

# Installation and Operation Manual



## **MOUNTAIN SERIES - CE**

Stone Hearth Oven

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*Wood-Fired Models*

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**MT. CHUCKANUT** WS-MS-4-W-CE

**MT. ADAMS** WS-MS-5-W-CE

**MT. BAKER** WS-MS-6-W-CE

**MT. RAINIER** WS-MS-7-W-CE

WOOD  STONE

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

**ORIGINAL INSTRUCTIONS**

**STONE HEARTH COOKING EQUIPMENT**

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

**WOOD-FIRED OVEN**

**ADDITIONAL COPIES AVAILABLE UPON REQUEST**



Shown: WS-MS-5-W-CE



**WOOD STONE MOUNTAIN SERIES CE WOOD-FIRED OVEN  
INSTALLATION AND OPERATING INSTRUCTIONS**

**RETAIN THIS MANUAL FOR FUTURE REFERENCE**

Additional copies of this manual at [woodstone-corp.com](http://woodstone-corp.com).  
For prompt responses to service/maintenance questions, call your distributor.

**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.

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.

**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.



**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**

**SAVE THE INSTRUCTIONS**

Wood Stone's gas-fired ovens have been tested and approved.





**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.

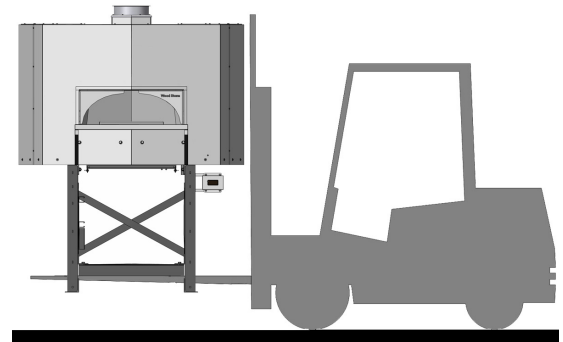


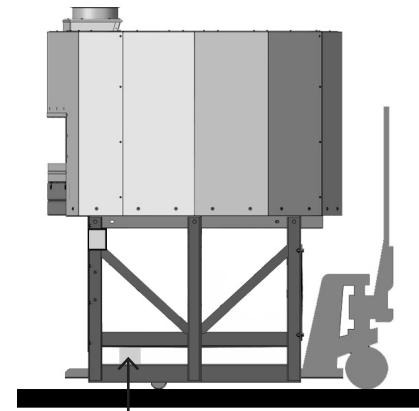
fig. a

**⚠ WARNING Minimum Required Forklift Capacities**

Model	Oven	Approximate shipping weight	Minimum fork length required	Required forklift capacity
WS-MS-4	Mt. Chuckanut	1089 kg 2400 lbs.	1.22m 4'	2268 kg 5000 lbs
WS-MS-5	Mt. Adams	1633 kg 3600 lbs.	1.5m 5'	2722 kg 6000 lbs
WS-MS-6	Mt. Baker	2087 kg 4600 lbs.	1.8m 6'	3629 kg 8000 lbs.
WS-MS-7	Mt. Rainier	2722 kg 6000 lbs.	2.1m 7'	5443 kg 12000 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 90 x 90 mm (4" x 4") 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.

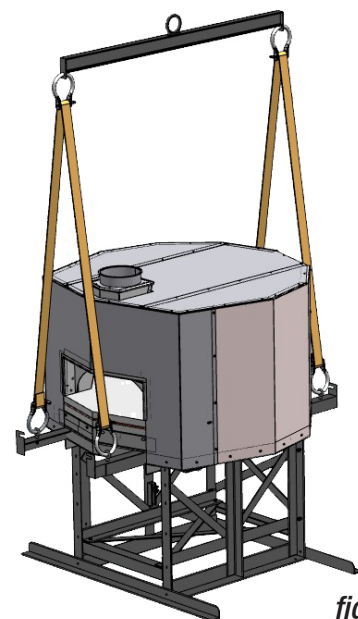


fig. c

**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.

**CLEARANCES**

1. The Wood Stone Fire Deck oven must have a minimum 25 mm (1") clearance to combustibles from all sides, and 152 mm (6") 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 152 mm (6") to either side of the oven doorway or above, must be constructed of non-combustible building materials.
3. This oven is suitable for installation on combustible floors. The minimum hearth extension area to be covered with a non-combustible floor surface must extend 914 mm (36") in front of and 762mm (30") to either side of the oven door opening.
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. A 216mm (8-1/2") 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 762mm (30") of either side of the door opening, floor to ceiling, must be sealed to prevent the entry of sparks or embers.

**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 25mm (1").

**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.**

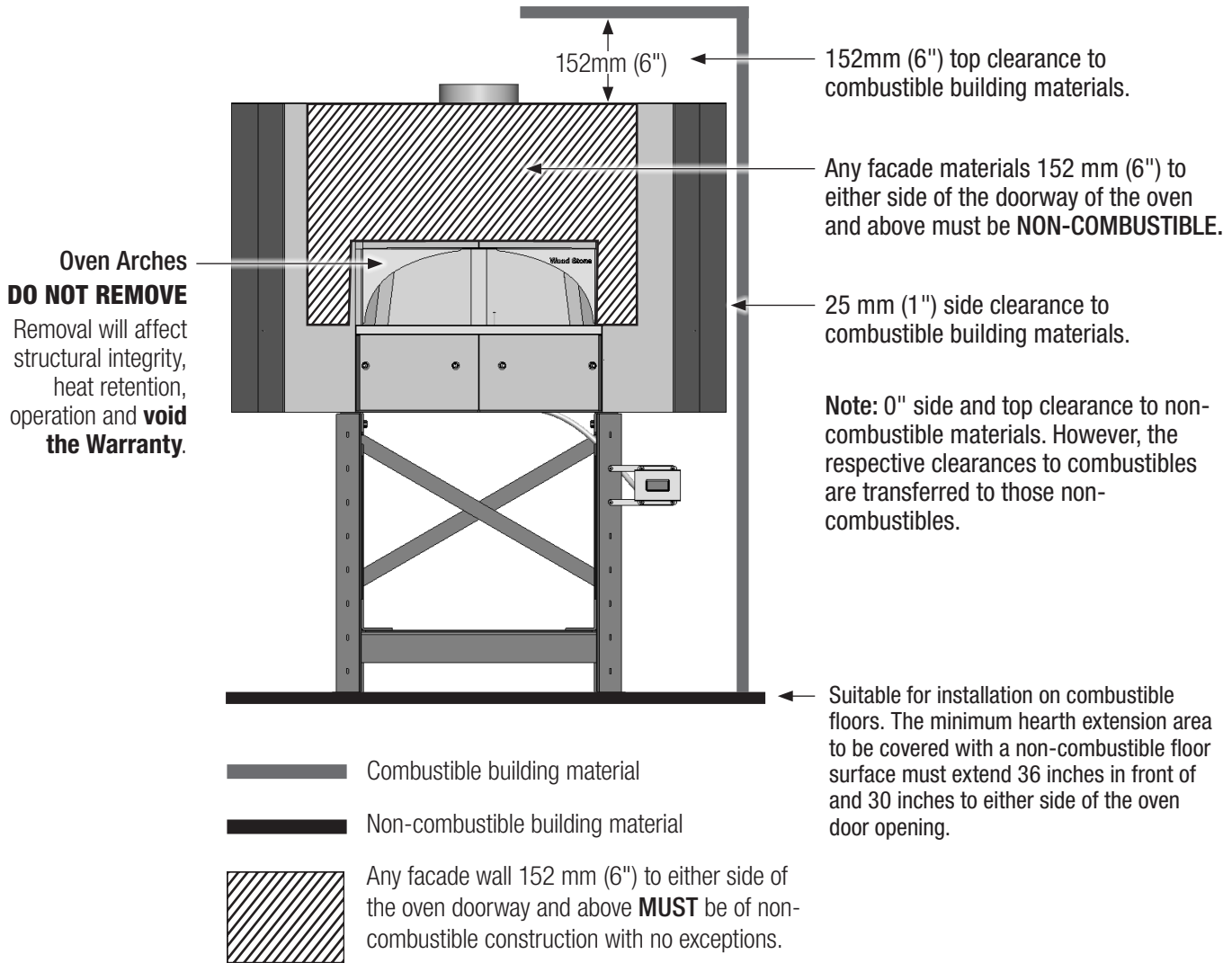
**WARNING: DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIAL.**



**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.



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







Wood Stone ovens are designed and tested to meet the requirements concerning the hygiene aspects of large kitchen appliances so as to eliminate or minimize the risk of contagion, infection, illness or injury arising from the consumption of contaminated food. To operate the oven in accordance, 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 container to prevent spillage onto the oven deck.

**ABOUT FACADE MATERIALS**

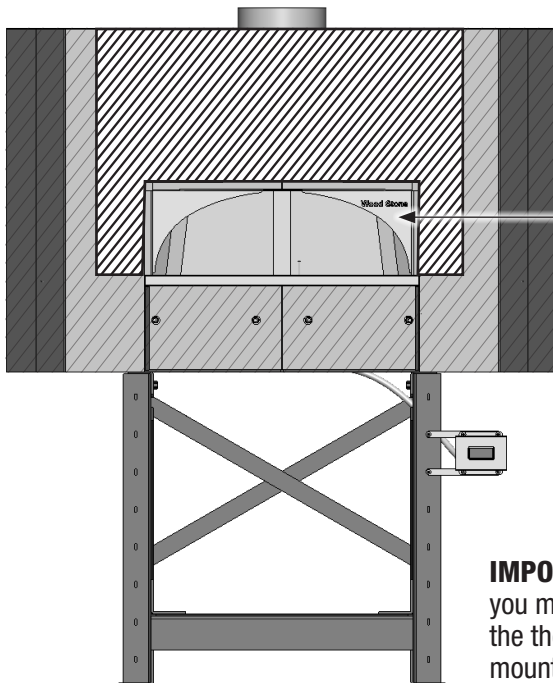
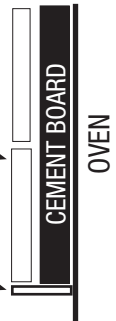
Fire Deck Series ovens can be finished with any non-combustible decorative material that can be easily affixed to the oven surface, including tile, stone or brick. It is always advisable to consult with the appropriate authority having jurisdiction before proceeding as there may be regulations regarding the suitability of various materials. Temperatures above the oven doorway can reach 90 °C (200 °F). Select materials and adhesives suitable for that temperature.

See [www.woodstone-corp.com](http://www.woodstone-corp.com) for detailed instructions for constructing a facade around a Wood Stone oven.

As an option, a 25 mm (1") wide stainless steel lip is provided around the doorway opening. This is provided so that the noncombustible, sanitation approved materials used to cover the cement board can be neatly terminated at these points.

Tile or other noncombustible, sanitation approved material (supplied by others)

25 mm (1") stainless steel perimeter lip





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 152mm (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.**



**THIS MODEL MUST BE VENTED AS A SOLID FUEL APPLIANCE**

Wood Stone ovens should be vented in accordance with pertinent national, regional and local codes concerning such appliances; check venting plans with the authority having jurisdiction before proceeding with installation.

**The above statement taking precedence, Wood Stone Corporation recommends the following two venting options:**

**1.** This Wood Stone Mountain Series oven can be vented as a Type A appliance (with no flue connection), designed to be installed under an exhaust hood (canopy). The hood must be connected to a grease-rated duct system. The venting system must be designed and installed in accordance with all relevant codes pertaining to grease and smoke producing commercial cooking appliances, and vented separately. There may be requirements for interlocking the oven or its gas supply with the ventilation system. Check with your local code official. Airflow should be adjusted according to the requirements specified by the hood manufacturer and/or local codes.

**OR**

**2.** The oven is also approved as a Type B<sub>11</sub> appliance, designed to be connected directly to a chimney which is installed in accordance with all relevant local and national codes. The chimney system must be installed and constructed to the same requirements as a duct that serves grease and smoke producing commercial cooking appliances. 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. If venting the oven with this method, the oven must be vented independently of other equipment. A suitable fan should be used at the end of the duct run to ensure proper draft in all conditions. Wood Stone does not recommend using an in-line type fan. When installed, the fan speed/air flow should be adjusted to attain the appropriate duct pressure, or airflow rate, at the oven flue collar (see Duct Pressure section below).

This oven should be vented in accordance with codes concerning solid fuel appliances. Due to the dangers of creosote buildup and sparks entering the duct, these models should be vented separately from all other kitchen equipment or in such a manner acceptable to the authority having jurisdiction.

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.

**Wood Stone recommends cleaning and inspection at least monthly on any ventilation system serving solid fuel equipment.**

**WOOD STONE RECOMMENDS THAT THE OPERATOR REFER TO THE EXHAUST HOOD MANUFACTURERS FOR INSPECTION, MAINTENANCE AND CLEANING.**

**DUCT PRESSURE**

- For any oven utilizing solid fuel: 0.35 mbar (0.14" w.c.)

This pressure may be checked by inserting the pressure test probe up through the oven doorway to the point where the duct is connected to the oven flue collar.

**FAN TEMPERATURE RATING**

The fan must be of a suitable temperature rating.

For ovens utilizing solid fuel, the fan must be rated for a **minimum of 232 °C (450 °F)** continuous.

**INTERLOCK SYSTEM**

There may be requirements for interlocking the oven or its gas supply with the ventilation system. Check with your local code official.

<b>AIRFLOW REQUIREMENTS (DIRECT CONNECT)</b>	
<b>Model</b>	<b>Airflow Requirement</b>
WS-MS-4-W-CE	.20 m <sup>3</sup> /sec (420 cfm)
WS-MS-5-W-CE	.24 m <sup>3</sup> /sec (500 cfm)
WS-MS-6-W-CE	
WS-MS-7-W-CE	.26 m <sup>3</sup> /sec (550 cfm)

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:** MS-4 ovens come standard with a round 203mm (8") I.D. collar and do not require the flue adapter for a direct connection.

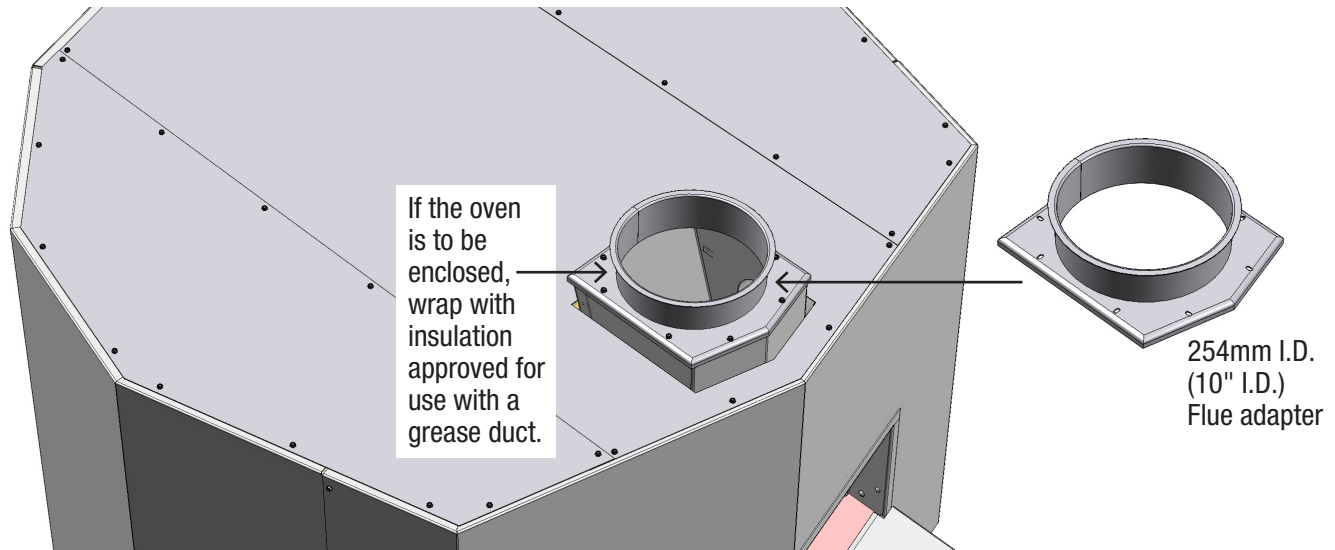
**MOUNTAIN SERIES MS-5, MS-6 & MS-7 OVENS: FLUE ADAPTER INSTALLATION**

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.

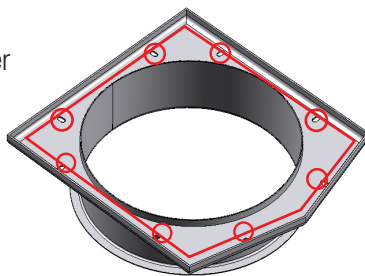
**The flue adapter is for direct connection to a duct system ONLY.  
DO NOT install if oven is installed under an exhaust hood.**

**FLUE ADAPTER ATTACHED TO OVEN FLUE COLLAR**

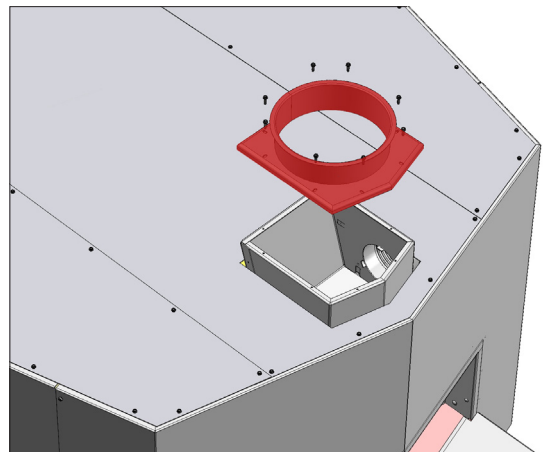


**FLUE ADAPTER INSTALLATION** (If not already installed)

- 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





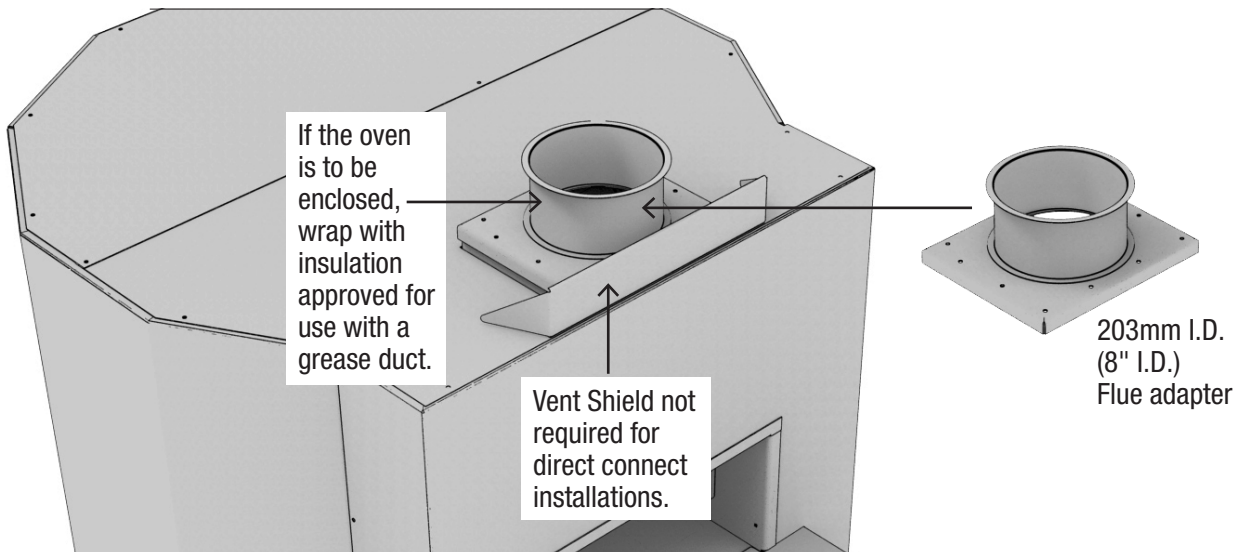
**MOUNTAIN SERIES MS-4 OVENS: FLUE ADAPTER INSTALLATION**

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 (203mm I.D. / 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.

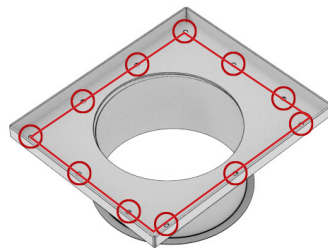
**The flue adapter is for direct connection to a duct system ONLY.  
DO NOT install if oven is installed under an exhaust hood.**

**FLUE ADAPTER ATTACHED TO OVEN FLUE COLLAR**

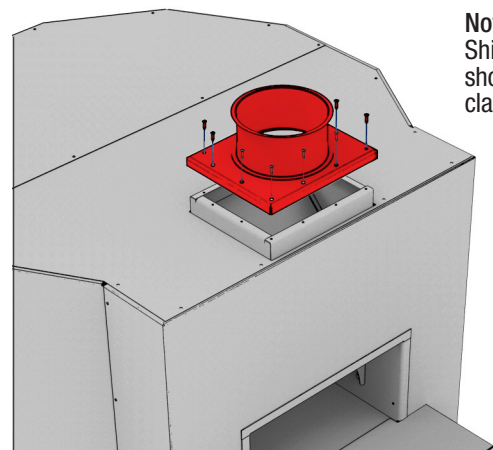


**FLUE ADAPTER INSTALLATION** (If not already installed)

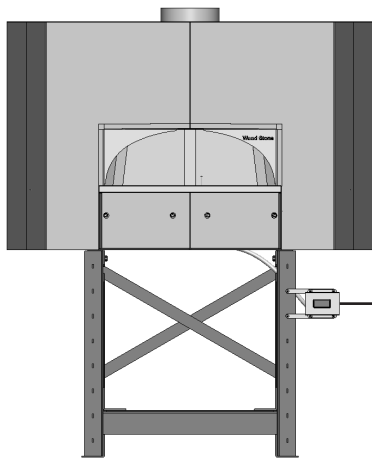
- Apply the supplied Engineered Grade Ceramic Sealing Compound to the underside of the Flue Adapter with an unbroken bead around the perimeter, and around each individual screw hole.
- Then fasten with the supplied screws.



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

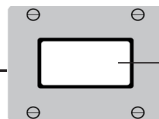


**Note:** Vent Shield not shown for clarity



### 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

230 VAC, 1.1 A, 50/60 Hz

### ELECTRICAL CODE LIMITATIONS

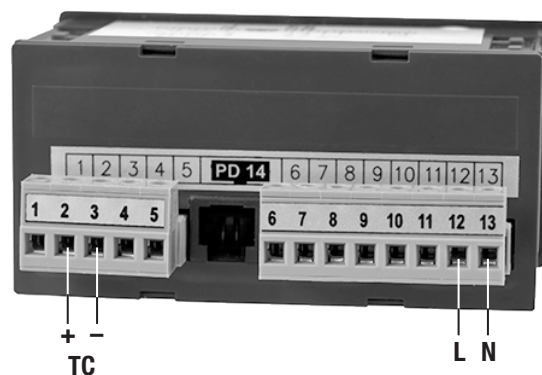
**Electrical grounding:** This appliance must be electrically grounded in accordance with local codes

### TO MAKE THE ELECTRICAL CONNECTION TO THE TEMPERATURE 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 230 VAC circuit. Have a licensed electrician install the appropriate circuit through the vacant hole in the back of the stainless steel readout enclosure. Connect the incoming power supply as shown. 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.

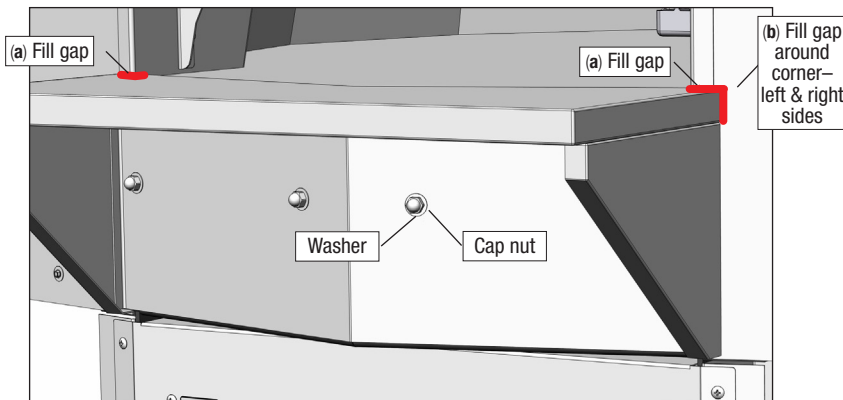
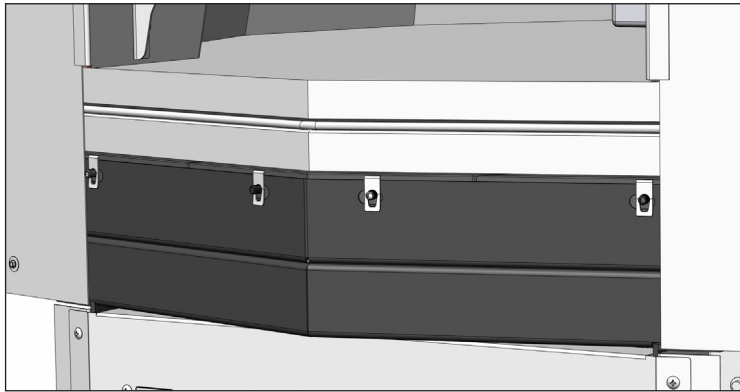


Thermocouple wires  
(factory installed)

Incoming 230 VAC circuit attaches here.  
Ground to the green screw in the rear inside wall of the stainless steel enclosure.



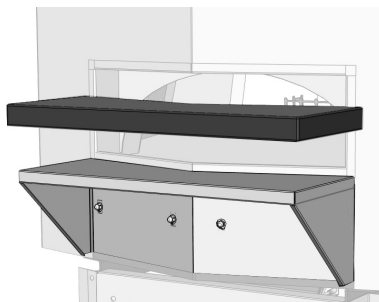
The initial steps are the same for mounting either a stainless mantle or a bracket for a granite mantle.



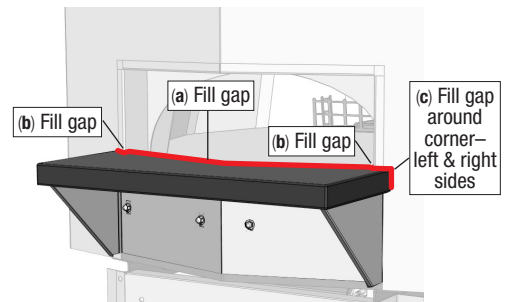
1. Begin by installing the threaded studs into the clip nuts below the oven doorway (3 or 4 turns is sufficient).
2.  Position the mantle (or bracket) on the oven, making sure the rear flange rests on the floor of the oven (you may need an extra pair of hands).
  - Note:** Do NOT remove the insulation 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.

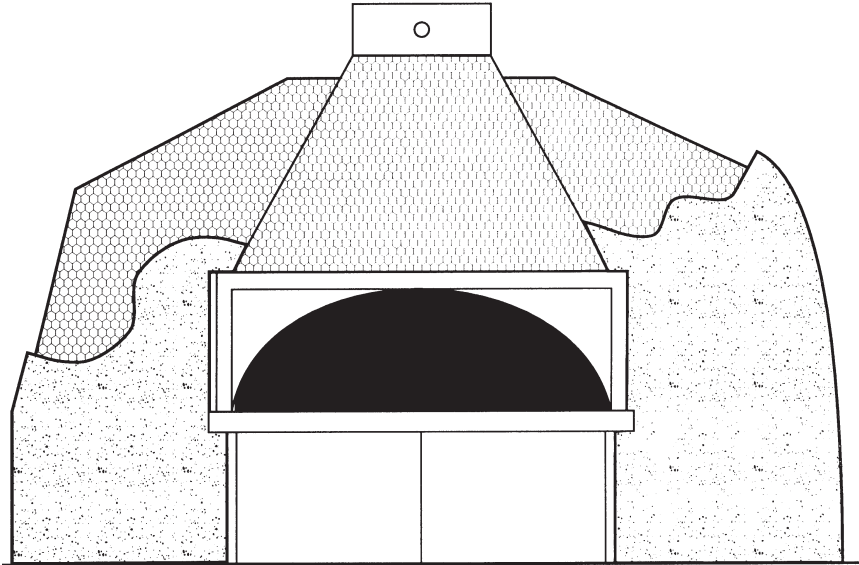
**INSTALLATION OF GRANITE**

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



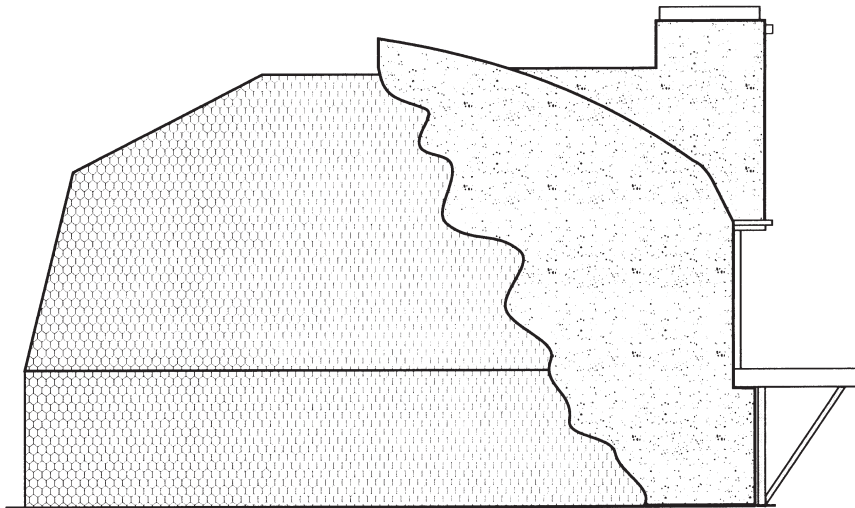
1. Put the stone in place and apply light pressure to seat it properly.
2. Make sure that the angle in the granite lines up with the angle in the bracket.
3. Allow the sealant to set for several hours, then with the provided Silicon sealant fill any gap: **(a)** between the Stone slab and the Metal bracket 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 25 mm (1") of stucco coating to cover all exposed metal lathing on the oven.

**Maintain a minimum of 152 mm (6") clearance from top and 25 mm (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 25 mm (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 2.25–3 kg (5–7 lbs) heavy hard wood. We suggest using a “fire starter” (paraffin/sawdust stick) to start the fire. Begin with (3) small pieces of wood (about 25–76 mm (1–3”) diameter and 356–406 mm (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. See the BURNING WOOD SAFELY section of this manual for more detail. Slowly bring the oven temperature up to 150–200 °C (300–400 °F). Maintain this fire for 4–5 hours.
2. Once the oven temperature has reached and maintained a temperature of 150–200 °C (300–400 °F) for 4–5 hours, 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 260–288 °C (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 288 °C (550 °F) within the first 8 hours. If your goal is to cook at higher temperatures, the oven should only be brought up to 288 °C (550 °F) on day one. Once the oven has reached 288 °C (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 and void the warranty.**

#### IMPORTANT NOTES

- 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.
- 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.
- One pound of properly cured, heavy, hardwood produces the potential of 6,500 BTU/hr.
- 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 OVER-FIRE THIS OVEN. IF FLAMES ARE SPILLING OUT OF THE DOOR OPENING,  
OR IF OVEN FLOOR TEMPERATURE EXCEEDS 454 °C (850°F), THEN YOU ARE OVER-FIRING THE OVEN.**



## 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 of this manual, or consult your local distributor 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. Wood Stone recommends locating the fire towards the sides of the oven (see diagram on next page). The oven is heated more evenly and effectively by the fire positioned on the side rather than in the rear of the oven. Note the thermocouple is located in approximately the center of the oven. The fire’s location should be far enough inside and of a size that doesn’t permit the flame to go up the flue.

Once the oven is being used daily, the fire can be ignited using still glowing coals from the previous day’s fire.

Adding about 2.25–3 kg (5–7 lbs) of wood per hour should bring the oven temperature up about 38 °C (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 on the Temperature Readout and should not exceed 454 °C (850 °F). Once the desired temperature is reached, maintain it by adding wood as needed. Do not toss or throw wood against back or side walls of oven—this will damage the oven and void the warranty.

## HOW TO READ HEARTH TEMPERATURE

The floor temperature is continuously displayed by the Temperature Readout. This reading is being taken by a thermocouple about 25mm (1") below the floor surface, so the actual surface temperature may be somewhat different.

## MANAGING THE FIRE / TEMPERATURE

These suggestions will normally produce an oven floor temperature of 260–315 °C (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 152–255 mm (6–10") of open flame working on the coal bed.

**5' and 6' ovens:** Maintain temperature using 1–1½ logs with 203–305 mm (8–12") of open flame working on the coal bed.

**7' oven:** Maintain temperature using 1½–2 logs with 203–355 mm (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 454 °C (850°F), THEN YOU ARE OVER-FIRING THE OVEN.**

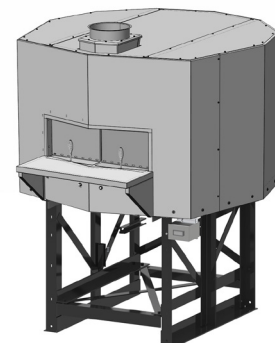
**ASH DISPOSAL:** At the start of the following work day, push glowing coals out of the ash pile with an 205mm (8") utility peel. Remove ash with ash shovel, leaving live coals to start the day’s fire. Place ashes into metal container with a tight-fitting lid. The closed container of ashes should be 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*.





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). Burn a maximum of 6.8 kg (15 lbs.) of wood per hour.

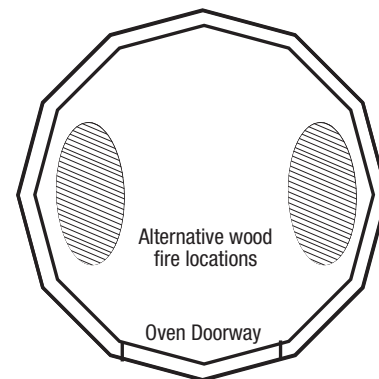
**If flames spill out of the doorway, or the oven temperature exceeds 454 °C (850 °F), you are over firing the oven.**

**NOTE: Ovens burning solid fuel require a more frequent maintenance schedule.**

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 least monthly on any ventilation system serving solid fuel equipment.**

### **IMPORTANT SAFETY CONSIDERATIONS WHEN BURNING SOLID FUEL**

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.**

### **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.



Wood Stone's stainless steel Particle Shovel and Double Compartment Ash Dolly offer a safe and convenient way to dispose of ash. Specification sheets may be viewed on the Wood Stone website under Tools & Accessories.



### 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.**

**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.**

### 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!**



**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

\* Cord/Stere conversion  
1 cord = 3.6 steres  
1 stere = .27 cords

\*\* 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](http://woodstone-corp.com), contact your local distributor).

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 x C      Cost per day =  $\frac{A \times C}{30}$       Cost per hour =  $\frac{(A \times C)}{30}$   
12 hr day

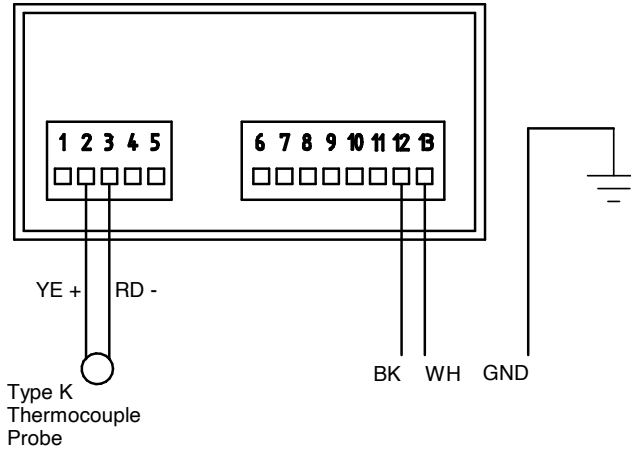
A = Cost/cord (from wood supplier)  
 B = kg/cord (from above table)  
 C = Cords/mth (from experience, or call Wood Stone for an estimate)

When burned, a kilo of any wood releases approximately 4.2 kWh (14300 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 1.2 m x 1.2 m x 1.2 m when stacked.

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



**230 VAC MODELS**



Bellingham, WA +1(360)650-1111 [www.woodstone-corp.com](http://www.woodstone-corp.com)

**DIAG #:** WD158 Rev. 0  
**DATE:** 7/8/2019



**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.**

**CONTACT YOUR LOCAL DISTRIBUTOR FOR WARRANTY SERVICE**

**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 your local distributor.



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