

Installation and Operation Manual



MOUNTAIN SERIES

Stone Hearth Oven
Dual Burner, Gas-Fired Models



MT. CHUCKANUT

WS-MS-4-RFG-IR, RFG-IR-NAP

MT. ADAMS

WS-MS-5-RFG-IR, RFG-IR-NAP

MT. BAKER

WS-MS-6-RFG-IR, RFG-IR-NAP

MT. RAINIER

WS-MS-7-RFG-IR, RFG-IR-NAP



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INSTALLATION AND OPERATION MANUAL

THE WOOD STONE MOUNTAIN SERIES

STONE HEARTH COOKING EQUIPMENT

WS-MS-(4, 5, 6, 7)-RFG-IR MODELS (INCLUDES NAPLES MODELS)

GAS-FIRED OVEN

ADDITIONAL COPIES AVAILABLE UPON REQUEST

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.



WOOD STONE MOUNTAIN SERIES GAS-FIRED OVEN OPERATING INSTRUCTIONS

DO NOT THROW THIS MANUAL AWAY

RETAIN THIS MANUAL FOR FUTURE REFERENCE

Additional copies of this manual and prompt responses to service/maintenance questions are available from Wood Stone @ 1-800-988-8103.

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.

FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance. Also, always keep the area under and around this appliance free and clear of any and all combustible materials.

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.

WARNING: This product must be installed by a Licensed Plumber or Gas Fitter when installed within the Commonwealth Of Massachusetts.

Wood Stone's gas-fired ovens have been tested and approved by Intertek Testing Services, and are ETL Listed to ANSI Z83.11b - 2006, CSA 1.8b-2006 and to NSF/ANSI Standard 4 - 2009e



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.

LIFTING THE OVEN

1. 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.

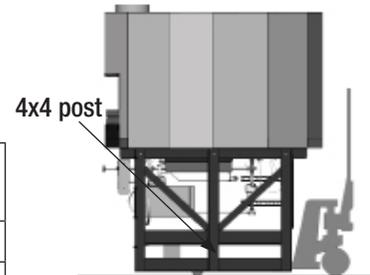
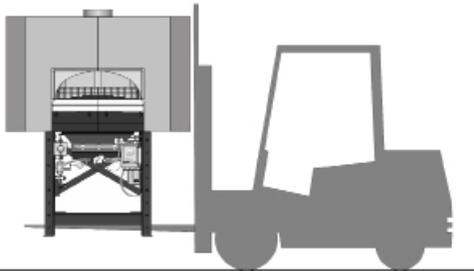
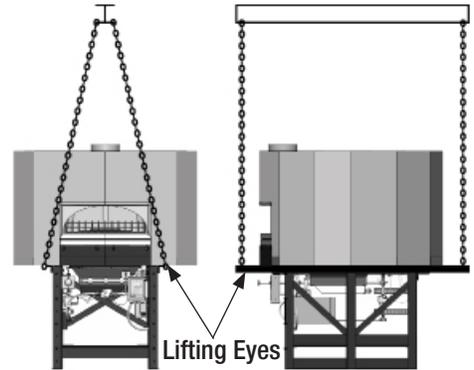
NOTE: Once lifting eyes are no longer needed, remove the lifting eyes one at a time **AND BE SURE TO REPLACE THE BOLTS THAT ATTACH THE OVEN TO THE STAND.**

2. USING A FORKLIFT

Be sure to use a forklift rated to lift more than the oven weighs as shown below. Fork length must be at least 6 feet, if not, fork extensions should be used. The oven stand is equipped with fork pockets just above the angle iron base. The oven is very top heavy so spread the forks as far apart as possible.

3. USING A PALLET JACK

Once the oven has been removed from the delivery vehicle, it can easily be moved on flat surfaces using a pallet jack. To lift the oven with a pallet jack, remove the front and rear angle iron stabilizers from the base of the oven stand and place a stout 4x4 post through the fork pocket as shown. **THE OVEN IS VERY TOP-HEAVY, MOVING THE OVEN UP OR DOWN A RAMP ON A PALLET JACK IS NOT SAFE!**



Model #	Oven	Approximate Weight	Minimum Fork Length Required	Required Forklift
WS-MS-4	Mt. Chuckanut	2,400 lbs.	4'	5,000 lbs.
WS-MS-5	Mt. Adams	3,600 lbs.	5'	6,000 lbs.
WS-MS-6	Mt. Baker	4,600 lbs.	6'	6,000 lbs.
WS-MS-7	Mt. Rainier	6,000 lbs.	7'	9,000 lbs.

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 interesting 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. Thank you.



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: 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.

CLEARANCES

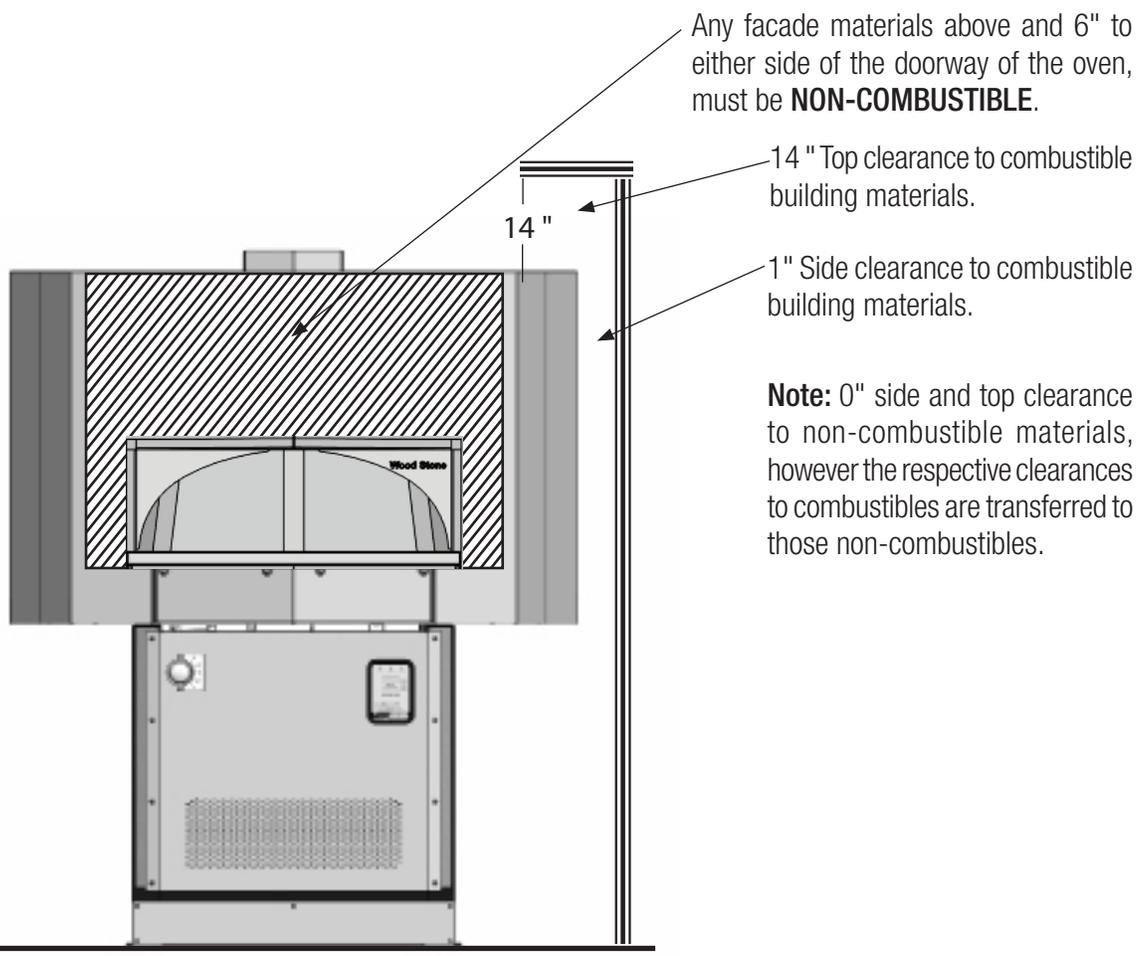
1. The Wood Stone gas-fired oven must have a **minimum 1" clearance to combustibles from all sides, and 14" clearance to combustibles from the top** (see Installation Clearances illustration) If building a facade that will contact the oven, use completely non-combustible materials*. Please note that standard dry-wall (or sheet rock) is considered a combustible.
2. Any facade above and/or 6" to either side of the oven doorway, must be constructed of non-combustible building materials.
3. Install this oven only on a non-combustible floor surface. The non-combustible floor surface should extend 36" out in front of the oven, and extend 30" to either side of the oven doorway.

NOTICE: FOR STUCCO COVERED OVENS (MODEL NUMBERS ENDING IN 'S'), 36" CLEARANCE TO COMBUSTIBLE BUILDING MATERIALS IS REQUIRED. *When non-combustible building materials contact the body of the oven, the clearances to combustibles are transferred to those non-combustibles.

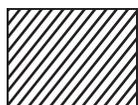
Please read this entire manual before you install the oven. Failure to follow instructions may result in property damage, bodily injury or even death. Contact your local building or fire officials about restrictions and installation inspection in your area.



THE FOLLOWING CLEARANCE INFORMATION APPLIES TO ALL WOOD STONE MOUNTAIN SERIES (NON-STUCCO) OVENS

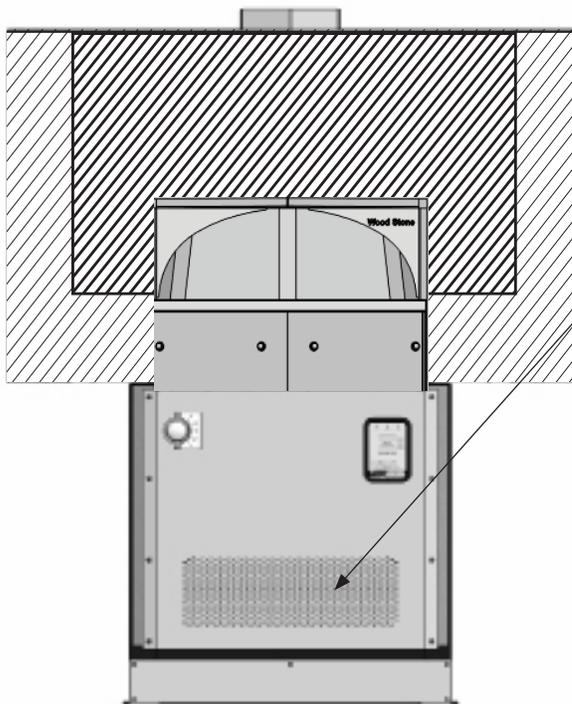


==== Combustible Building Material

 Hatched area represents area above and 6" to either side of the oven doorway.



Wood Stone Mountain Series (MS-Models) ovens carry an ETL Sanitation listing. The oven interior only is ETL listed to NSF/ANSI Standard 4. This means that the surfaces of the oven which are meant to be left exposed after the facade has been put in place, have been evaluated from the standpoint of sanitation and food safety and found to comply with NSF/ANSI Standard 4. To operate the oven in accordance with NSF/ANSI Standard 4, only pizza and bread products may be cooked directly on the floor of the oven. Other types of food may be cooked on or in pans, or other suitable containers to prevent spillage onto the oven deck.



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

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.

Go to www.woodstone-corp.com for detailed instructions for constructing a facade around a Wood Stone Oven.

  Hatched areas shall not be exposed after installation of facade.

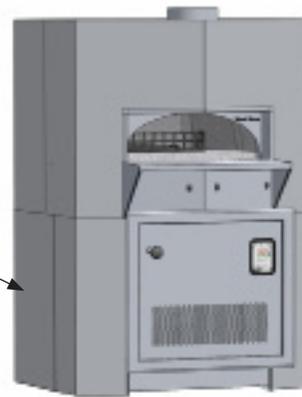
 Any facade above and/or within 6" to either side of the doorway must be constructed of non-combustible building materials



The Mountain Series (MS and MH) model ovens are ETL approved for outdoor installation. When installed outdoors, the open area beneath the oven must be enclosed, with the exception of the perforated area on the front service panel (or storage box) for air intake. The oven may be installed in a weatherproof enclosure. If so be sure to maintain all clearances and adhere to the installation requirements included in this manual.

Wood Stone also offers the following options to enclose the area beneath the oven:

Lower Lagging Kit



Stand Wrap Kit



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



The Wood Stone Gas 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!**

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 tapping located at the base of the T-junction between the SV-2 and the radiant/interior 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.

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

Factory specified individual burner manifold pressures for RFG-IR models equipped to burn Natural Gas.

Model	SV-1	SV-2
WS-MS-4-RFG-IR-NG	3.5"	5"
WS-MS-5-RFG-IR-NG	3.5"	4.75"
WS-MS-6-RFG-IR-NG	3.5"	4.75"
WS-MS-7-RFG-IR-NG	3.5"	4.6"

Factory specified individual burner manifold pressures for RFG-IR models equipped to burn Propane (LP).

Model	SV-1	SV-2
WS-MS-4-RFG-IR-LP	9"	7"
WS-MS-5-RFG-IR-LP	9"	8"
WS-MS-6-RFG-IR-LP	9"	8"
WS-MS-7-RFG-IR-LP	9.2"	9.5"

Model	SV-1	SV-2
WS-MS-4-RFG-IR-HLP	9"	7"
WS-MS-5-RFG-IR-HLP	9"	8"
WS-MS-6-RFG-IR-HLP	9"	8"
WS-MS-7-RFG-IR-HLP	9.2"	9.5"



HOURLY NATURAL GAS BTU INPUT RATES FOR WOOD STONE GAS OVENS

Model	Hourly BTU Input Rate
WS-MS-4-RFG-IR-NG	115,000
WS-MS-5-RFG-IR-NG	188,000
WS-MS-6-RFG-IR-NG	188,000
WS-MS-6-RFG-IR-NAP-NG	218,330
WS-MS-7-RFG-IR-NG	220,000

Note: For MS-4, 5, 7-RFG-IR-NAP-NG models there is no change in BTU's.

HOURLY PROPANE BTU INPUT RATES FOR WOOD STONE GAS OVENS

Model	Hourly BTU Input Rate	Model	Hourly BTU Input Rate
WS-MS-4-RFG-IR-LP	102,000	WS-MS-4-RFG-IR-HLP	115,000
WS-MS-5-RFG-IR-LP	159,000	WS-MS-5-RFG-IR-HLP	188,000
WS-MS-6-RFG-IR-LP	159,000	WS-MS-6-RFG-IR-HLP	188,000
WS-MS-6-RFG-IR-NAP-LP	218,330	WS-MS-6-RFG-IR-NAP-HLP	218,330
WS-MS-7-RFG-IR-LP	227,000	WS-MS-7-RFG-IR-HLP	227,000

Note: For MS-4, 5, 7-RFG-IR-NAP-LP models there is no change in BTU's. Wood Stone recommends that the appliance's individual shutoff valve (supplied by others) be left readily accessible. Wood Stone also recommends that inspection and maintenance of the burners and gas piping connections of this appliance be performed at regularly scheduled intervals and only by professional gas appliance service agencies.

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, The Natural Gas installation Code CAN/CGA-B149.1 or the Propane Installation Code, CAN/CGA-B149.2, as applicable including:

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 V circuit. The oven can be ordered configured for connection to a 240 V 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 V to a 240 V circuit or vice versa. It is recommended that the oven be connected to its own individual branch circuit. Have a licensed electrician connect the oven to the appropriate 120 V or 240 V circuit. Electrical diagrams are located directly to the right, behind the removable service/intake panel of the appliance as well as inside the control 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.

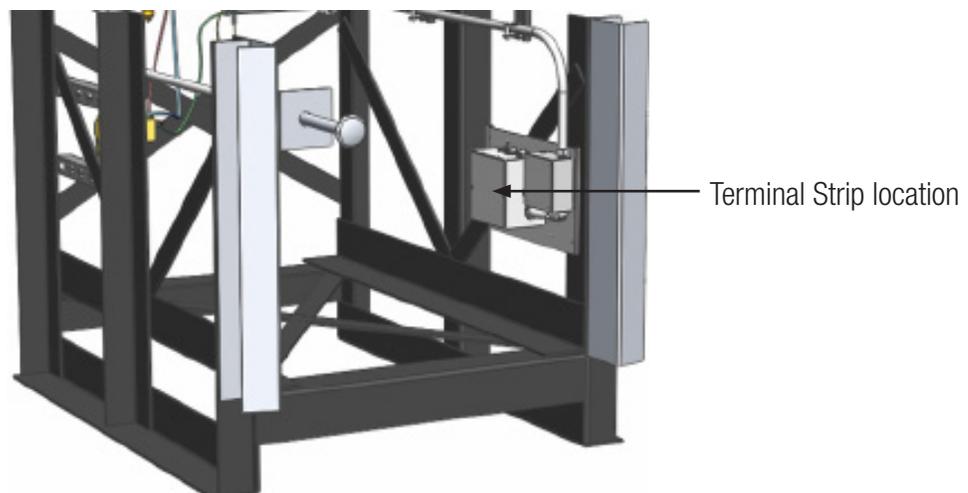
ELECTRICAL RATINGS:

120 V, 2 amp

240 V, 1 amp

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.





The following are the manufacturer's recommendations for venting the Wood Stone MS (Mountain Series) RFG-IR 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. Submit your venting plans to your local authorities before proceeding with your installation, as there may be additional requirements in your area. All non-solid fuel venting systems should be inspected and cleaned at least every 3 months.

THERE ARE THREE OPTIONS:

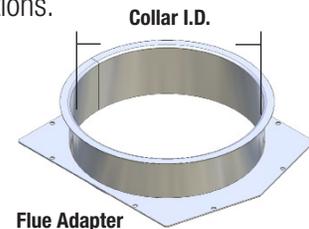
1. **Direct Connection:** A listed building heating appliance chimney, also listed as a grease duct as described in NFPA 96, connected directly to the oven flue collar and provided with a power ventilator listed for restaurant appliance exhaust. The power ventilator should be rated for a minimum of 300° 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° Fahrenheit 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.

The CFM required to attain this static pressure will depend on the configuration of your particular installation but will probably be between 500 and 700 CFM. NOTE: Double door ovens (Models ending in DD), have two flue collars, both must be connected and a static pressure of negative 0.1 inches must be maintained at each collar.

NOTE: If your MS-5, MS-6, or MS-7 oven is ordered from Wood Stone without a hood, it will have a round flue adapter installed to facilitate direct connection to a round duct. If the oven is to be installed under a hood, it MAY be necessary to remove the round adapter to properly position the hood. This is done by removing the screws that attach the adapter to the oven. Please contact Wood Stone if you have any questions.

OVEN MODEL SERIES		FLUE COLLAR I.D. (NOMINAL)
Mt. Adams	WS-MS-5	10 inch
Mt. Baker	WS-MS-6	10 inch
Mt. Rainier	WS-MS-7	10 inch

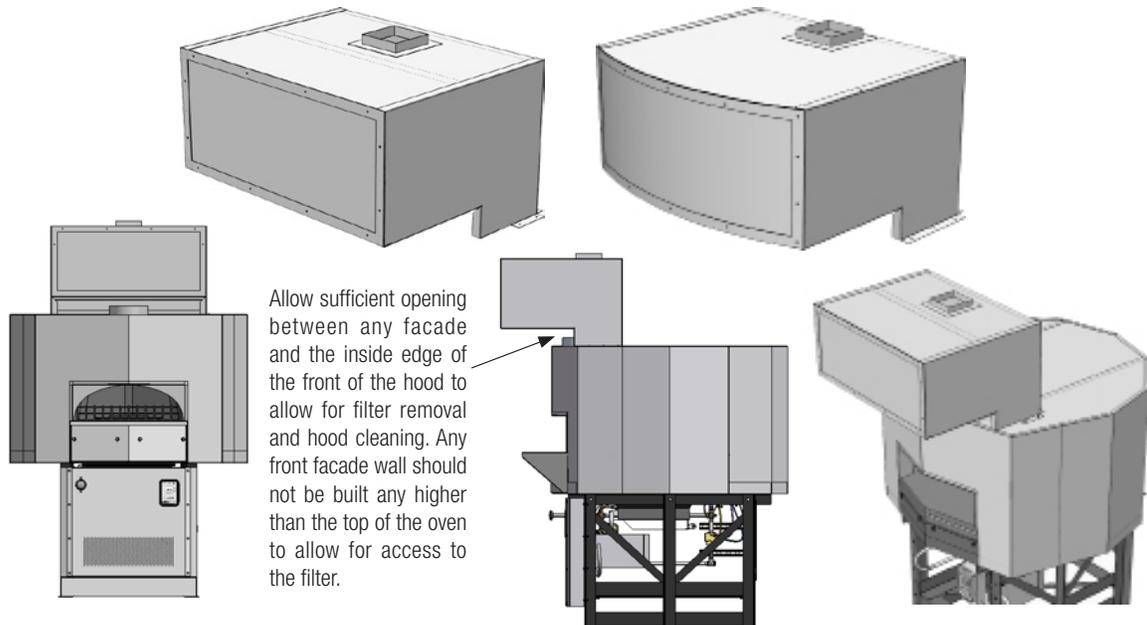


NOTE: MS-4 ovens come standard with a round 8" O.D. collar and do not require the flue adapter for a direct connection.

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.



INSTALLATION VIEWS OF A WOOD STONE HOOD



2. A Listed Type 1 Exhaust Hood or one that is constructed and installed in accordance with all relevant Local and National Codes. Wood Stone offers eyebrow-type hoods designed specifically for Wood Stone ovens. See specification sheet on ventilators for Wood Stone ovens. Note that the notch of the hood is even with the front edge of the oven. The hood must be installed in accordance with the hood manufacturer's instructions, and with NFPA 96 and/or the applicable local and national codes.
3. Exhaust from Wood Stone gas-fired ovens (RFG models) can be vented using one of the previously mentioned methods OR can be combined with exhaust from other equipment, assuming the common duct meets the construction requirements listed in #1. If the Wood Stone oven is installed using the direct connect method, and is going to be tied into a common duct that is connected to any hoods; the system must be engineered so that the duct pressure at the oven flue collar is -0.1 inches W.C. (-0.14 inches W.C. for solid fuel models). Failure to properly engineer the venting system will severely compromise oven performance and reliability. Tying a direct connected Wood Stone oven into a common duct may not be a feasible solution for many installations. In these cases the oven must either be vented separately, or vented using a Type 1 hood.

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. **VERY IMPORTANT! WOOD STONE RECOMMENDS THAT YOU SUBMIT YOUR VENTING PLANS TO LOCAL CODE AUTHORITIES BEFORE PROCEEDING WITH INSTALLATION.**

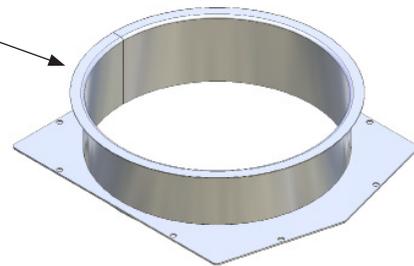


MOUNTAIN SERIES OVENS -- FLUE ADAPTER

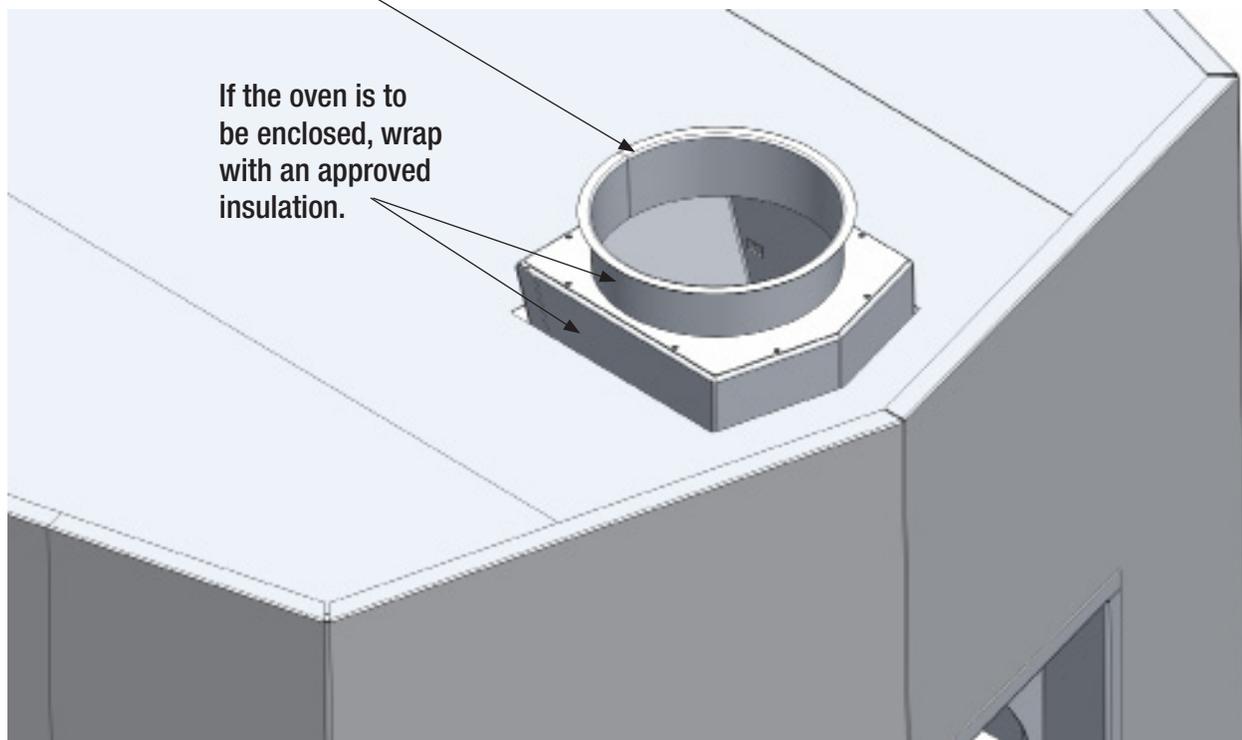
The flue adapter unit is designed to facilitate connection to a round duct. Use the stainless steel screws provided to attach the flue adapter to the exhaust outlet on the oven.

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. 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.

Flue adapter



FLUE ADAPTER -- shown attached to oven flue collar



If the oven is to be enclosed, wrap with an approved insulation.



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

FIRE SUPPRESSION

Check with your local code officials to see if fire suppression is required in your area. If fire suppression is required, you must vent the oven using a Type 1 hood constructed and installed in accordance with NFPA 96. If fire suppression is required, Wood Stone recommends providing protection for the hood and duct plenum. The fusible link in the hood must be rated at 450° F minimum. Wood Stone offers UL Listed Exhaust hoods for our ovens that are pre-piped for ANSUL R-102 fire suppression. Wood Stone does not recommend aiming any fire suppression nozzles into the cooking chamber of the oven. All installations are subject to the approval of the local authority having jurisdiction.



VENTING DO'S AND DON'TS

When installing a Wood Stone Mountain Series oven there are some basic guidelines to follow with regards to oven venting that will help ensure proper operation and performance of the gas burners on the oven. These guidelines will also help prevent damage to the oven gas and electrical components due to improper venting and installation. Damage caused by improper venting and installation is not covered by the oven Warranty. This information applies to all Wood Stone Mountain Series (MS) ovens equipped with 1 or more gas burners.

Most Wood Stone Mountain Series ovens are built in to some sort of wall structure or enclosure. This creates the potential for different venting scenarios that can be detrimental to the operation and performance of the oven burners. Here are some basic rules that to follow that will ensure a properly functioning oven installation. Illustrated examples are included on the following pages.

RULE 1:

The **ONLY** pathway for air to enter the space beneath the oven should be at the front of the oven at the perforated opening in the oven service panel provided with the oven, or on ovens equipped with an optional storage box, through the perforations provided on the oven storage box. This will eliminate the chance of air movement or cross drafts beneath the oven that can disrupt the oven burners.

RULE 2:

DO NOT block the flow of air through the front service panel. It is required to provide necessary combustion air to the oven burners. Airflow and service access **MUST** be provided from the front of the oven only at this service panel. **DO NOT** relocate the oven air intake. **See Rule 1.**

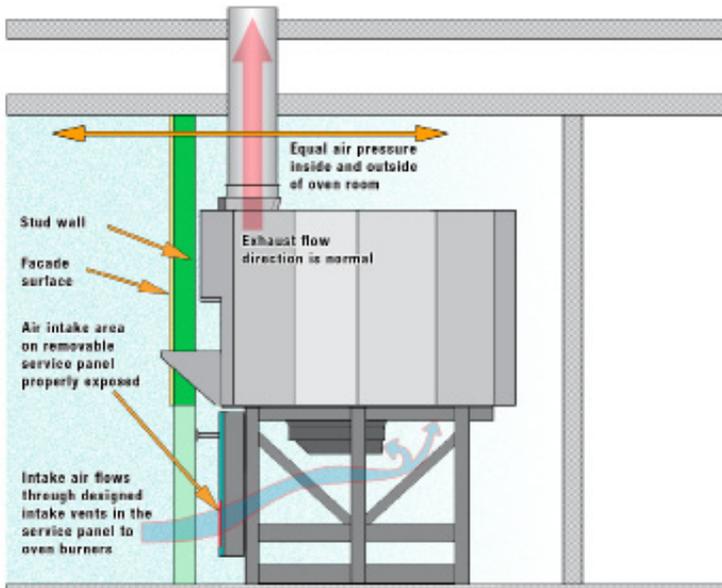
RULE 3:

To ensure proper venting of the oven, you must use an appropriate exhaust fan as described in this manual. There must also be an adequate source of make-up air provided to your kitchen space, (room that the oven opens to). The make-up air supply should not point directly at the oven. Other than the oven service panel, do not provide make-up air or other ventilation into an enclosure that surrounds the oven. **See Rule 1.** Without proper make-up air the oven, (or any gas equipment) will not vent and operate correctly.

Please see drawings on the following pages.

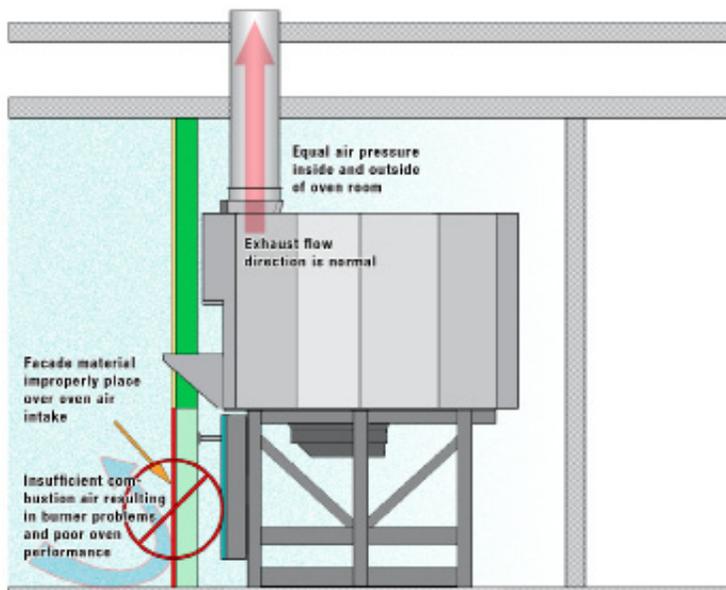


DIRECT CONNECT VENTING EXAMPLES



1A ACCEPTABLE VENTING

Example 1A shows a proper installation. Enclosure around the oven is completely sealed so that the only air entering the space beneath the oven comes through the oven service panel.

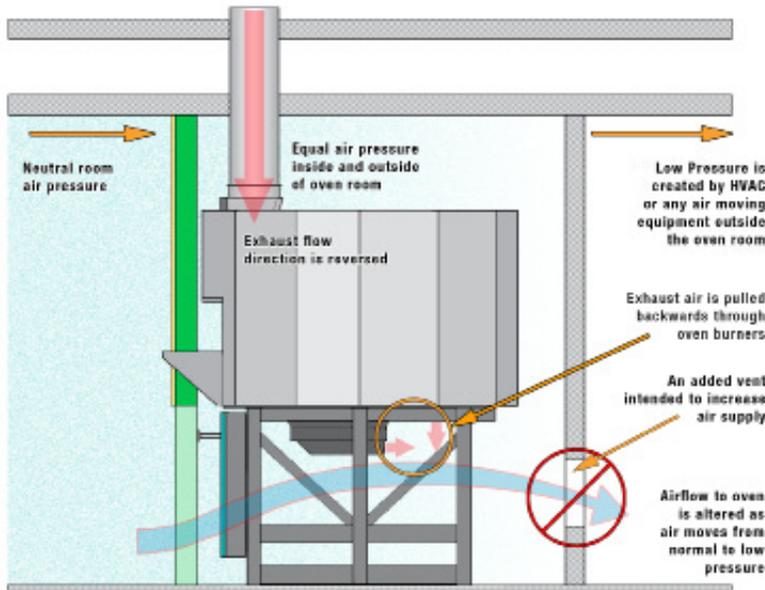


2A UNACCEPTABLE VENTING

Example 2A is not acceptable because the combustion air intake is blocked, preventing combustion air from reaching the oven burners. The burners will not function properly, and this will also lead to damage of oven components.

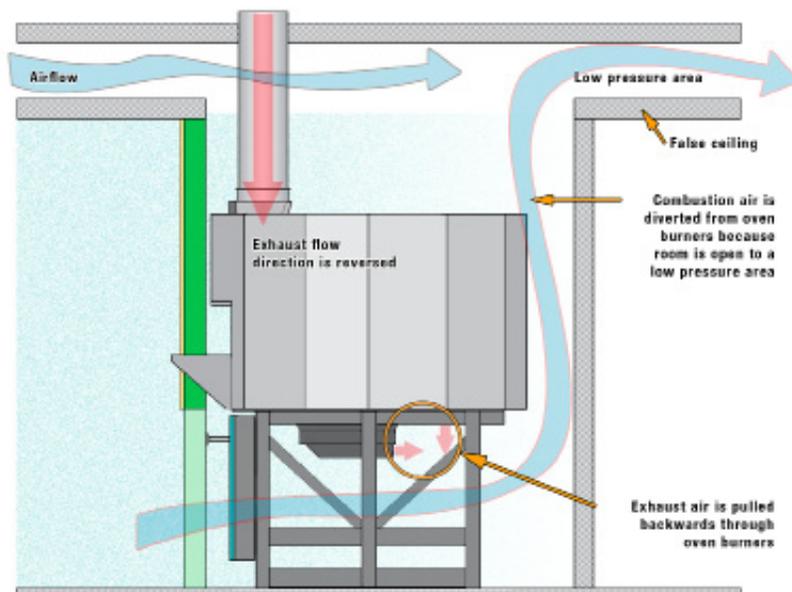


DIRECT CONNECT VENTING EXAMPLES



3 UNACCEPTABLE VENTING

Example 3 shows an incorrect installation where an additional vent was added to the wall behind the oven, creating an air pressure difference causing air movement beneath the oven and disrupting the operation of the oven burners. This air movement can be so severe as to cause a downdraft situation pulling the exhaust down the oven flue and also backwards through the burners, leading to heat damage of oven components.

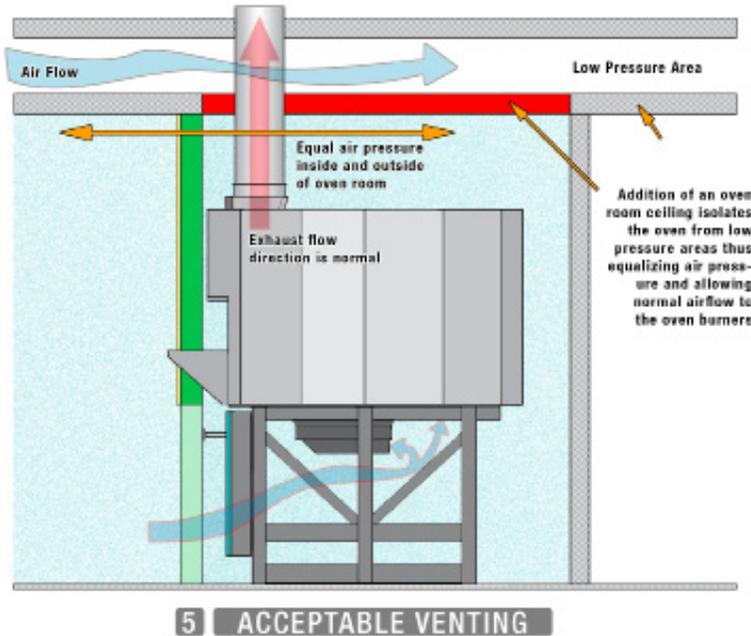


4 UNACCEPTABLE VENTING

Example 4 shows an incorrect installation where the enclosure surrounding the oven is open to the attic space above the ceiling. Air can move rapidly through the space enclosing the oven to the lower pressure area within the attic space. This can cause a downdraft situation at the oven pulling air and heat backwards through the oven burners, leading to damage of oven components.



DIRECT CONNECT VENTING EXAMPLES



Example 5 shows a correct installation where a ceiling has been added to the enclosure surrounding the oven to correct an improper installation.

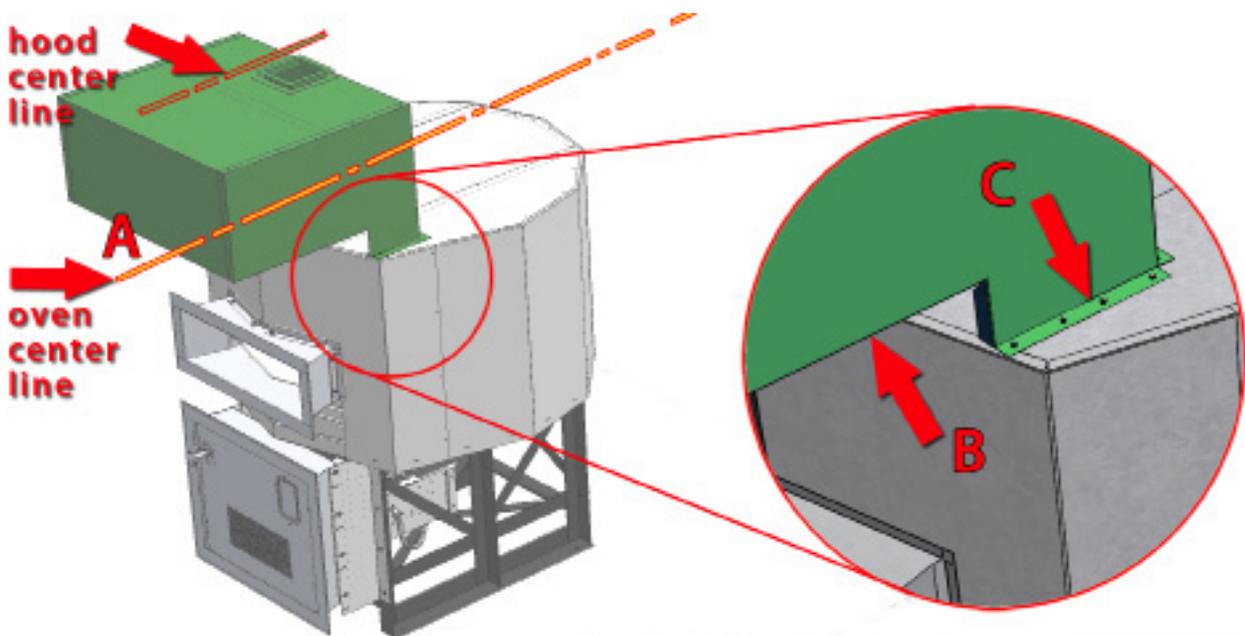


HOOD INSTALLATIONS

In addition to the information given for installations using the direct connect venting method, the following information applies to installations where the oven is being vented using a Type 1 hood. Also refer to the **Oven Venting** section earlier in this manual.

PROPER MOUNTING POSITION FOR THE WOOD STONE HOOD.

1. Center the hood from side to side on the oven. Note that if an MS-5, 6 or 7 model, the oven has the round flue adapter attached. The adapter may prevent the proper positioning of the hood. The flue adapter is attached with screws, simply remove the screws to remove the adapter if it is in the way.
2. Pull the hood forward so that the notch, as viewed from the side of the hood, lines up with the front edge of the top of the oven.
3. Secure the hood to the top of the oven using #10 self tapping screws. The flanges on the hood are pre-drilled. Screw directly into the top of the oven to secure the hood.
4. Attach grease -rated duct to the outlet on the hood. The hood captures over the oven flue collar and oven doorway. No connection is made to the oven flue collar.

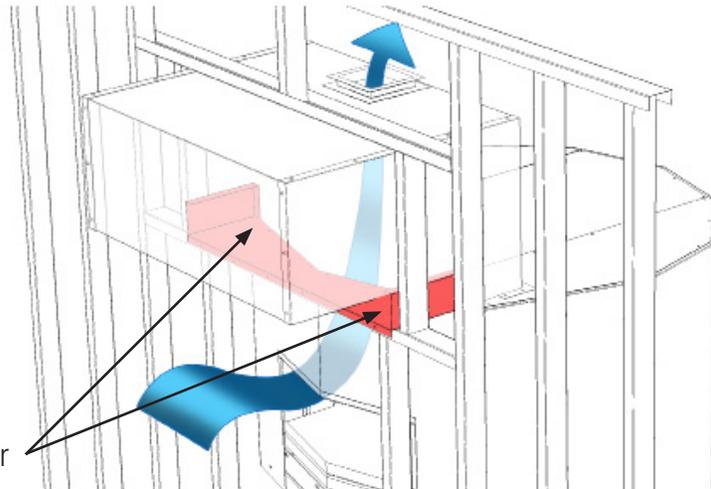


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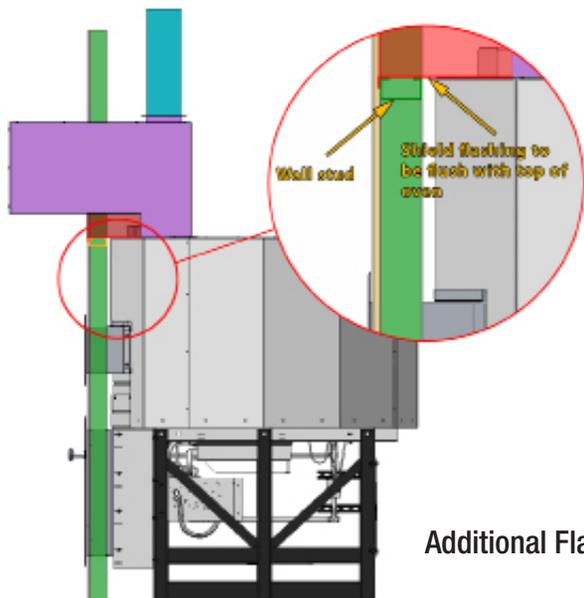


HOOD INSTALLATION WITH DECORATIVE FACADE WALL/OVEN ENCLOSURE.

For installations where a hood is being used with a decorative facade wall or oven enclosure, it will be necessary to both seal the gap between the facade wall and the top of the oven, and the gaps at the sides of the hood between the facade wall and the front of the oven. This will prevent air from being pulled up the sides of the oven from below by the hood. It will also prevent debris, etc. from falling into the facade wall.



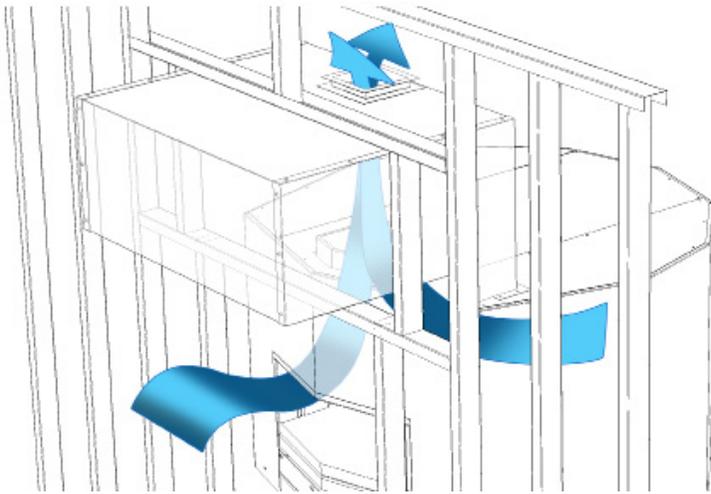
Flashing Piece - By Installer



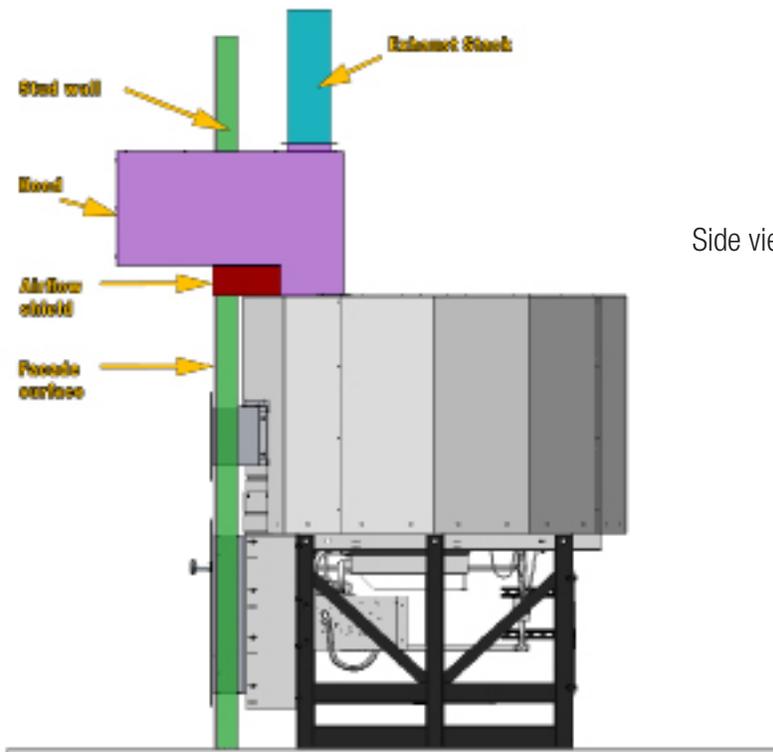
Additional Flashing Detail

Note that the hood does extend out beyond the face of the oven. DO NOT extend the oven facade wall into the oven hood. The wall beneath the hood must stop at the top of the oven. To allow for proper function of the hood, filter removal and hood maintenance you must provide a minimum of 8 inches of clearance between the front face of the facade wall and the front of the hood.

Continued on next page



Incorrect installation. No flashing installed so air being pulled up the sides of the oven from beneath.



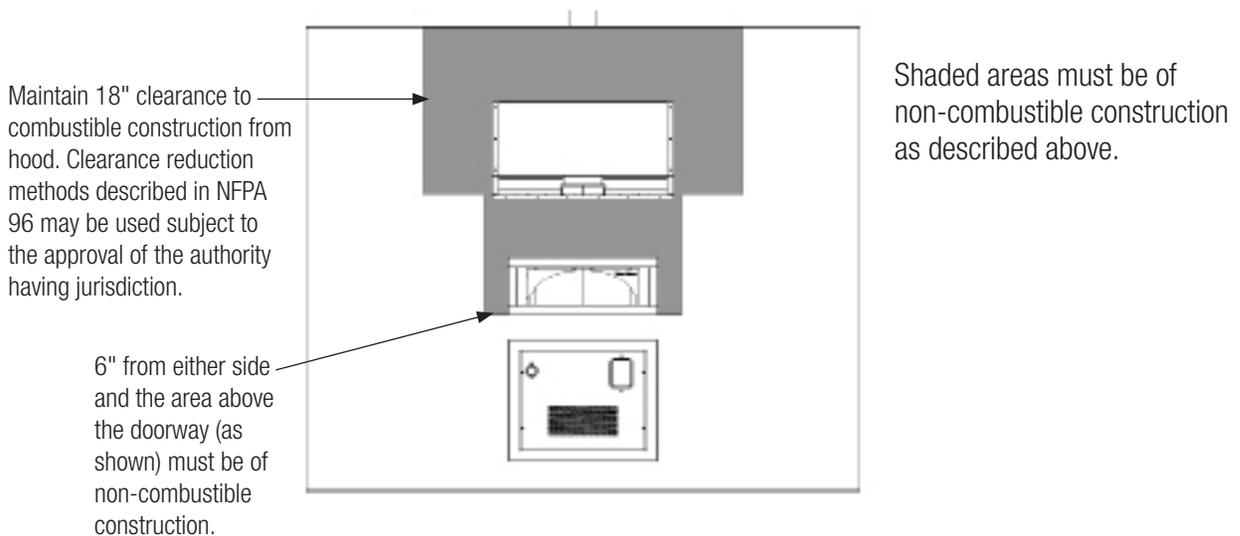
Side view of properly installed hood.



CLEARANCES

The Type 1 hood requires an 18-inch clearance to combustible construction. Clearances to limited combustibles may be reduced per NFPA 96 and/or your local codes. Approved clearance reduction methods may also be used, per NFPA 96 and/or your local codes. Consult with your local inspector regarding approved methods.

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



All installations subject to the approval of the local authority having jurisdiction. Wood Stone recommends you submit your venting plans in advance to your local authority for approval.



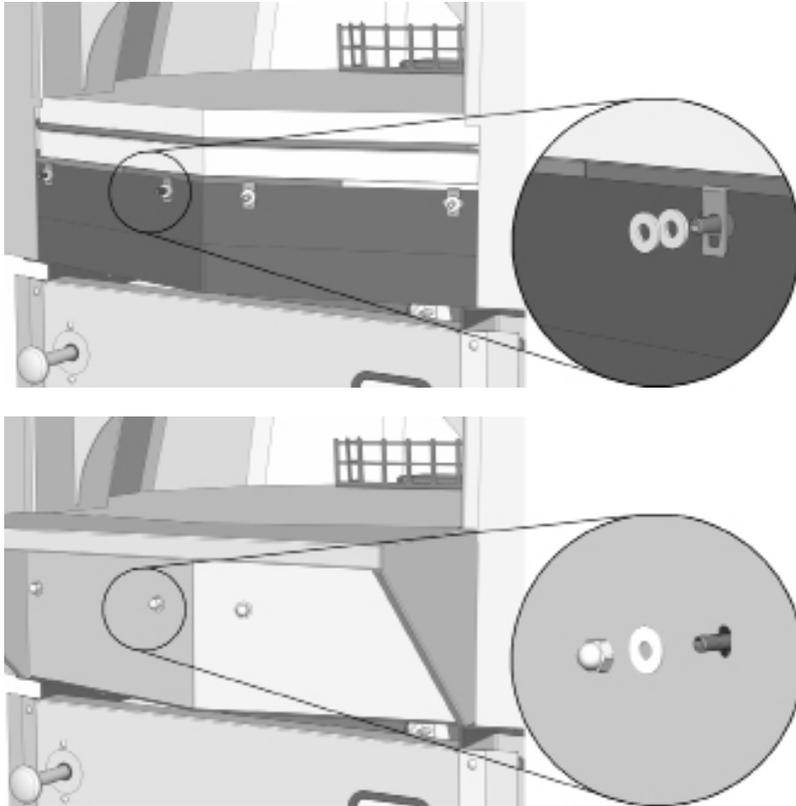
1. Mount the oven mantle (if provided) using the hardware provided. (Please refer to the Mantle Mounting section).
2. Mount the stainless steel toe kick to the front of the oven stand, angle side down using the large self tapping screws. The holes are pre-drilled in the stand. If your oven is equipped with a service panel extension or storage box, a toe kick is not necessary. Refer to assembly diagrams in the pages that immediately follow.
3. Mount the service/intake panel to the brackets on the front of the stand, directly below the doorway, using the screws provided. See the **Front Panel Assembly** page. If your oven was shipped with the optional facade extensions, see **Facade Extensions** page.

NOTE: This panel is the only access for servicing the gas and electrical components of the oven so it must be left accessible and removable. Do not obstruct the flow of combustion and ventilation air through the perforation provided on the front panel.

4. The following applies to stucco finish ovens only (Models ending with 'S'): Once the oven has been set in place, cover wire mesh and metal lathing with no less than 1 inch of stucco (see **Stucco Application** page for diagram and stucco formula).



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. Next, place (2) spacer washers on each stud.
3. Position the mantle (or bracket) on the oven, make sure the rear flange rests on the floor of the oven (you may need an extra pair of hands).
4. Finally, place one final washer (stainless steel) and a cap nut on each stud. Tighten the cap nuts so the mantle is securely held in place.
5. 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 compound.

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.

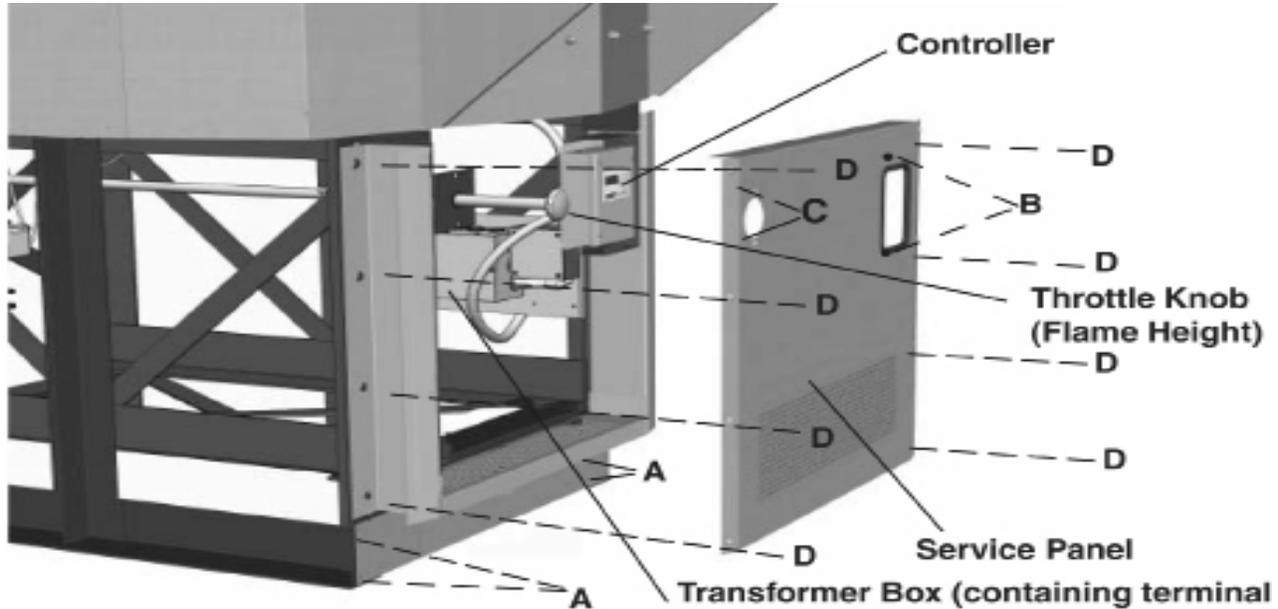


Put the stone in place and apply light pressure to seat it properly. Make sure that the angle in the granite lines up with the angle in the bracket. Allow the adhesive to set for several hours before filling any gap between the stone slab and the metal bracket with the silicone compound (provided). Clean up any adhesive and/or silicone before it dries!





STANDARD FRONT PANEL AND TOE KICK



Transformer Box (containing terminal strip for incoming power supply).

NOTE: Have a licensed electrician make the electrical connection here.



A - Hex-head self-tapping screw - to attach toe kick. 4 total.



C - Phillips head #10 screw - Attaches service panel to throttle knob bracket. 2 total.



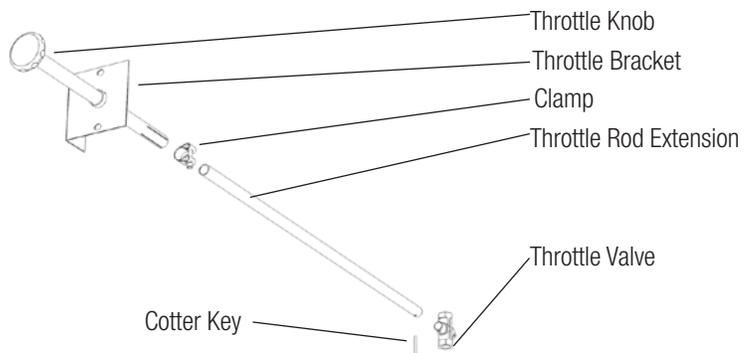
B - Phillips head 1/4-20 screw - Attaches service panel to controller bracket. 2 total.



D - Phillips-head self-tapping screw-used to secure the sides of the service panel. 8 total.

VIEW OF THROTTLE ASSEMBLY

The throttle 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 throttle knob is in the desired position.

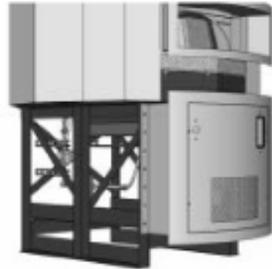




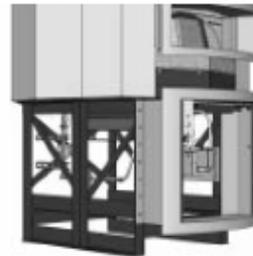
OVENS EQUIPPED WITH OPTIONAL LOWER EXTENSION

MOUNTING INSTRUCTIONS

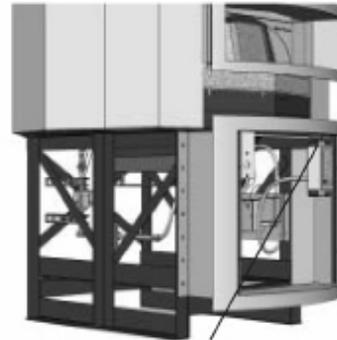
Lower extension, throttle rod and controller.



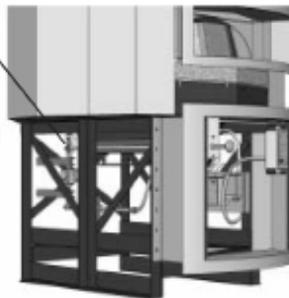
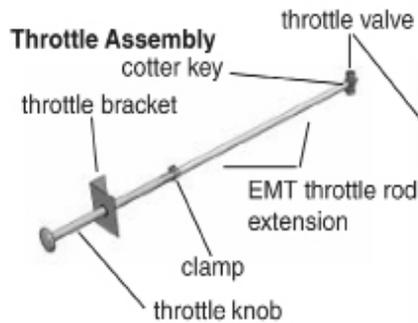
1. After the oven has been leveled, remove the throttle rod assembly which has been attached to the inside of the stand for shipping. Then position the lower extension assembly onto the front of the oven. It will rest on the guides that are welded to the oven legs. Attach the assembly to the oven legs using the 1/4-20 nuts and bolts, and washers.



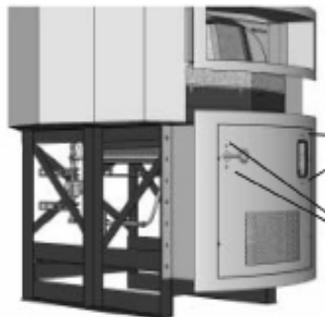
2. Remove the access panel.



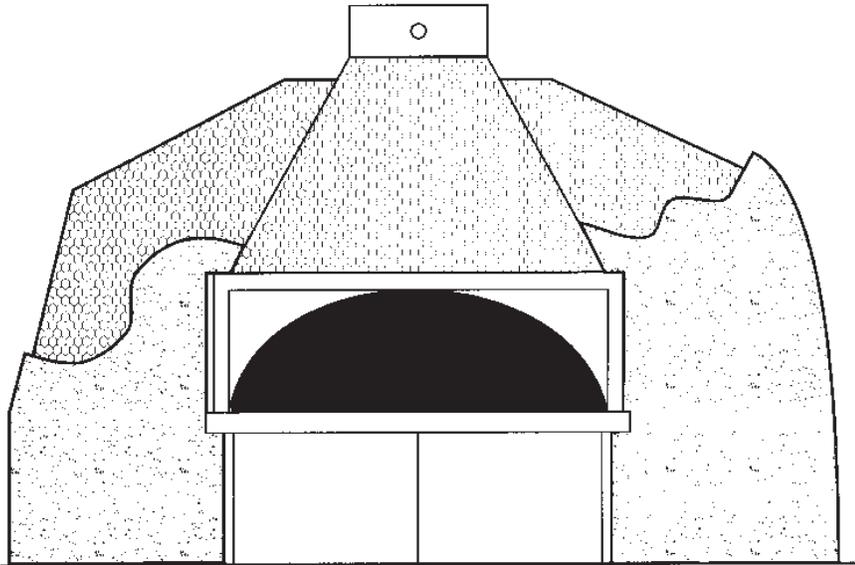
3. Attach the controller to the mounting bracket on the extension using 1/4-20 bolts.



4. Remove the throttle knob from the throttle assembly. Attach the EMT throttle rod extension to the throttle valve using the cotter key. Pass the throttle rod through the throttle bracket (already attached) and attach it to the EMT throttle rod extension using the clamp.

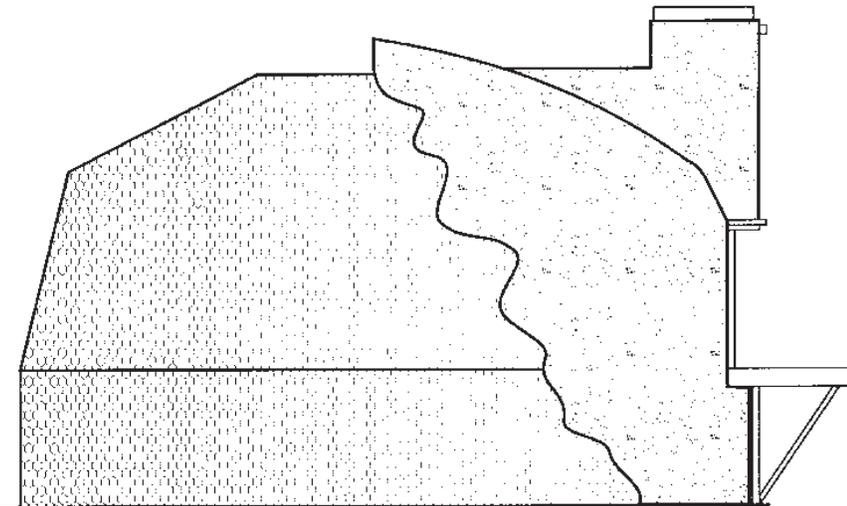


5. Reinstall the front panel. Secure the controller with a 1/4-20 screw at the top and bottom. Use 2 #10 SS sheetmetal screws to secure the front panel to the throttle bracket.



Front View

NOT TO SCALE



Side View

NOT TO SCALE

TRADITIONAL STUCCO MIX

1 part masonry cement
1 part regular cement
5 parts sand

STUCCO PREMIX IS AVAILABLE AT YOUR LOCAL LUMBER YARD OR BUILDING SUPPLY STORE

FOLLOW STUCCO MANUFACTURER'S INSTRUCTIONS FOR CORRECT MIXING INFORMATION

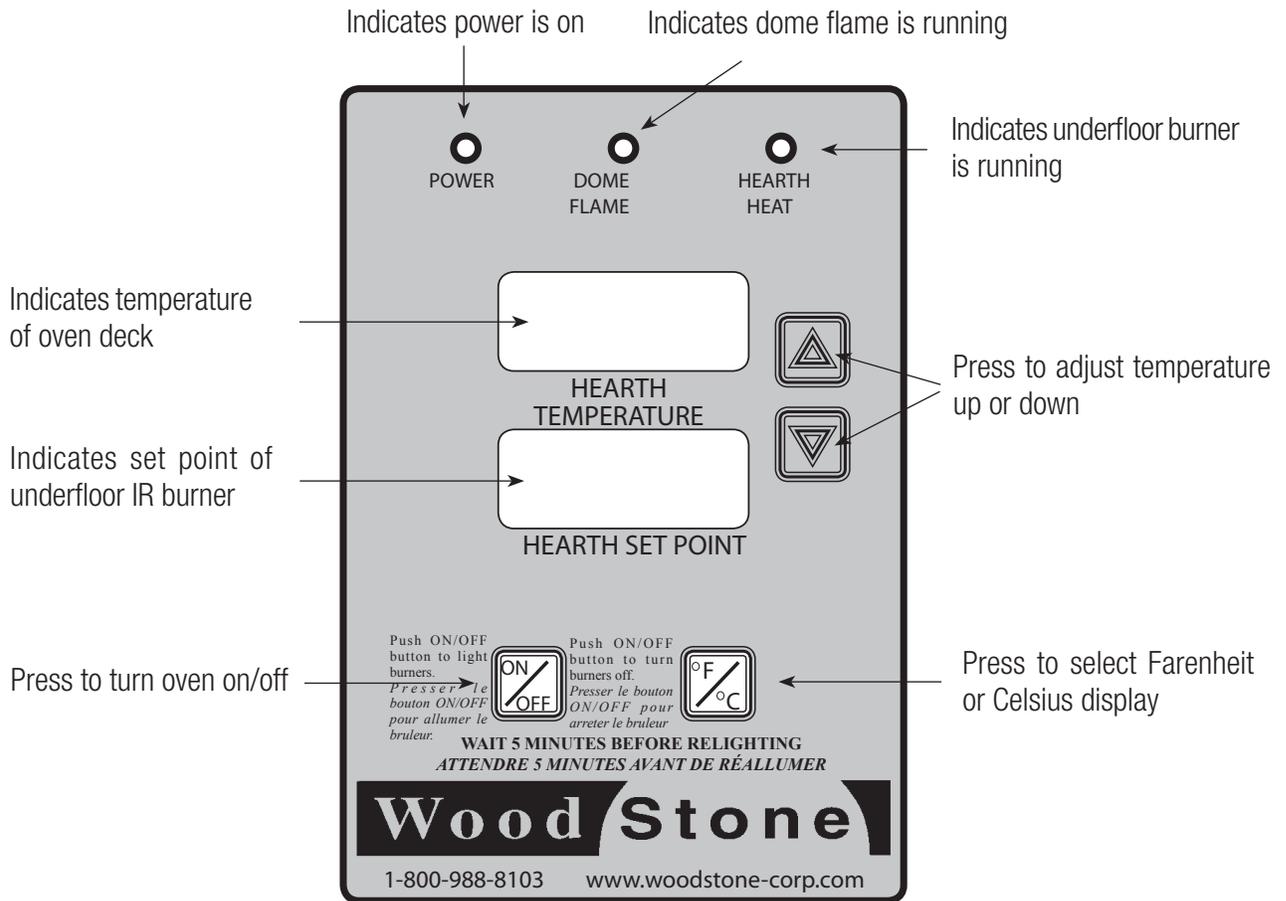
MINIMUM STUCCO APPLICATION IS 1"

This figure depicts the application of stucco on a Wood Stone oven. Use no less than one inch of stucco coating to cover all exposed metal lathing on the oven.



BEFORE TURNING ON YOUR OVEN

BASIC CONTROLLER FUNCTIONS





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

INITIAL OVEN STARTUP PROCEDURE

Your oven was cured at the factory, however in the course of shipment, storage on site, etc. the ceramic materials will have absorbed moisture. It is critical that the Initial Oven Startup 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 Oven Startup 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.

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. Remove the night door(s). Push 'ON'/'OFF' button on controller. It may take awhile for the gas to purge all the air from the gas lines.
4. Allow oven to operate at FACTORY SETTINGS for 1 hour (thermostat set at 100° F, Radiant flame at its lowest setting). Leave the set point at 100° F throughout the entire first day.
5. After one hour, raise dome flame to 25% (~6 inch flame, 2 on the Throttle Knob Pointer), hold this setting for 4 hours.
6. After 4 hours at 25% flame, raise to 50% flame (3 on the Throttle Knob Pointer) and hold for at least another 4 hours or until the temperature reaches 500° F.
7. 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.
8. Turning Off The Oven - Push 'ON'/'OFF' button, all gas will go off, including the pilots. Put oven night door(s) in place to retain heat.

Note: Always wait 5 minutes before restarting the oven. **Never run the oven with the night 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.



THIS OVEN IS NOT FOR USE WITH SOLID FUEL

DAILY OVEN OPERATION OVERVIEW

DAILY START UP

1. Remove the night door(s).
2. Push 'ON'/'OFF' button, adjust the set point on the control panel to the desired floor temperature. Using the Throttle Knob Pointer, 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. Note: It is only possible to program the hearth set point for the underfloor IR burner to temperatures from 100° to 700 ° 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 Throttle Knob located to the lower left of the doorway, beneath the mantle. **This burner is the primary heat source for the oven.** The infrared underfloor burner act as an assist, to maintain desired floor temperatures during periods of high food production.

TURNING OFF THE OVEN

1. Push 'ON'/'OFF' button, all gas will go off, including the pilots.
2. Put oven night door(s) in place to retain heat.

Note: Always wait 5 minutes before restarting the oven. **Never run the oven with the night door(s) in place.**



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.

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 Throttle Knob Pointer at '3' (~8-9" flame) on the Flame Height Index Scale for desired temperature of 570-600° F. Set Throttle Knob Pointer at '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.

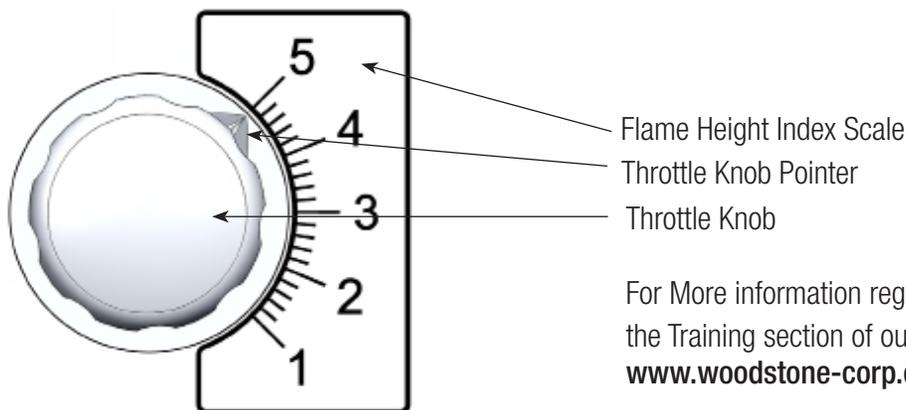
*NOTE: THE COOKING FLAME HAS TWO PURPOSES:

- 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.

*****Return the Throttle Knob Pointer to the Holding Flame after removing the pizza/product from the oven.*****

***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



For More information regarding Flame Height Control go to the Training section of our web site at:

www.woodstone-corp.com



CLEANING THE OVEN

1. As needed (twice per hour), use the floor brush to sweep stray food debris to the doorway, where it can be easily removed with a dough cutter or spatula.
2. As needed, swab the deck using a damp (not wet) rag wrapped around the floor brush.

NEVER PLACE ANYTHING IN OR ABOVE THE RADIANT FLAME.

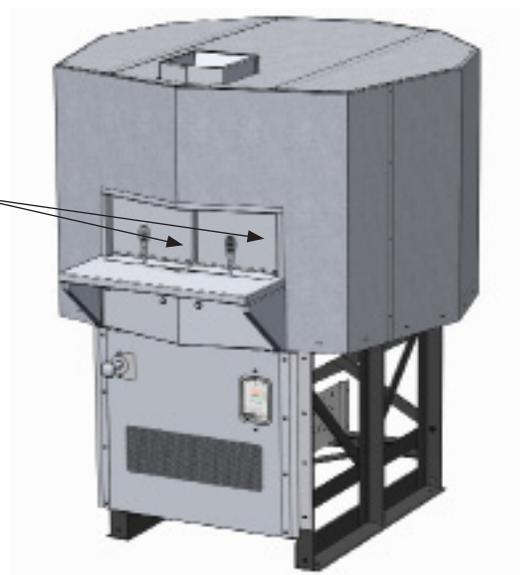
NEVER SWEEP DEBRIS INTO THE RADIANT BURNER. THIS CAN CAUSE THE BURNER TO CUT OUT, DAMAGE BURNER COMPONENTS, AND/OR EFFECT BURNER PERFORMANCE. PROBLEMS CAUSED BY DEBRIS IN THE RADIANT BURNER WILL NOT BE COVERED BY THE OVEN WARRANTY.

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.

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 DOORS: The door(s) are used for nighttime heat retention. Do not operate the oven with doors in place.

Night Doors





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° Fahrenheit (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

Gas-fired Oven- If a Wood Stone gas-fired oven is operated at low temperatures (below 400° 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°, 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.

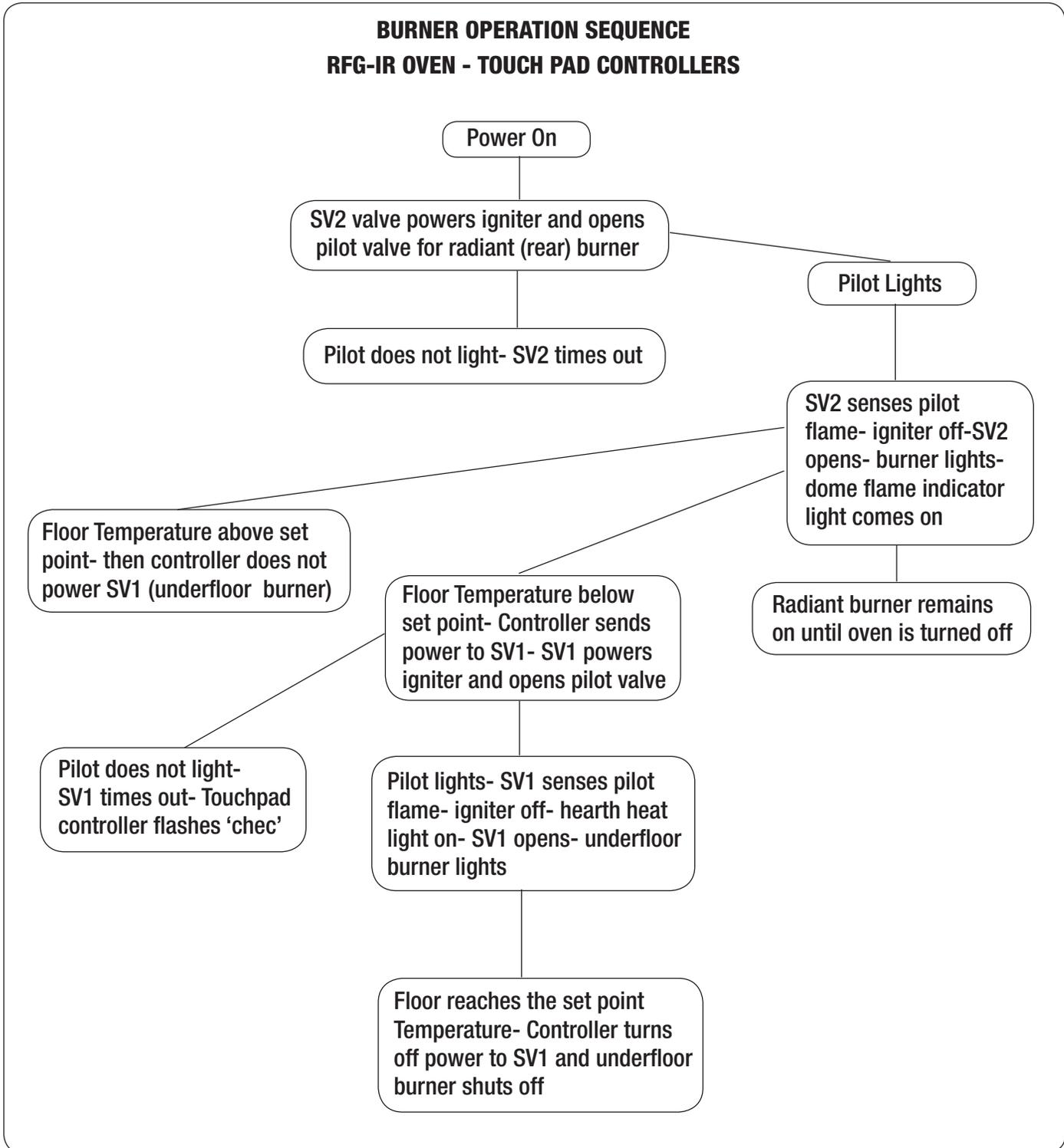


PROBLEM	CAUSE/SOLUTION
Controller will not turn on	<ol style="list-style-type: none"> Incoming power to oven turned off. Check circuit breaker for circuit supplying the oven. Check that any wall switches external to the oven that control oven power are turned on. Check that any interlocks external to the oven are turned on. If control still does not turn on, please contact Wood Stone for assistance.
Radiant Flame does not light	<ol style="list-style-type: none"> Is gas turned on to the oven? Is gas shut-off valve turned all the way on? Debris in burner. Burner may require cleaning. Contact Wood Stone for assistance. Damaged igniter or gas valve. Contact Wood Stone for assistance. If the oven is being started for the first time: <ul style="list-style-type: none"> Has all air been bled from the gas line? Is the switch on the SV-2 valve in the 'ON' position? <p>Note: (Valve is locate on the back of the control box, beneath the oven.)</p>
Underfloor burner is not running. 'Hearth Heat' light is off.	Hearth temperature is above the set point.
Hearth Temperature is above the setpoint	This Is Normal. Radiant (dome) flame can drive the temperature over the set point. The set point only controls the underfloor (hearth) burner. Turn down the dome flame if needed.
'Chec' display on controller	Underfloor Burner did not fire when the floor temperature dropped below the set point. Contact Wood Stone for assistance.

Please contact Wood Stone at 1-800-988-8103 should service be necessary, or if you have any questions about your oven. Our office hours are 8am to 4:30pm Pacific Standard 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.



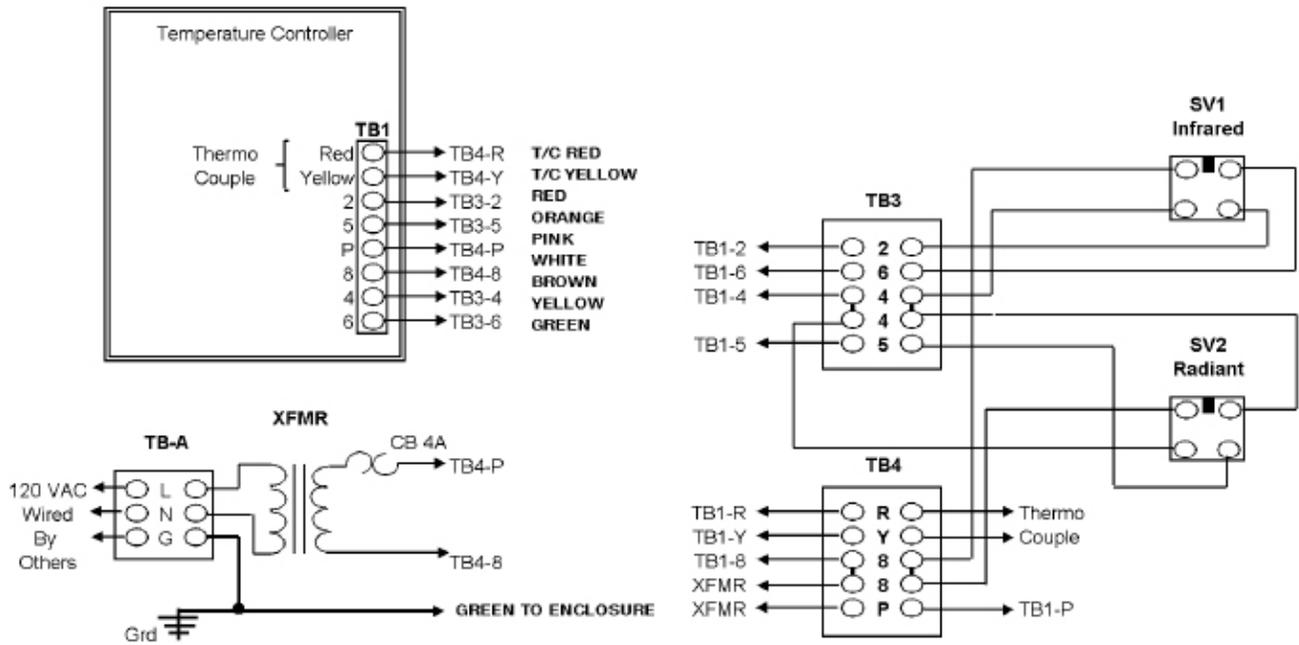
BURNER OPERATION SEQUENCE RFG-IR OVEN - TOUCH PAD CONTROLLERS





RFG-IR 120 VAC MODELS

RFG-IR 120 VAC WIRE DIAGRAM

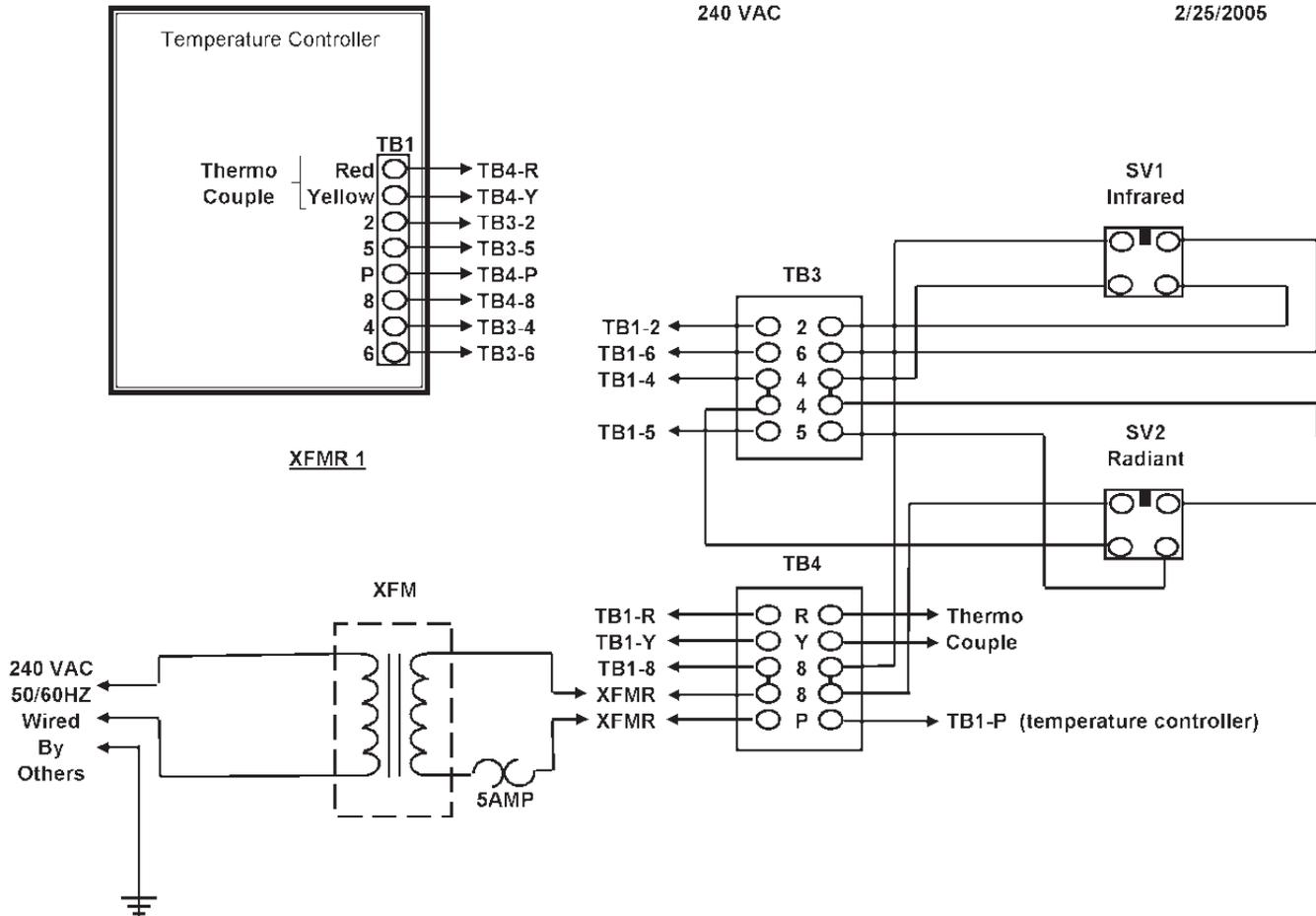




RFG-IR 240 VAC MODELS

240 VAC

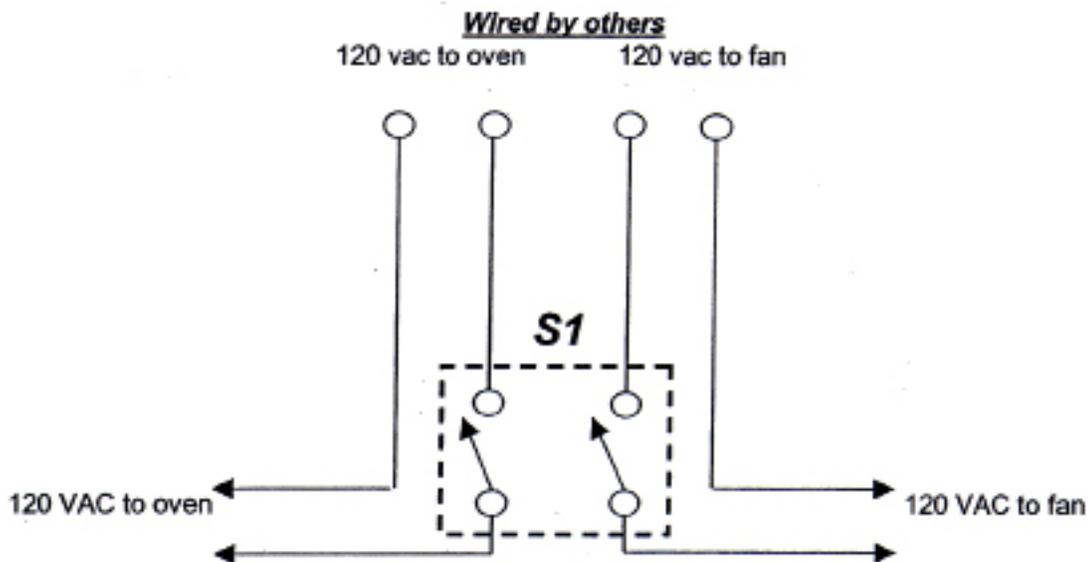
2/25/2005





INTERLOCK OF OVEN CONTROL TO AN EXHAUST FAN

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



S1 is a double pole - single throw switch (provided by others) that interrupts incoming power to both the oven and the fan.

The intent is to prevent the operation of the oven 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.

An optional interlock relay kit is available from Wood Stone. Please contact your dealer or Wood Stone.

No other connection to the oven control system is condoned by Wood Stone and may affect the oven warranty and cause damage to the oven controls.



ALL WARRANTY SERVICE MUST BE PRE-APPROVED BY WOOD STONE. • PLEASE CONTACT THE FACTORY FIRST.

Please call 1-800-988-8103 or 1-360-650-1111 seven days a week. Our normal business hours are 8am to 4:30pm Pacific Standard time Monday through 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. 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.

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 manual.
2. In the event the equipment is improperly maintained. Proper maintenance is the responsibility of the user; proper maintenance procedures are prescribed in the Wood Stone installation manual.
3. In the event that the failure or malfunction of the appliance or any part thereof is caused by abnormal 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 either the dome or oven deck.
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 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, direct your claim to:

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