

# Installation and Operation Manual



## **TRADITIONAL SERIES**

Stone Hearth Oven

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*Gas-Fired, Gas/Wood Combination Models*

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**TRADITIONAL SERIES** WS-TS-5-(RFG)-(IR)-(W)

**TRADITIONAL SERIES** WS-TS-6-(RFG)-(IR)-(W)

**Wood Stone**

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-(W)	-(W)	
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### INSTALLATION AND OPERATION MANUAL THE WOOD STONE TRADITIONAL SERIES

#### STONE HEARTH COOKING EQUIPMENT

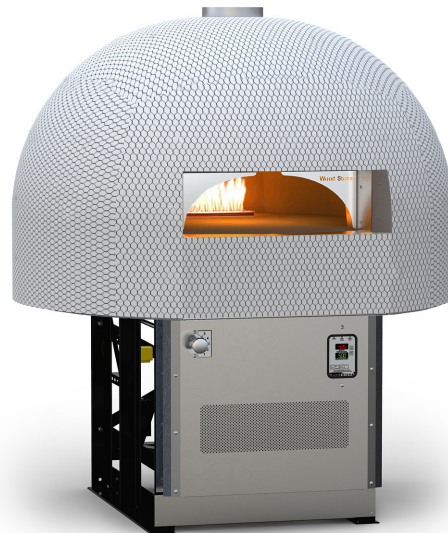
**WS-TS-(5,6)-RFG-(W)**

**WS-TS-(5,6)-RFG-IR-(W)**

**WS-TS-(5,6)-W-IR**

#### GAS-FIRED & GAS/WOOD COMBINATION MODELS

#### ADDITIONAL COPIES AVAILABLE UPON REQUEST



Shown: TS-5-RFG-IR

**WOOD STONE TRADITIONAL SERIES GAS-FIRED AND GAS/WOOD COMBINATION 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 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.

**IMPORTANT:** Consult your local gas supplier for a statement outlining a procedure to be followed in the event you smell gas. Post the statement in a prominent location.

**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.

**IN THE EVENT OF A POWER FAILURE, NO ATTEMPT SHOULD BE MADE TO OPERATE THE OVEN.**

**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**

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

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

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

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

### SAVE THE INSTRUCTIONS

Wood Stone ovens  
have been tested and approved by Intertek Testing Services and  
conform to ANSI Z83.11, UL 2162 and UL 737;  
are certified to CSA 1.8, ULC/ORD 2162, ULC S627 and CGA 2.17;  
and to NSF/ANSI 4.



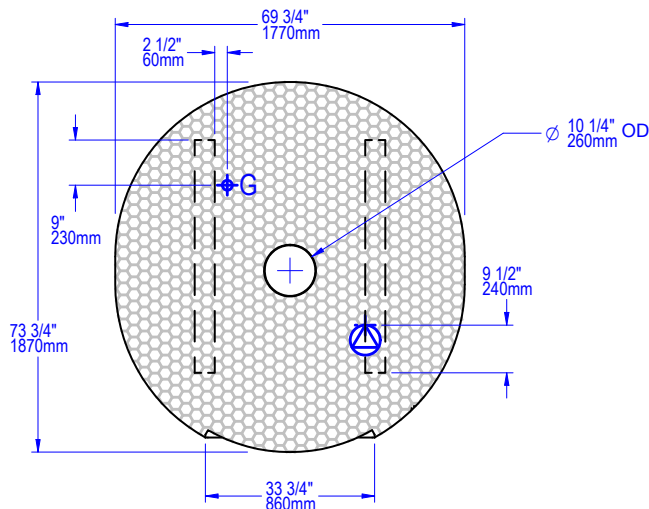
**Intertek**  
ANSI Z83.11  
CSA 1.8



**Intertek**  
ANSI/NSF 4





### Plan view



Overall dimensions shown are accurate for all models.

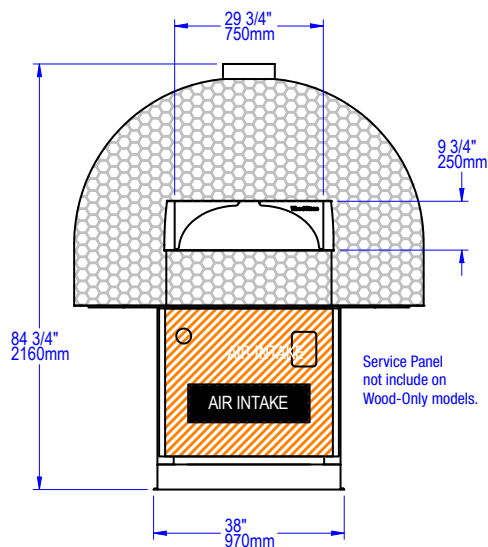
Model shown includes Type 2 Controller, Flame Height Control Knob and Gas Inlet, which are only included on specific configurations.

 Air intake: Do not facade or cover over

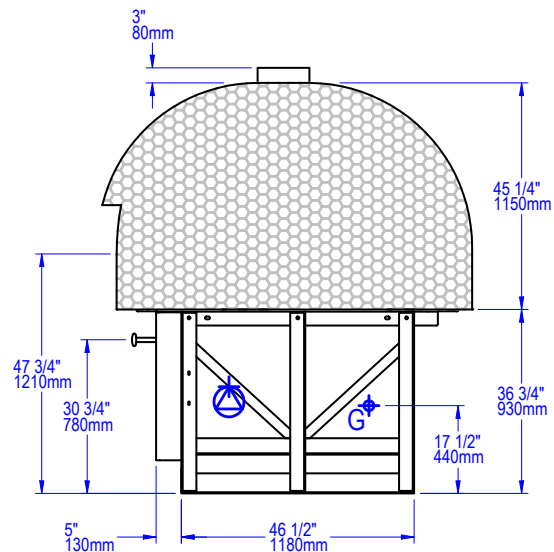
 Must be left removable for service

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

### Front view



### Side view



### UTILITIES SPECIFICATIONS

#### Gas ⚡

3/4 inch FNPT gas inlet  
See Gas Specifications on page 13 of this manual.

**Maximum gas inlet pressure:**  
1/2 psi (14 inches W.C.)

#### Electrical ⚡

120 VAC, 2 A, 50/60 Hz  
Optional: 240 VAC, 1 A, 50/60 Hz  
All utility connections made beneath oven as shown.  
Refer to data plate when installing.

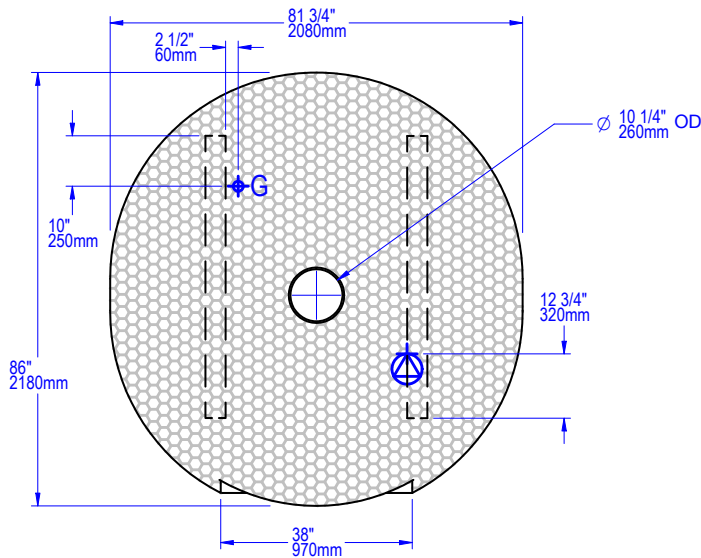
#### Venting

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

**Important:** "-W" models must be vented as solid-fuel oven.



### Plan view



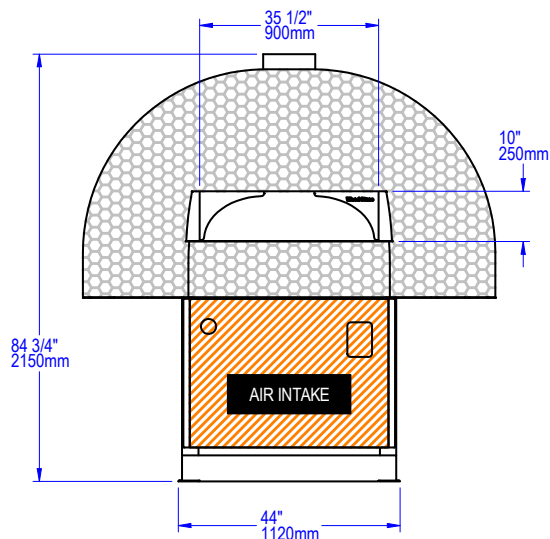
Overall dimensions shown are accurate for all models.

Model shown includes Type 2 Controller, Flame Height Control Knob and Gas Inlet, which are only included on specific configurations.

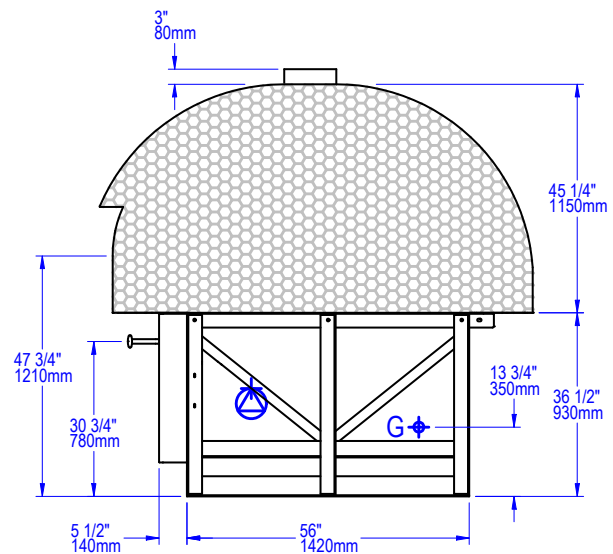
- Air intake: Do not facade or cover over
- Must be left removable for service

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

### Front view



### Side view



### UTILITIES SPECIFICATIONS

#### Gas ⚡

3/4 inch FNPT gas inlet  
See Gas Specifications on page 13 of this manual.

**Maximum gas inlet pressure:**  
1/2 psi (14 inches W.C.)

#### Electrical ⚡

120 VAC, 2 A, 50/60 Hz  
Optional: 240 VAC, 1 A, 50/60 Hz  
All utility connections made beneath oven as shown.  
Refer to data plate when installing.

#### Venting

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

**Important:** "-W" models must be vented as solid-fuel oven.





### 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.

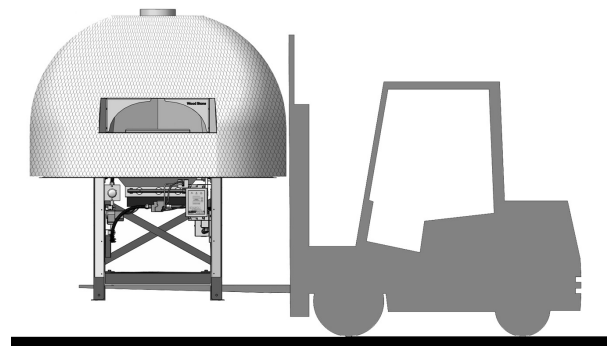


fig. a

### ⚠ WARNING

#### Minimum Required Forklift Capacities

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

### USING A PALLET JACK

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

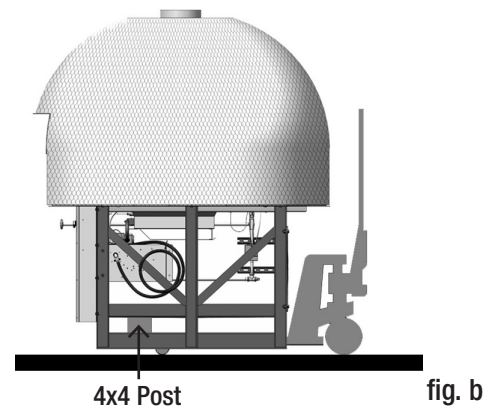


fig. b

**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.

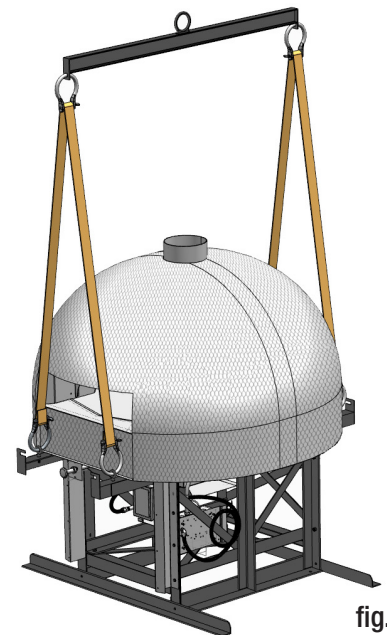


fig. c

### 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 Traditional Series oven must have a minimum 1-inch clearance to combustibles from all sides, and 6-inch clearance to combustibles from the top. If building materials will contact the oven, they must be completely non-combustible. Please note that standard Drywall (or Sheetrock) is considered a combustible. When non-combustible building materials contact the body of the oven, the respective clearances are transferred to those non-combustibles.
2. Any facade 6 inches to either side of the oven doorway or above, must be constructed of non-combustible building materials.
3. **For gas-only models**, this oven is suitable for installation on combustible floors (convient à l'installation sur un plancher combustible).

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

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

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

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

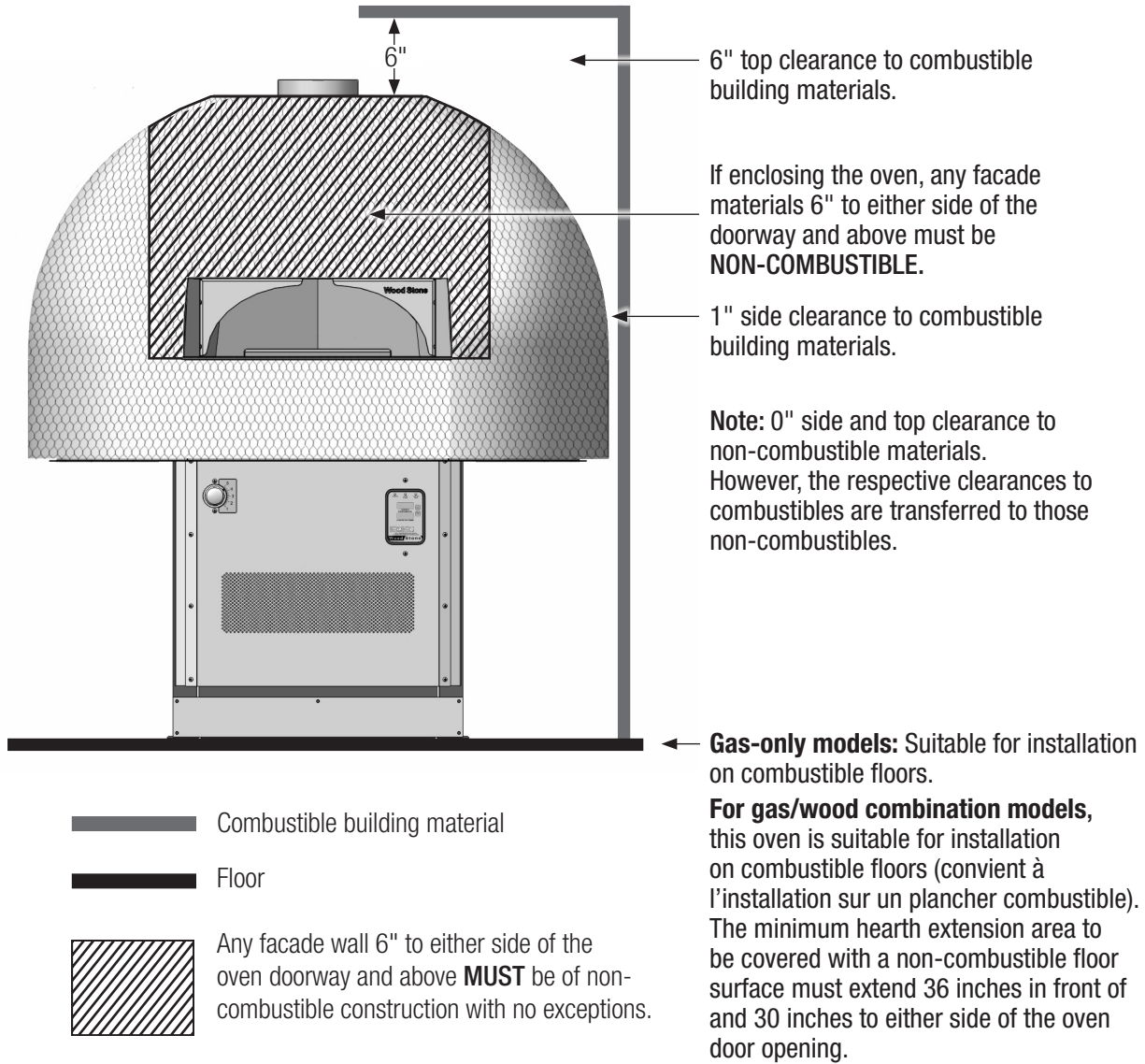


**WARNING:** Installation and servicing of this product could expose you to glasswool/ceramic fibers as well as calcium silicate dust. **ALWAYS WEAR RESPIRATORY AND EYE PROTECTION WHEN INSTALLING OR SERVICING THIS APPLIANCE.** Please read this entire manual before you install the oven. Failure to follow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

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



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





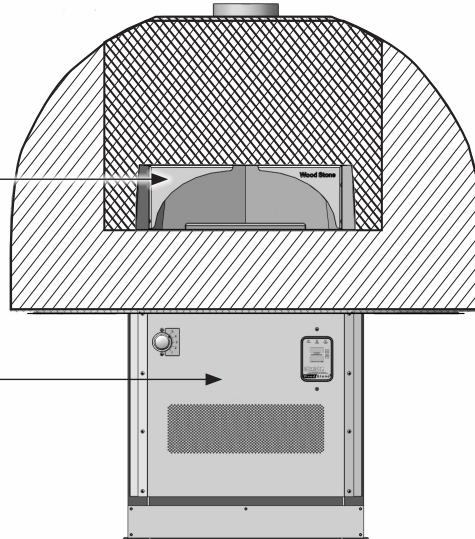
Wood Stone Traditional Series (TS-) ovens carry an ETL Sanitation listing. The oven interior only is ETL listed to NSF/ANSI Standard 4. Surfaces of the oven, meant to be left exposed after facade installation, have been evaluated for sanitation and food safety and comply with NSF/ANSI Standard 4. To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


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


### Oven Arches **DO NOT REMOVE**

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

A removable service panel or storage box allows access for service of gas and electrical components. If this panel is not used, access and air intake of equivalent dimensions **MUST** be provided at the front of the oven.



 Hatched areas shall not be exposed after installation of facade, i.e. this area must be covered with stucco, tile, or similar non-combustible material.

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

## STUCCO

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

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

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

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

## TILE

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

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

The surface area of the TS-5 dome is approximately 72 ft<sup>2</sup>.

The surface area of the TS-6 is approximately 90 ft<sup>2</sup>.



### FACTORY SPECIFIED INDIVIDUAL BURNER MANIFOLD PRESSURES (W.C.) FOR WS-TS MODELS

Burner Configuration (NG)	RFG-IR, RFG-IR-W (W.C.)		RFG, RFG-W (W.C.)	W-IR (W.C.)
	SV-1	SV-2	SV-2	SV-1
Model				
WS-TS-5-NG	3.5"	4.75"	4.75"	3.5"
WS-TS-6-NG	3.5"	4.75"	4.75"	3.5"

Burner Configuration (LP & HLP)	RFG-IR, RFG-IR-W (W.C.)		RFG, RFG-W (W.C.)	W-IR (W.C.)
	SV-1	SV-2	SV-2	SV-1
Model				
WS-TS-5-(LP, HLP)	9"	8"	8"	9"
WS-TS-6-(LP, HLP)	9"	8"	8"	9"

**This oven requires no modifications or adjustments for use at high altitudes.**

The installation of this appliance must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 or The Natural Gas Installation Code CAN/CGA-B149.1 as applicable.

SV-1 is the gas control valve that operates the Underfloor Infrared (IR) Burner. The manifold pressure is checked at the outlet port on the SV-1 gas valve.

SV-2 is the gas control valve that operates the interior Radiant Burner. SV-2 is located at the rear left beneath the oven. The manifold pressure test port for the Radiant Burner is a 1/8" NPT plugged tap located at the base of the T-junction between the SV-2 and the Radiant Burner.

The burner manifold pressure has been adjusted and tested at the factory. A variety of factors can influence this pressure, so be sure to test the burner manifold pressure and adjust the valve as necessary to achieve the specified pressure.

**NOTE:** The gas valve is shipped in the **ON** position.

### GAS CONNECTION

The Traditional Series ovens are equipped with a 3/4" NPT gas connection located at the rear left of the oven. Have a licensed gas installer provide the hook-up and test all fittings and pipe connections for leaks. Use approved gas leak detectors (soap solutions or equivalent) over and around the fittings and pipe connections. **DO NOT USE FLAME TO TEST FOR LEAKS.**

Wood Stone recommends that the oven's individual shutoff valve (supplied by others) be left readily accessible. Wood Stone also recommends that inspection and maintenance of the burner and gas piping connections of this appliance be performed at regularly scheduled intervals and only by professional gas appliance service agencies.

**Maximum inlet gas pressure must not exceed 14" W.C. (1/2 PSI)**



### MAXIMUM HOURLY BTU INPUT RATES FOR WS-TS MODELS

Burner Configuration (NG)			
Model	RFG-IR-W, RFG-IR	RFG, RFG-W	W-IR
WS-TS-5-NG	188,000	105,000	83,000
WS-TS-6-NG	188,000	105,000	83,000

Burner Configuration (LP)			
Model	RFG-IR-W, RFG-IR	RFG, RFG-W	W-IR
WS-TS-5-LP	159,000	94,000	65,000
WS-TS-6-LP	159,000	94,000	65,000

Burner Configuration (HLP)			
Model	RFG-IR-W, RFG-IR	RFG, RFG-W	W-IR
WS-TS-5-HLP	188,000	105,000	83,000
WS-TS-6-HLP	188,000	105,000	83,000

### GAS INLET PRESSURE

For ovens running on natural gas, an inlet pressure of 7 to 10" W.C. is recommended to ensure optimum oven performance. Incoming gas pressure below this range will affect oven performance, the lower the pressure the greater the negative impact. If the gas supply pressure is greater than 14" W.C. (1/2 PSI), an external regulator, supplied by others, is REQUIRED to lower the gas pressure to the acceptable range. Issues caused by low or high gas pressure are installation issues, and will not be covered under the Warranty.

For ovens running on Propane (LP or HLP), the recommended inlet pressure to ensure optimum oven performance is 10 to 12" W.C. Incoming gas pressure below this range will affect oven performance, the lower the pressure the greater the negative impact. If the gas supply pressure is greater than 14" W.C. (1/2 PSI), an external regulator, supplied by others, is REQUIRED to lower the gas pressure to the acceptable range. Issues caused by low or high gas pressure are installation issues, and will not be covered under the Warranty.

For all installations, follow best practices for proper gas line pipe sizing for the line serving the oven. To ensure proper operation, all gas piping and fittings leading up to the oven should have an inside diameter equal to or greater than that of the oven gas connection. Also make sure that a readily accessible shut off valve (supplied by others) is installed near the oven, and in accordance with all applicable codes. Shut off valves must be of the full-flow type, and not introduce any restriction into the gas line.

The connection to the oven should be hard-piped whenever feasible. If this is not possible, use a properly sized flexible connector approved for this application. When using a flexible connector make sure that its design does not present any reduction in pipe diameter or other restriction. Oven issues caused by improper pipe sizing, improper shut off valves, restrictive connectors, or any other deficiency in the gas supply design or installation will not be covered under the oven Warranty.

### GAS CODE LIMITATIONS

The installation of this appliance must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 or The Natural Gas Installation Code CAN/CGA-B149.1 as applicable.

The appliance and its individual shutoff valve (supplied by others) must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.45 kPa).

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve (supplied by others) during any pressure testing of the gas supply piping system at test pressure, equal to or less than 1/2 psi (3.45 kPa).



Incoming power should be connected to the terminal strip located in the transformer junction box beneath the oven (see diagram below). The standard oven model comes configured for connection to a 120 VAC circuit. The oven can be ordered configured for connection to a 240 VAC circuit. Always refer to the equipment data plate beneath the oven to verify the proper voltage. The voltage is also specified on the transformer box cover. Never connect an oven rated 120 VAC to a 240 VAC circuit or vice versa. It is recommended that the oven be connected to its own individual branch circuit. Have a license electrician connect the oven to the appropriate 120 VAC or 240 VAC circuit.

Electrical diagrams are located on the transformer box. Electrical diagrams are also located near the end of this manual. See the FRONT PANEL ASSEMBLY section of this manual for the location of the transformer housing.

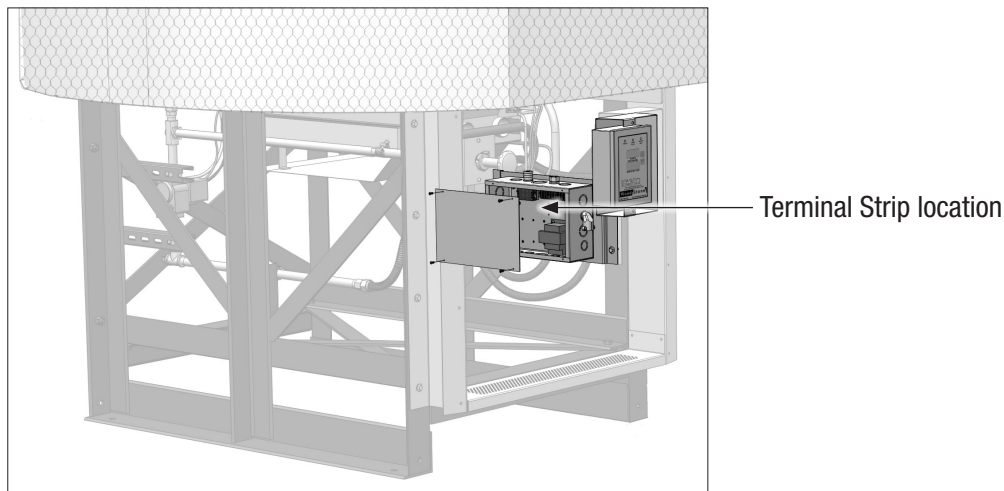
### ELECTRICAL RATINGS

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.



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





This section covers all configurations of the Traditional Series Oven: Gas-Only and Wood/Gas Combination models. Make certain you read the appropriate section for your model. **Note:** Wood/Gas Combination models must be vented as solid fuel.

The following are the manufacturer’s recommendations for venting the Wood Stone Traditional Series 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/gas combination 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 for Gas-Only Models (RFG, RFG-IR):** 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 300 °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 -0.1 inches water column is necessary at the oven flue collar to ensure that flue gas temperatures do not exceed 300 °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.

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

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

### CFM REQUIREMENTS (DIRECT CONNECT)

Burner Configuration	RFG-W, RFG-IR-W, W-IR	RFG, RFG-IR
Model		
WS-TS-5	500	450
WS-TS-6	500	450

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



**VENTING OPTION 2**

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

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

**VERY IMPORTANT!**

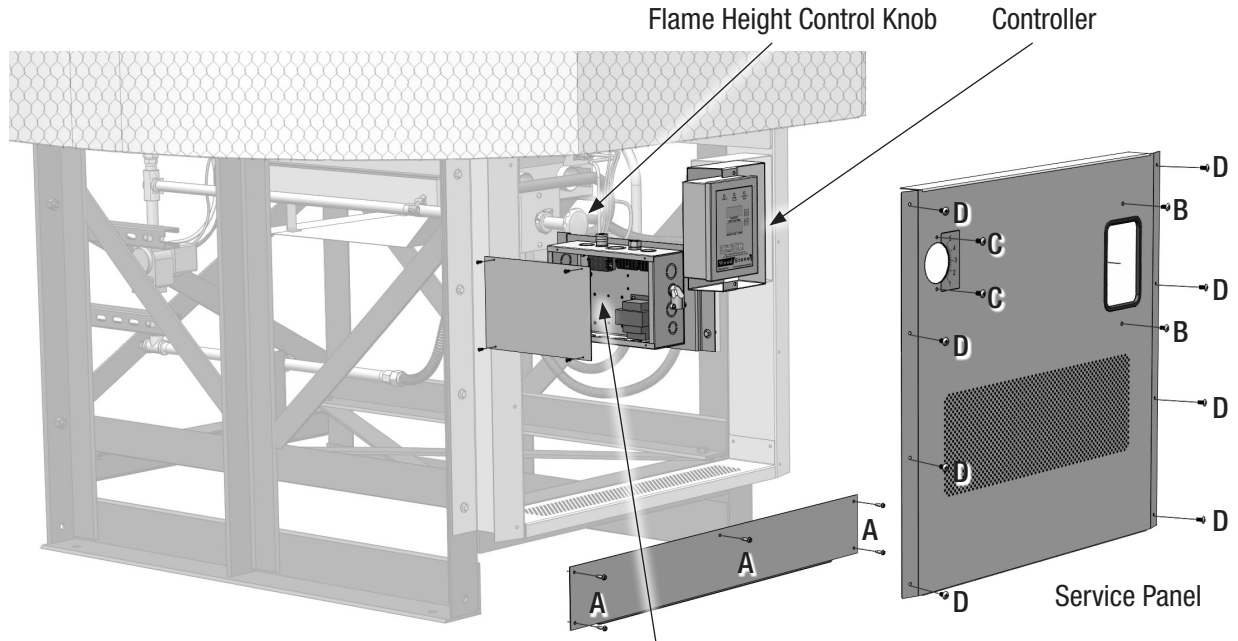
**WOOD STONE RECOMMENDS THAT YOU CONSULT WITH A QUALIFIED MECHANICAL ENGINEER  
AND SUBMIT YOUR VENTING PLANS TO LOCAL CODE AUTHORITIES  
BEFORE PROCEEDING WITH INSTALLATION.**

**FIRE SUPPRESSION**

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



### STANDARD FRONT PANEL AND TOE KICK ASSEMBLY INSTRUCTIONS



#### Transformer Box

Contains terminal strip for incoming power supply.

**NOTE:** Have licensed electrician make this electrical connection.



**A** Hex-head self-tapping screw. Used to attach Toe Kick. 5 total.



**B** Phillips head 1/4-20 screw. Used to attach Service Panel to Controller bracket. 2 total.



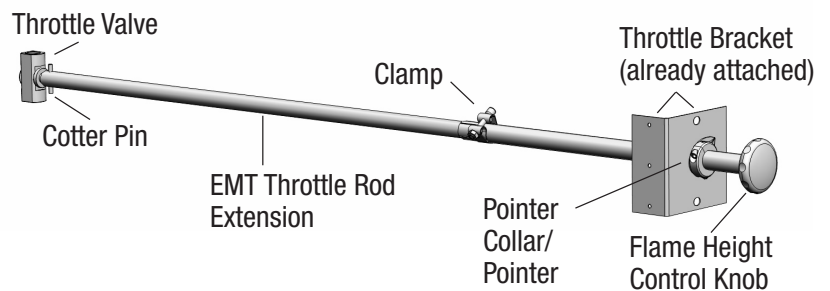
**C** Phillips head #10 screw. Used to attach Service Panel to Throttle Knob Bracket. 2 total.



**D** Phillips head self-tapping screw. Used to secure the sides of the Service Panel. 8 total.

### SERVICE PANEL THROTTLE ASSEMBLY

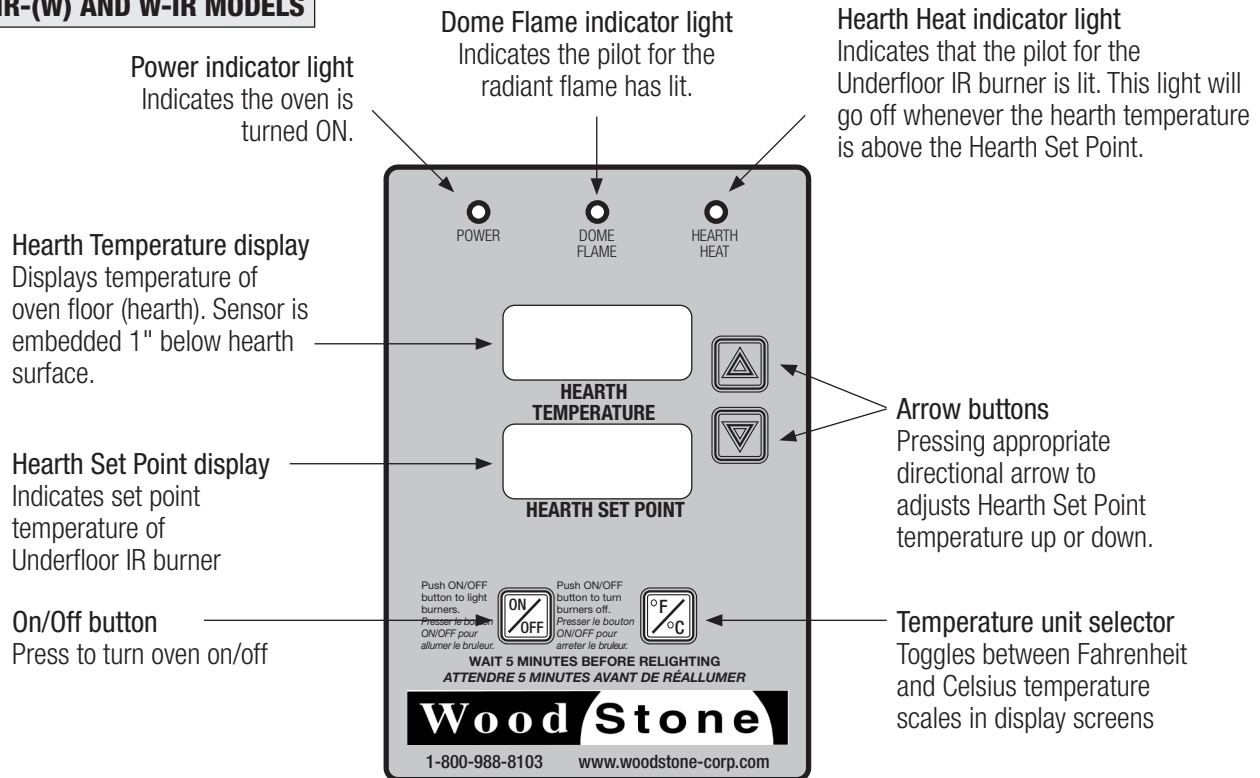
The Flame Height Control Knob position can be adjusted inward or outward by loosening the Clamp and sliding the throttle knob assembly to the desired position. Be sure to retighten the Clamp once the Flame Height Control Knob is in the desired position.





### CONTROLLER FUNCTIONS

#### TYPE 2 RFG-IR-(W) AND W-IR MODELS



#### TYPE 4 RFG-(W)





### DETERMINING THE APPROPRIATE FLAME HEIGHT

For each specific configuration of oven there is a system that determines what the desired flame height will be. Each flame height corresponds to a saturated floor temperature. Several factors need to be accounted for in order to determine this relationship for each oven. Burning wood simultaneously in the oven will influence the settings below.

### USING THE FLAME HEIGHT INDICATOR SCALE

**Heat Up Flame:** Set Throttle Knob Pointer at "5" (highest setting) on the Flame Height Index Scale until desired temperature is reached.

**Holding Flame:** Set the flame height to "3" (~8–9" flame) on the Flame Height Index Scale for desired temperature of 570–600 °F. Set the flame height to "2" (~5–6" flame) on the Flame Height Index Scale for desired temperature of 450–480 °F.

**Cooking Flame:** After introducing the pizza/product into the oven, visually raise the flame to approximately 3 inches higher than the Holding Flame.

**Return the Flame Height Control Knob to the Holding Flame position after removing the pizza/product from the oven.**

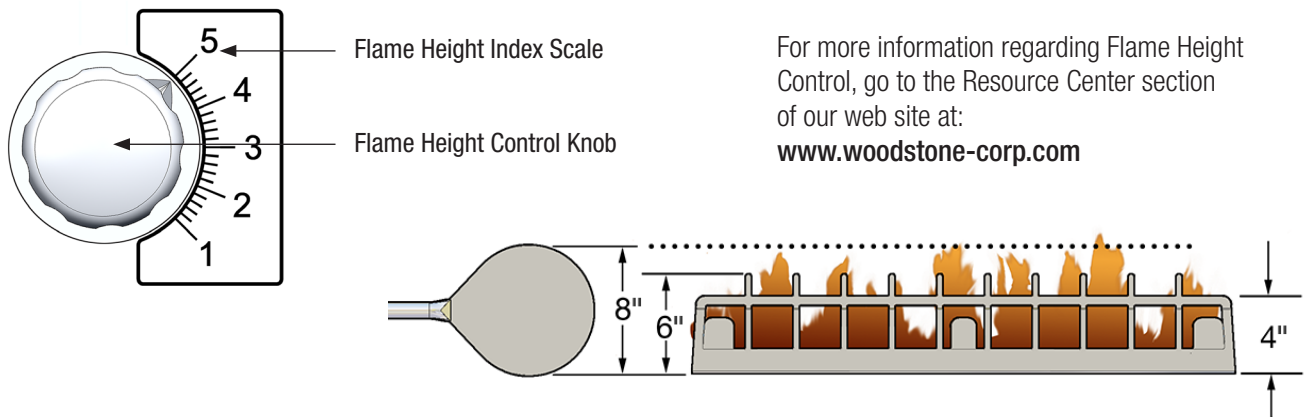
### THE COOKING FLAME HAS TWO PURPOSES:

1. To bake the top of the pizza/product as fast as the bottom of the pizza/product.
2. To help replace heat to the floor (hearth) that is lost during production cooking.

**Note:** The settings recommended on the Flame Height Index Scale for specific flames are based on ovens that have been installed according to specifications. Individual results may vary slightly.

### FLAME HEIGHT INDICATOR

Comprised of two parts





### CLEANING THE OVEN

Clean as needed—multiple times per hour depending on production. Wood Stone recommends the use of long-handled brushes for sweeping up surface debris that will accumulate on the floor of the oven during use. Use a natural fiber brush, always brushing away from the radiant burner well to the doorway where it can be easily removed with a dough cutter or spatula. For deeper cleaning, use a brass bristled brush. The oven floor can be then cleaned with a damp (not wet) rag wrapped around the brush head.

Wood Stone offers an assortment of oven brushes available through your dealer. Specification sheets may be viewed on the Wood Stone website under Tools & Accessories.

**NEVER PLACE ANYTHING IN OR ABOVE THE RADIANT FLAME.**

**NEVER SWEEP DEBRIS INTO THE RADIANT BURNER. THIS CAN CAUSE THE BURNER TO CUT OUT, DAMAGE BURNER COMPONENTS, AND/OR EFFECT BURNER PERFORMANCE. PROBLEMS CAUSED BY DEBRIS IN THE RADIANT BURNER WILL NOT BE COVERED BY THE OVEN WARRANTY.**

**NEVER USE ICE, EXCESSIVE WATER, ANY LIQUID, OR ANY TYPE OF CLEANING CHEMICAL ON THE OVEN FLOOR. DOING SO CAN SEVERELY DAMAGE THE OVEN CERAMIC AND THIS DAMAGE WILL NOT BE COVERED UNDER WARRANTY.**

### NIGHT HEAT RETENTION DOORS

The Night Heat Retention Door(s) are used for nighttime heat retention.  
**Do not operate the oven with doors in place.**



### PERIODIC THERMAL CLEANING

#### ESTABLISHING A THERMAL CLEANING SCHEDULE

Wood Stone ovens are typically operated at temperatures which preclude the need for cleaning of the interior walls and ceiling (the dome) of the oven. If, however, you routinely operate the oven at floor temperatures lower than 450 °F, you may notice a buildup on the interior walls and/or ceiling of the oven. If this is the case, use the following procedure to periodically clean the oven. The frequency of thermal cleaning will be determined by the amount of buildup experienced.

#### THERMAL CLEANING

If a Wood Stone gas-fired oven is operated at low temperatures (below 450 °F), it is possible that grease from food could condense on the walls and ceiling of the oven. To remove the grease that has accumulated on the walls and ceiling of the oven, simply turn the radiant flame to its highest setting. Monitor the floor temperature displayed on the Controller. When the floor reaches 600 °F, lower the flame slightly so as to maintain the oven floor temperature near 600 °F for about an hour. Once the oven dome appears clean, allow the oven to return to normal operating temperatures and continue normal operation.

**RFG AND RFG-W MODELS: INITIAL OVEN START-UP PROCEDURE**

Wood Stone recommends completing this start-up procedure before burning any wood.

**IMPORTANT:** If at any time you feel that the burner is not operating properly, turn the oven off and call for service. Before servicing, disconnect the electrical supply at the breaker and turn off the gas supply at the appliance's individual gas shutoff valve. In the event of a power failure, no attempt should be made to operate the oven.

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 or if the oven has not been used for an extended period of time.

**BEFORE GETTING STARTED**

1. Make sure main gas supply is ON (valve parallel with gas line).
2. Make sure the switches on the Honeywell control gas valves are in the ON position. These are located beneath the oven.
3. Make sure that the venting system has been tested and approved for operation and is ON.

**FIRST DAY**

1. Remove the Night Heat Retention Door(s). Push the ON/OFF button on Controller. It may take awhile for the gas to purge all the air from the gas lines.
2. Allow oven to operate at the factory settings for 1 hour (Radiant flame at its lowest setting).
3. After one hour, using the Flame Height Control Knob, raise radiant flame to 25% (~6 inch flame, "2" on the Flame Height Index Scale). Hold this setting for 4 hours.
4. After 4 hours at 25% flame, using the Flame Height Control Knob, raise to 50% flame ("3" on the Flame Height Index Scale) and hold for at least another 4 hours or until the temperature reaches 500 °F.
5. Once the temperature reaches 500 °F the oven is ready for use. If you will be shutting the oven down, see the instructions that follow.

**TURNING OFF THE OVEN**

1. Push ON/OFF button. All gas will go off, including the pilots. Put the Night Heat Retention Door(s) in place to retain heat.

**NOTE:** Always wait 5 minutes before restarting the oven. **Never run the oven with the Night Heat Retention Door(s) in place.**

**NOTE:** 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 the Wood Stone Service Department for evaluation.

**RFG AND RFG-W MODELS: DAILY OVEN OPERATION OVERVIEW****DAILY OPERATION**

1. Remove the Night Heat Retention Door(s).
2. Push ON/OFF button. Using the Flame Height Control Knob, turn the radiant flame to its highest setting. Check your temperature after approximately one hour. If you are close to your desired temperature, reduce your flame to the holding flame setting that corresponds to your desired temperature. See the FLAME HEIGHT CONTROL section that follows to determine the proper setting that will correspond to your desired temperature. The Hearth Temperature readout will display "LO" until the oven floor reaches 100 °F.

**ADJUSTING THE RADIANT (DOME) FLAME**

**To adjust the radiant flame:** The radiant flame is always on when the oven is operating and can be adjusted to any flame intensity between its highest and lowest setting. Simply turn the Flame Height Control Knob located to the lower left of the doorway, beneath the mantle.

**FOR MODELS APPROVED TO ALSO BURN WOOD**

See the BURNING WOOD SAFELY section of this manual for information on burning wood. Models listed to burn wood will have a -W at the end of the model number.

**TURNING OFF THE OVEN**

1. Push the ON/OFF button. All gas will go off, including the pilots.
2. Put the Night Heat Retention Door(s) in place to retain heat.

**Note:** Always wait 5 minutes before restarting the oven. **Never run the oven with the Night Heat Retention Door(s) in place.**

**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.**



**RFG-IR AND RFG-IR-W OVENS: INITIAL OVEN START-UP PROCEDURE**

Wood Stone recommends completing this Start-Up Procedure before burning any wood.

**IMPORTANT:** If at any time you feel that either or both of the burners are not operating properly, turn the oven off and call for service. Before servicing, disconnect the electrical supply at the breaker and turn off the gas supply at the appliance's individual gas shutoff valve. In the event of a power failure, no attempt should be made to operate the oven.

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.

**BEFORE GETTING STARTED**

1. Make sure main gas supply is ON (valve parallel with gas line).
2. Make sure the switches on the Honeywell control gas valves are in the ON position. These are located beneath the oven.
3. Make sure that the venting system has been tested and approved for operation and is ON.

**FIRST DAY**

1. Remove the Night Heat Retention Door(s). Push the ON/OFF button on Controller. It may take awhile for the gas to purge all the air from the gas lines.
2. Allow oven to operate at the factory settings for 1 hour (Hearth Set Point at 100 °F, Radiant flame at its lowest setting). Leave the Hearth Set Point at 100 °F throughout the entire first day.
3. After one hour, raise Radiant flame to 25% (~6 inch flame, "2" on the Flame Height Index Scale). Hold this setting for 4 hours.
4. After 4 hours at 25% flame, raise to 50% flame ("3" on the Flame Height Index Scale) and hold for at least another 4 hours or until the temperature reaches 500 °F.
5. Once the temperature reaches 500 °F the oven is ready for use. If you will be shutting the oven down, see the instructions that follow.

**TURNING OFF THE OVEN**

1. Push ON/OFF button. All gas will go off, including the pilots. Put the Night Heat Retention Door(s) in place to retain heat.

**NOTE:** Always wait 5 minutes before restarting the oven. **Never run the oven with the Night Heat Retention Door(s) in place.**

**NOTE:** 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.



## RFG-IR AND RFG-IR-W OVENS: DAILY OVEN OPERATION OVERVIEW

### DAILY OPERATION

1. Remove the Night Heat Retention Door(s).
2. Push ON/OFF button, adjust the Hearth Set Point on the Controller to the desired floor temperature. Using the Flame Height Control Knob, turn the radiant flame to its highest setting.
3. Check your temperature after approximately one hour. If you are close to your desired temperature, reduce your flame to the holding flame setting that corresponds to your desired temperature. See the FLAME HEIGHT CONTROL section that follows to determine the proper setting that will correspond to your desired temperature.

**Note:** It is only possible to program the Hearth Set Point for the Underfloor IR burner to temperatures from 100–800 °F. Once proper temperatures for your application have been established, there should be little or no need to change the Hearth Set Point. The Hearth Temperature readout will display “LO” until the oven floor reaches 100 °F.

### ADJUSTING THE RADIANT (DOME) FLAME

**To adjust the Radiant flame:** The Radiant flame is always on (when the oven is operating) and can be adjusted to any flame intensity between its highest and lowest setting. Simply turn the Flame Height Control Knob located to the lower left of the doorway, beneath the mantle. **This burner is the primary heat source for the oven.** The Underfloor IR burner acts as an assist, to maintain desired floor temperatures during periods of high food production.

### FOR MODELS APPROVED TO ALSO BURN WOOD

See the BURNING WOOD SAFELY section of this manual for information on burning wood. Models listed to burn wood will have a -W at the end of the model number.

### TURNING OFF THE OVEN

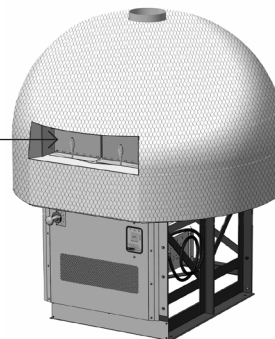
1. Push the ON/OFF button. All gas will go off, including the pilots.
2. Put the Night Heat Retention Door(s) in place to retain heat. **Note:** This option is for heat retention **only**, and should only be used when the oven is turned OFF.

**Note:** Always wait 5 minutes before restarting the oven.

**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.**

### NIGHT HEAT RETENTION DOORS

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





### W-IR OVENS: INITIAL OVEN START-UP PROCEDURE

The W-IR model is a wood burning oven with an Underfloor Infrared burner to assist in speeding heat-up and to assist in managing hearth temperature. The wood fire in this oven is the main heat source.

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.

#### BEFORE BUILDING THE FIRE

**Note:** W-IR ovens use the Type 2 Controller shown in the GAS CONTROLLERS section of this manual.

Set the thermostatic Hearth Set Point to 100 °F (factory settings). Note that the Hearth Temperature display will read “LO” until the oven reaches 100 °F. To adjust the oven’s thermostatic hearth temperature setting, simply the Up or Down arrow button corresponding to the direction in which you would like the setting to go. If the thermostatic Hearth Set Point is raised **above** the actual Hearth Temperature, the Underfloor IR burner should activate. **Note:** It is only possible to program the floor’s thermostatic Hearth Set Point to temperatures from 100–800 °F. Once the proper temperature for your application have been established, there should be little or no need to change the Hearth Set Point.

#### DAY ONE

1. Build a small kindling fire of newspaper and 5–7 lbs. of heavy hard wood. 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. See the BURNING WOOD SAFELY section of this manual for more detail. Slowly bring the oven temperature up to 300–400 °F. Maintain this fire for 4–5 hours.
2. Once the oven temperature has reached and maintained a temperature of 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 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 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.**

**AFTER THE FIRST DAY HEAT-UP:** Raise the Hearth Set Point to desired hearth temperature. If the goal is to cook between 500–530 °F, the Hearth Set Point should be 500 °F. Remember, the wood fire is the main heat source.

**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, hard wood produces the potential of 6,500 BTU/hr.
- The temperature sensor (thermocouple) is located one inch under the surface, approximately 1 ft. back from the center of the oven. The thermocouple will read a much higher temperature than the surrounding deck temperature 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, the Start-Up Procedure will need to be repeated to avoid thermal shocking of the oven ceramic 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.

### THE FIRE

Use only seasoned hardwoods with a moisture content of 15–20%. 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 Wood Stone 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, 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. The oven is heated more evenly and effectively by the fire positioned on the side rather than in the rear of the oven.

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

The floor temperature is indicated in the Hearth Temperature display on the Controller and should not exceed 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.

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

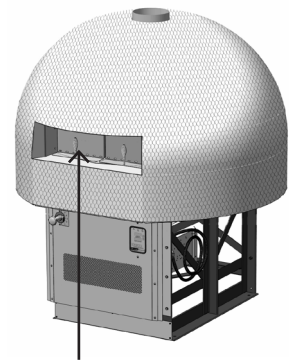
### HOW TO READ HEARTH TEMPERATURE

The floor temperature is continuously displayed by the Controller in the top window labeled “Hearth Temperature”. This reading is being taken by a thermocouple about an inch 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 500–600 °F. If you need to achieve higher temperatures, use a little more wood. For lower temperatures use a little less wood.

**TS-5:** To maintain temperature: 1–1½ logs with 8–12" of open flame working on the coal bed.



### NIGHT HEAT RETENTION DOORS

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

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



### ASH DISPOSAL

At the start of the following work day, pull the spent fuel (fly ash) off of the coal bed using your brass bristle brush. Remove with ash shovel and place ashes into an ash dolly (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. Specification sheet is available under Tools and Accessories on [www.woodstone-corp.com](http://www.woodstone-corp.com).

**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.

**Note:** 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.

### TURNING OFF THE BURNER

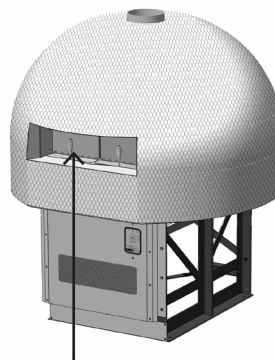
Push the ON/OFF button on the Controller to turn the burner off. The burner will go out and the digital readout on the Controller will go blank.

### ALWAYS WAIT 5 MINUTES BEFORE RELIGHTING THE OVEN

For additional operational and cooking information please visit [www.woodstone-corp.com](http://www.woodstone-corp.com) or call Wood Stone.

### NIGHT HEAT RETENTION DOORS

These door(s) are used for nighttime heat retention. **Note:** This option is for heat retention *only*, and should only be used when the oven is turned OFF.



### NIGHT HEAT RETENTION DOORS

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



WS-TS-RFG-W and RFG-IR-W models are approved to allow the burning of wood in the cooking chamber in addition to the gas burners. When burning wood, the fire should be placed to one side of the oven chamber, as close to the door opening as is possible (this is often described as the 8 o'clock or 4 o'clock position). Burn a maximum of 15 lbs. of wood per hour. **If flames spill out of the doorway, or the oven temperature exceeds 850 °F, you are over firing the oven.**

Make every effort to keep ash and other debris out of the radiant burner well. Do not use the radiant burner as a “backstop” when shoveling ash and/or coals out of the oven. **Burner problems resulting from debris or ash in the burner well will not be covered by the oven warranty.** Using the oven floor brush and ash shovel, move debris only toward the oven doorway and dispose of safely.

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

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

**DO NOT USE THE RADIANT BURNER TO IGNITE WOOD OR SUPPORT THE WOOD FIRE.**

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

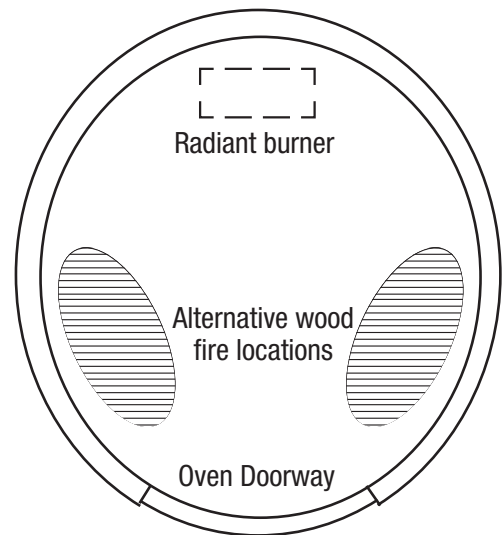
The interior floor and dome of the oven do not require creosote or soot removal. The oven flue and exhaust system will require inspection and cleaning. The exhaust system must be inspected and cleaned per the manufacturer's and or local code official's recommendations.

**Wood Stone recommends cleaning and inspection at 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 Ash Shovel and Double Compartment Ash Dolly 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.





**IMPORTANT SAFETY CONSIDERATIONS**

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

**CREOSOTE - AND THE NEED FOR ITS REMOVAL**

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

The exhaust system should be inspected and cleaned per the manufacturer's and or local code official's recommendations.

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





### 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](http://woodstone-corp.com)).

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

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

$$\text{Cost per month} = A \times C \quad \text{Cost per day} = \frac{A \times C}{30} \quad \text{Cost per hour} = \frac{A \times C}{\frac{30}{12 \text{ hr day}}}$$

A = Cost/cord (from wood supplier)

B = lb/cord (from above table)

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

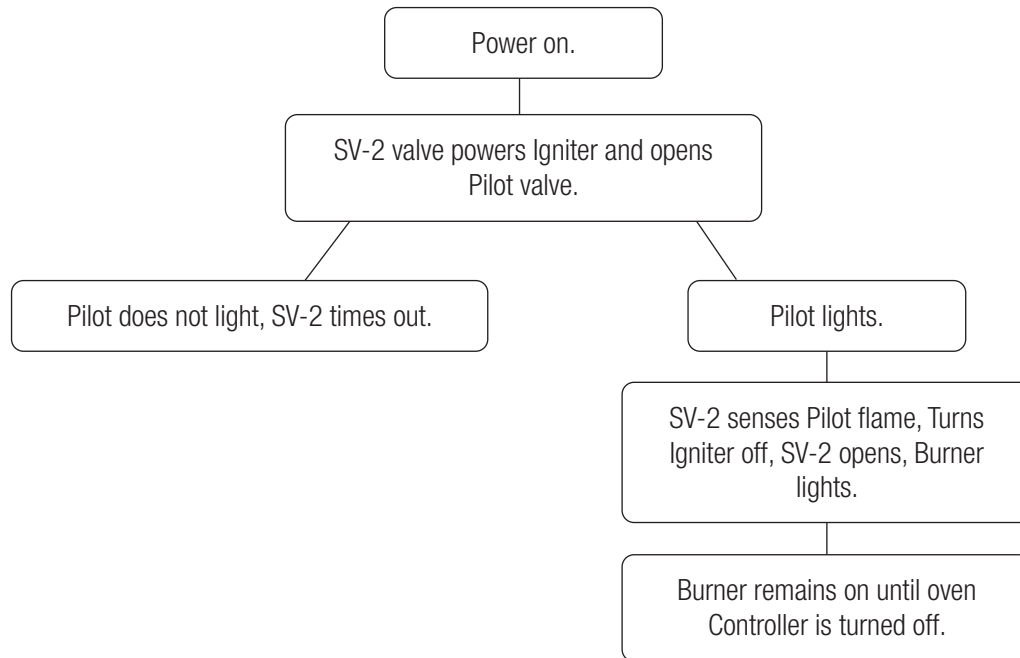
When burned, a pound of any wood releases approximately 6500 BTU/hr, so it is better to compare the price of wood by the pound rather than by the cord. A full cord of wood measures 4' x 4' x 8' when stacked.

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

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

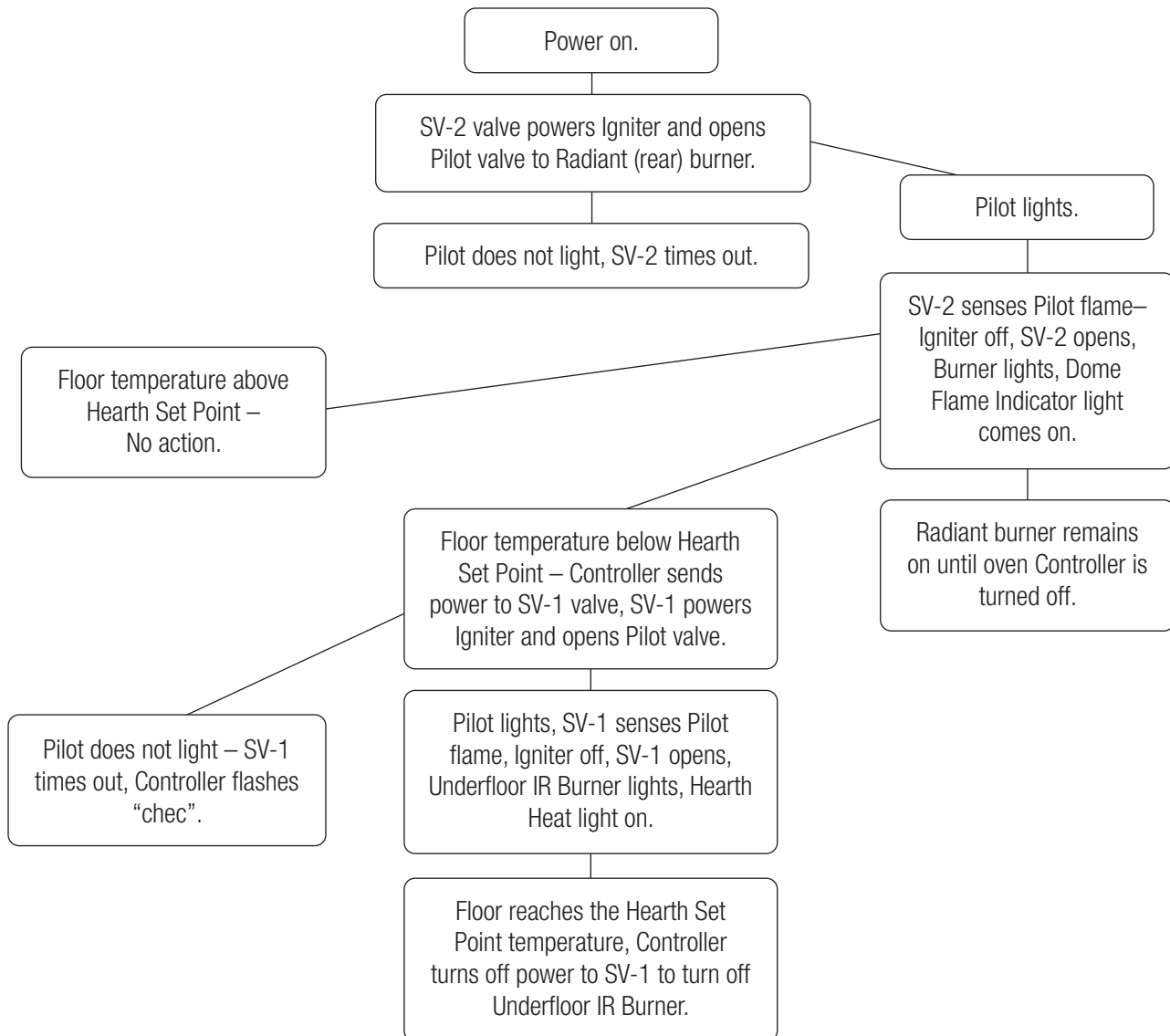


**BURNER OPERATION SEQUENCE  
RFG-(W) OVEN - TYPE 4 CONTROLLER**



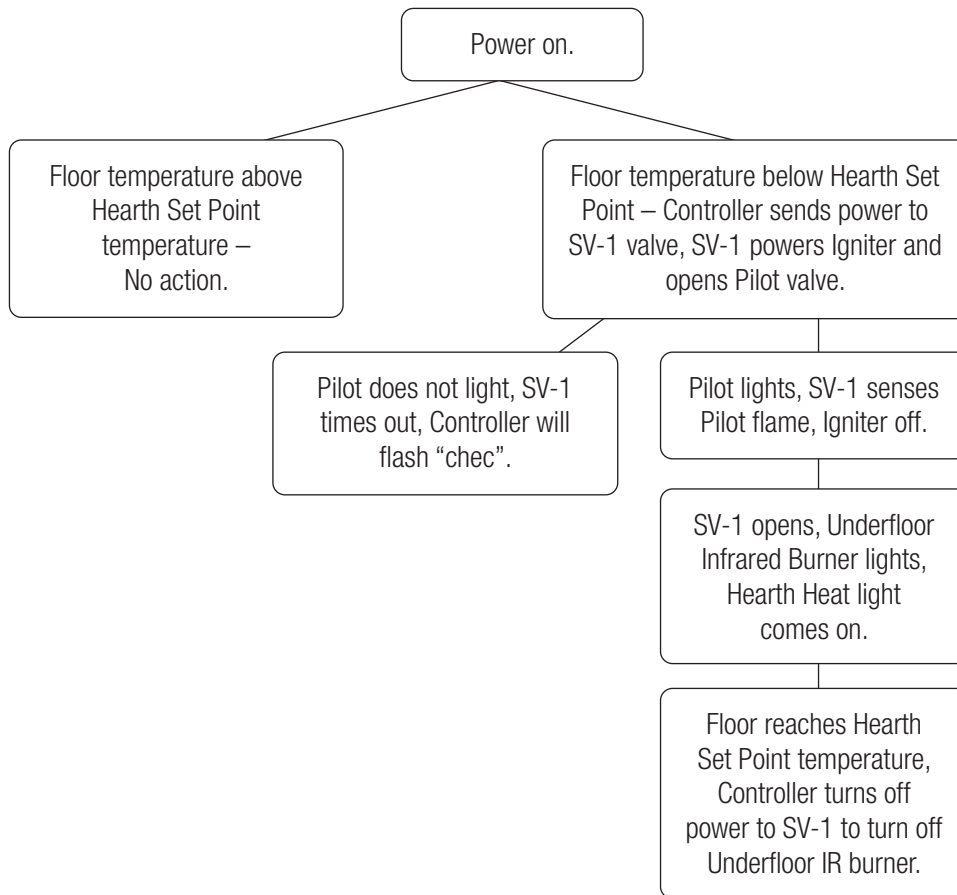


### BURNER OPERATION SEQUENCE RFG-IR-(W) OVEN - TYPE 2 CONTROLLER





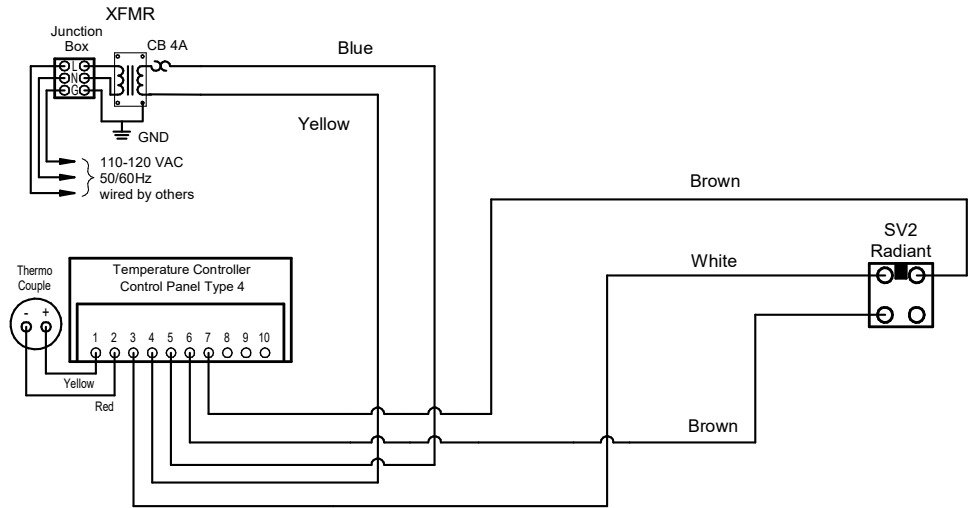
### BURNER OPERATION SEQUENCE W-IR OVEN - TYPE 2 CONTROLLER





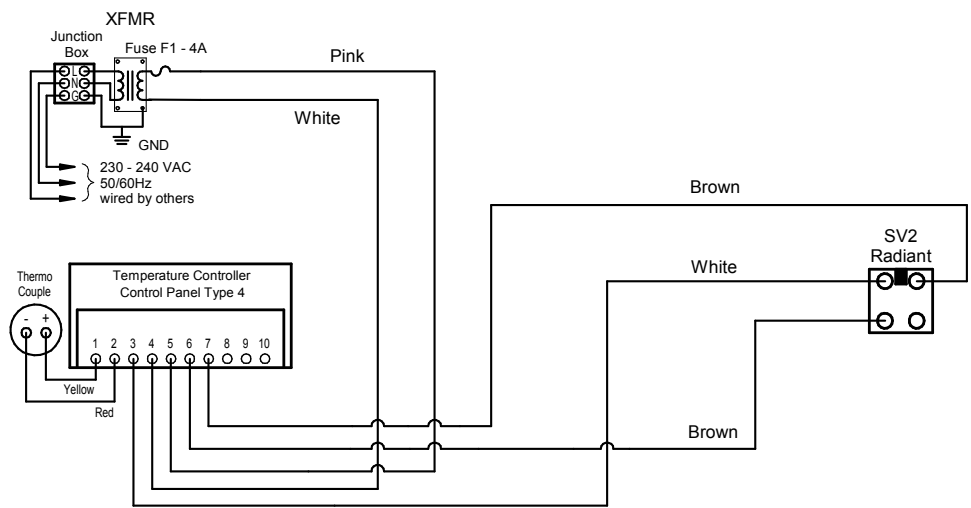
### RFG MODELS

**120 VAC**



DIAG #: WD070 Rev. 1

**240 VAC**



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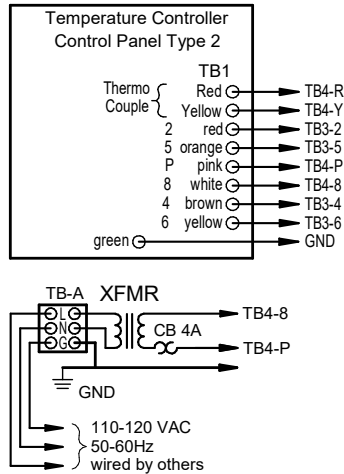
DIAG #: WD077 Rev. 2  
DATE: 12/12/2018



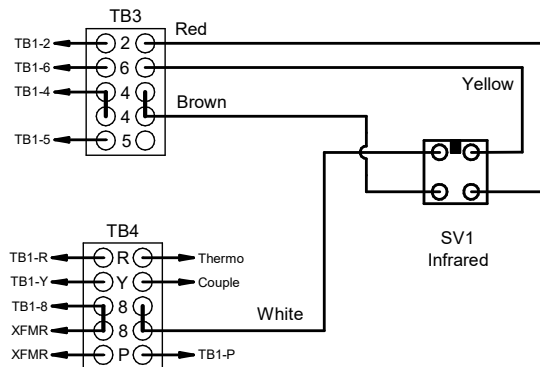


### W-IR MODELS

**120 VAC**



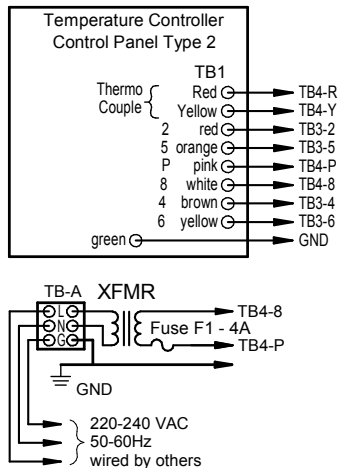
IR Only (W-IR)



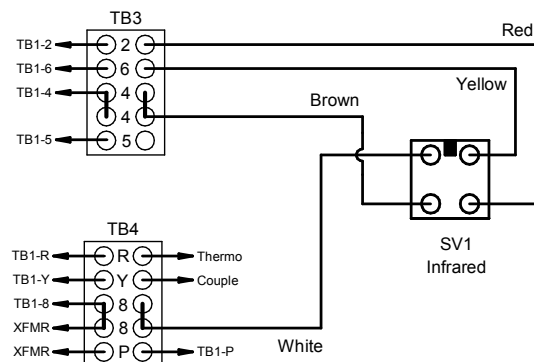
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DIAG #: WD061 Rev. 0  
DATE: 3/28/2014

**240 VAC**



IR Only EM-2V



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DIAG #: WD062 Rev. 1  
DATE: 12/12/2018



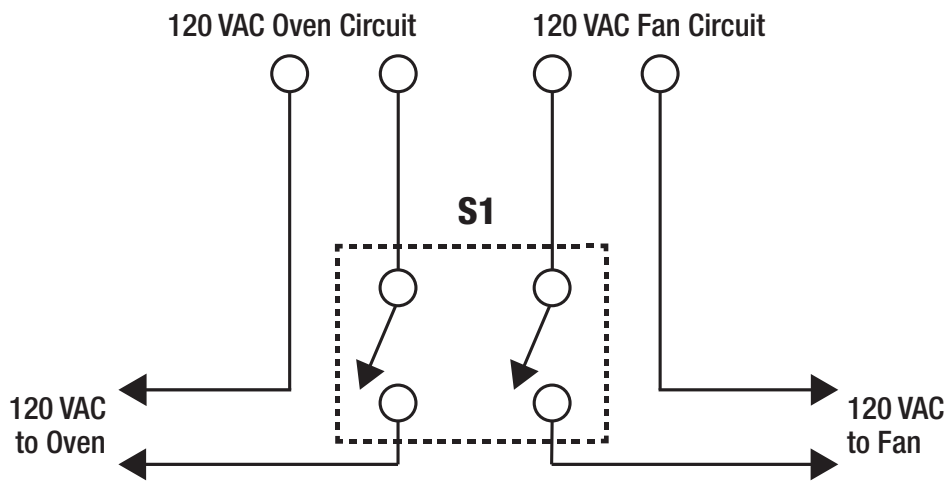


### INTERLOCK OF OVEN CONTROL TO AN EXHAUST FAN

This connection is intended to interrupt power to the oven until the fan is turned on.

**This connection is NOT to be used with ovens burning solid fuel.  
The ventilation system must be running any time there is solid fuel burning in the oven.  
Failure to follow this instruction can lead to a fire, as well as dangerous buildup  
of combustion byproducts, including Carbon Monoxide.**

Wired by others



S1 is a Double Pole, Single Throw (DPST) switch provided by others.

S1 is a double pole, single throw switch (provided by others) that interrupts in-coming power to both the oven and the fan. The intent is to prevent the operation of the oven’s gas burner in the event the fan is shut off.

Any interruption of the power to the oven will cause the oven (including all burners and pilots) to shut off, and it will be necessary to restart the oven by pressing the start switch once power is restored.

For additional interlock options, see the Wood Stone Interlock Options supplement in the Manuals section on the website, [woodstone-corp.com](http://woodstone-corp.com), or contact Wood Stone for additional information.



PROBLEM	CAUSE/SOLUTION
Controller will not turn on <b>ALL MODELS</b>	<ol style="list-style-type: none"> <li>Incoming power to oven turned off. Check circuit breaker for circuit supplying the oven. Check that any wall switches external to the oven that control oven power are turned on. Check that any interlocks external to the oven are turned on.</li> <li>If Controller still does not turn on, please contact Wood Stone for assistance.</li> </ol>
Radiant flame does not light <b>RFG-(W)</b> <b>W-IR</b> <b>RFG-IR-(W)</b>	<ol style="list-style-type: none"> <li>Is gas turned on to the oven? Is gas shut-off valve turned all the way on?</li> <li>Debris in burner. Burner may require cleaning. Contact Wood Stone for assistance.</li> <li>Damaged igniter or gas valve. Contact Wood Stone for assistance.                      If the oven is being started for the first time:                      Has all air been bled from the gas line?                      Is the switch on the SV-2 valve in the "ON" position?  <b>NOTE:</b> Valve is located beneath the oven at the rear, towards the side where the radiant burner is located.</li> </ol>
Flame cuts out <b>RFG-(W)</b> <b>RFG-IR-(W)</b>	<ol style="list-style-type: none"> <li>Debris in burner.</li> <li>Oven is being run with the Night Heat Retention Door in place.                      Door must be removed whenever the oven is turned on.</li> <li>Wind blowing into the oven, or other venting issue.</li> </ol>
Underfloor IR burner is not running. "Hearth Heat" light is off. <b>RFG-IR-(W)</b> <b>W-IR</b>	Hearth temperature is above the Hearth Set Point.
Hearth Temperature is above the Hearth Set Point. <b>RFG-IR-(W)</b> <b>W-IR</b>	This is normal. Radiant (dome) flame can drive the temperature over the Hearth Set Point. The Hearth Set Point only controls the Underfloor IR burner. Turn down the dome flame if needed.
"Chec" display on Controller <b>RFG-IR-(W)</b> <b>W-IR</b>	Underfloor IR burner did not fire when the floor temperature dropped below the Hearth Set Point. Contact Wood Stone for assistance.
"Chec" display on Controller <b>RFG-(W)</b>	See "Radiant flame does not light" above.

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



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

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

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

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

### LIMITATIONS OF LIABILITY

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

### TO SECURE WARRANTY SERVICE

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

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

# Wood Stone

**WOOD STONE CORPORATION**

1801 W. Bakerview Rd.  
Bellingham, WA 98226 USA

Toll Free 800.988.8103

Tel 360.650.1111

Fax 360.650.1166

[www.woodstone-corp.com](http://www.woodstone-corp.com)

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