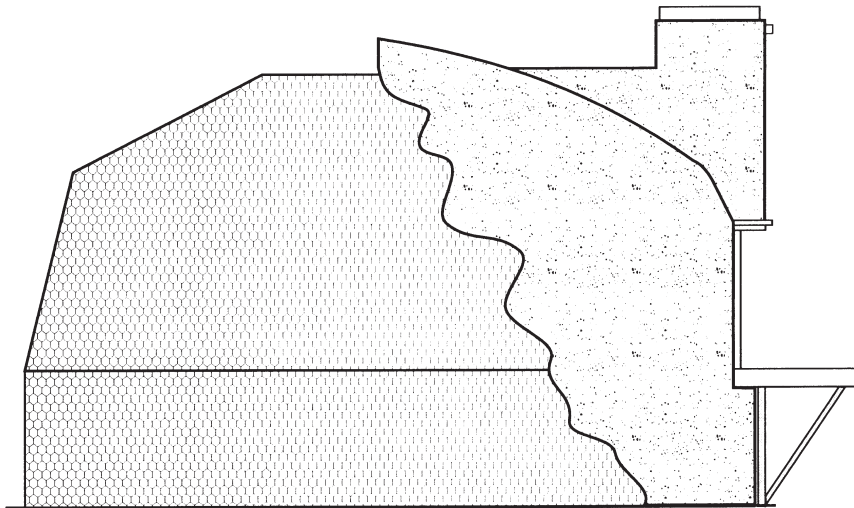
1. Put the stone in place and apply light pressure to seat it properly.
2. Make sure that the angle in the granite lines up with the angle in the bracket.
3. Allow the sealant to set for several hours, then with the provided Silicon sealant fill any gap: **(a)** between the Stone slab and the Metal bracket along the front of the Doorway, **(b)** the Stone edge & stainless steel Doorway frame and **(c)** where the Stone upper corners touch the oven.
4. Clean up any sealant before it dries.





Front View

NOT TO SCALE



Side View

NOT TO SCALE

This figure depicts the application of stucco on a Wood Stone oven.

Use no less than one inch of stucco coating to cover all exposed metal lathing on the oven.

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

TRADITIONAL STUCCO MIX

- 1** part masonry cement
- 1** part regular cement
- 5** parts sand

Stucco premix is available at your local lumber yard or building supply store.

Follow stucco manufacturer's instructions for correct mixing information.

MINIMUM STUCCO APPLICATION IS 1"

**READ BEFORE BUILDING FIRST FIRE**

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 newspaper and 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.**



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, although the oven is heated more evenly and effectively when the fire positioned on the side rather than in the rear of the oven. Once the oven is being used daily, the fire can be ignited using still glowing coals from the previous day's fire. 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 Hearth 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 removable Night Heat Retention Door(s) into door opening to hold heat in the oven overnight. **NOTE:** This accessory is for night heat retention *only*.

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.

4' oven: Maintain temperature using 1 log with 6–10" of open flame working on the coal bed.

5' and 6' ovens: Maintain temperature using 1–1½ logs with 8–12" of open flame working on the coal bed.

7' oven: Maintain temperature using 1½–2 logs with 8–14" of open flame working on the coal bed.

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.

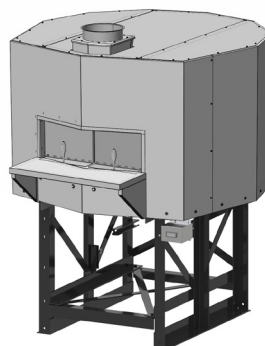
ASH DISPOSAL: At the start of the following work day, push glowing coals out of the ash pile with an 8" utility peel. Remove ash with ash shovel, leaving live coals to start the day's fire. Place ashes into metal container with a tight-fitting lid. The closed container of ashes should be placed on a 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.

NIGHT HEAT RETENTION DOORS

NOTE: Never operate this oven with the stainless steel Night Heat Retention Doors in place. This accessory is for night heat retention *only*.





REMOVAL OF CREOSOTE AND SOOT

As with all commercial cooking equipment exhaust systems, a regular inspection and cleaning schedule is needed to prevent the possibility of a hood or duct fire. The frequency of inspection and cleaning will depend on hours of use and type and quality of wood used as fuel. Only use hardwood species dried to a moisture content of 20% or less. See the FUELWOOD FACTS section at the end of this manual.

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. Typically we recommend cleaning the duct system at least monthly for all solid fuel equipment.

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.

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.

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.



Wood Stone's stainless steel ash shovel and double compartment ash disposal system offer a safe and convenient way to dispose of ash. Specification sheets may be viewed on the Wood Stone website under Tools & Accessories.



OVEN FLOOR: As needed, brush food particles and stray fire debris from the oven floor using a long-handled floor brush. If something spills on the floor of the oven, wait for it to burn and/or dry up and then clean the residue off with the floor brush. This process can be sped up by moving a small portion of coals onto the spill causing it to bake off quickly. For removal of fine particles (burned flour or ash), wrap a warm, damp cloth around the brush head and use it to briskly wipe the floor. Do not scrape the oven floor with metal tools having sharp edges or corners.

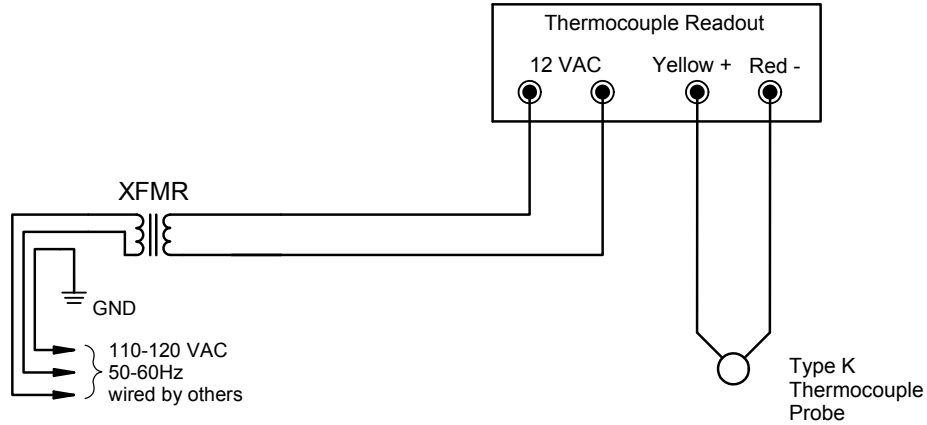
STAINLESS STEEL SURFACES: The oven tools, the mantle, the night doors and the oven doorway must be cleaned, as needed, using warm soapy water. Do not use abrasive metal scouring pads as they will scratch the stainless steel. Avoid the use of excess water when cleaning the face of the digital readout or oven Controller.

DUCT: As with all commercial cooking equipment, regular cleaning and maintenance of the exhaust system is necessary to prevent the possibility of a hood and/or duct fire. The frequency of inspection and cleaning will depend upon hours of use and type and moisture content of the wood used for fuel. **Wood Stone recommends cleaning and inspection at least monthly on any ventilation system serving solid fuel equipment.** See the SAFETY CONSIDERATIONS section of this manual.

AVOID FLUE FIRES. BURN GOOD QUALITY WOOD AND ESTABLISH A REGULAR CLEANING SCHEDULE!



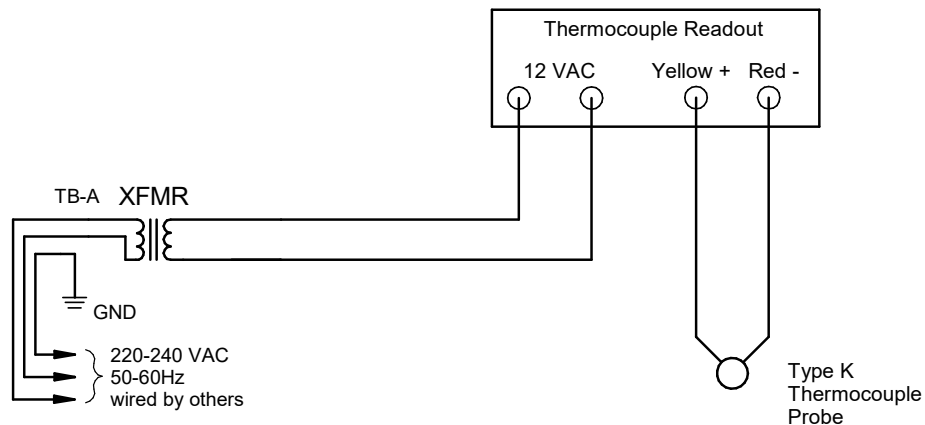
120 VAC MODELS



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DIAG #: WD051 Rev. 0
DATE: 3/27/2014

240 VAC MODELS



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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).**

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 fuelwood costs using the following formulas:
 The cost of well-seasoned hardwood varies greatly with geographical location.
 Cost per month = A x C Cost per day = $\frac{A \times C}{30}$ Cost per hour = $\frac{A \times C}{30 \times 12 \text{ hr day}}$

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 = $\frac{A}{B}$

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

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**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 questions 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 wood-fired equipment configurations, in the event that pressed log products of any type have been burned in the equipment.
9. In coal-fired oven configurations, in the event any type of coal other than anthracite coal fuel has been used.
10. 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
Phone 1.800.988.8103 or 1.360.650.1111

WOOD STONE

WOOD STONE CORPORATION

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www.woodstone-corp.com

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