

Service Manual



FIRE DECK SERIES

Stone Hearth Oven

*Gas-Fired, Gas/Wood, Coal/Gas
Combination Models*

FIRE DECK 6045 WS-FD-6045-RFG-(IR)-(W)

FIRE DECK 8645 WS-FD-8645-RFG-(IR)-(W)

FIRE DECK 9660 WS-FD-9660-RFG-(IR)-(W)-(CL)

FIRE DECK 11260 WS-FD-11260-RFG-(IR)-(W)-(CL)

FIRE DECK 9690 WS-FD-9690-RFG-(IR)-(W)-(CL)

FIRE DECK 11290 WS-FD-11290-RFG-(IR)-(W)-(CL)

FIRE DECK 11275 WS-FD-11275-RFG-(IR)-(W)-(CL)

FIRE DECK 90112 WS-CS-90112-RFG-(IR)-(W)

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



TABLE OF CONTENTS

Cautions & Warnings 3

Overview 4

Service Information 5

Operational Overview 6

Operation Sequence

 W-IR. 7

 RFG 8

 RFG-IR. 9

Gas Oven Components. 10

Controller Troubleshooting

 Controller 13

 Radiant Burner 15

Infrared Burner Troubleshooting 20

Common Repair Procedures 22

Gas Piping Layout 26

Electrical Diagrams 28

Parts List. 32

Gas Specifications

 FD-6045 34

 FD-8645 35

 FD-9660/11260. 36

 FD-9690/11290. 37

Gas Connections 38

Electrical Connections 39

Start-Up Information. 40

Technical Verification Checklist 41

Limited Warranty 42

**WOOD STONE OVEN SERVICE MANUAL FOR GAS-FIRED,
WOOD-FIRED AND COAL-FIRED FIRE DECK SERIES OVENS****ADDITIONAL COPIES AVAILABLE UPON REQUEST**

This manual is for use only by trained, qualified service personnel. It is recommended that this oven be installed, maintained and serviced by qualified professionals.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause 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, des blessures ou la mort. Lire attentivement les instructions d'installation, de fonctionnement et d'entretien avant de procéder à son installation ou entretien.

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.

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

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

ESURE DE SÉCURITÉ: Ne pas entreposer ni utiliser de essence ni autres vapeurs ou liquides inflammables à proximité de cet appareil ou de tout autre appareil.

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 THE UTMOST IMPORTANCE THAT THIS OVEN BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.

Wood Stone's Fire Deck Gas-Fired ovens have been tested and approved by Intertek Testing Services, and are ETL Listed to ANSI Z83.11:2016 Ed. 4, CSA 1.8:2016 Ed. 4, UL Subject 2162, ULC-S627-00, UL 737 and to NSF/ANSI 4:2016.





WOOD STONE OVEN SERVICE MANUAL INTRODUCTION

Welcome to the Wood Stone Oven Service Manual. This manual covers the Fire Deck line of wood gas and coal-fired ovens. If the unit you are servicing does not appear in this manual, please call our Service Department for assistance. This manual is for use only by Trained and Qualified Service Personnel.

WARNING! Improper installation adjustment, alteration, service or maintenance can result in property damage, injury or death. Please read and understand all pertinent instructions before attempting to install or perform any kind of service on this equipment. BE SAFE.



SERVICE DEPARTMENT AND WARRANTY INFORMATION

If you have any questions please call the Wood Stone Service Dept. at 1-800-988-8103. Normal hours are 8am–5pm. Pacific time Monday through Friday. After hours and on weekends call and follow the instructions to leave a message on the emergency service voice mail. A Wood Stone technician will be paged and return your call promptly.

You must contact Wood Stone before proceeding with any Warranty service. We strongly encourage you to call whenever any service is performed. There are two reasons for this. First, though we strive to design and build equipment that is simple and easy to service, we realize that our equipment is quite unique. We find we can often be of considerable help over the phone when a technician is troubleshooting an oven or rotisserie. Second, we keep a record of all service that's been performed on each individual piece of equipment. This history can be useful for troubleshooting. Our goal is to help you service the equipment correctly and as efficiently as possible.

Parts are available through Wood Stone. Please contact the factory for pricing. Additional Service Manuals and Installation and Operation Manuals are also available. Installation and Operation Manuals, and additional installation information, are also available on the Wood Stone web site at: www.woodstone-corp.com.

See the complete Wood Stone Limited Warranty at the end of this manual.



GAS-FIRED OVENS OPERATIONAL OVERVIEW

THE FIRE DECK OVENS ARE AVAILABLE IN A WIDE VARIETY OF GAS AND SOLID FUEL CONFIGURATIONS

BURNER FUNCTION

Radiant Flame Burner (RFG): When equipped, the radiant flame Burner is the main heat source for the oven, and it runs continuously when the oven is turned on. Fire Deck ovens will often have multiple RFG Burners. To control temperature, Flame Height Control Knob(s) are provided at the front of the oven. **There is no thermostatic control for the radiant flame Burner; the operator manually adjusts the flame height with the Flame Height Control Knob to control the temperature of the oven.**

Infrared Burner (IR): The IR is installed beneath the floor of the oven. It is controlled independently of the Radiant Burner by a temperature control located in the oven Control Box. This box is located on the front of the oven. The Controller incorporates a programmable Hearth Set Point and a Hearth (floor) Temperature display. Remember the IR Burner is not the primary heat source for the oven.

SOLID FUEL OPTIONS

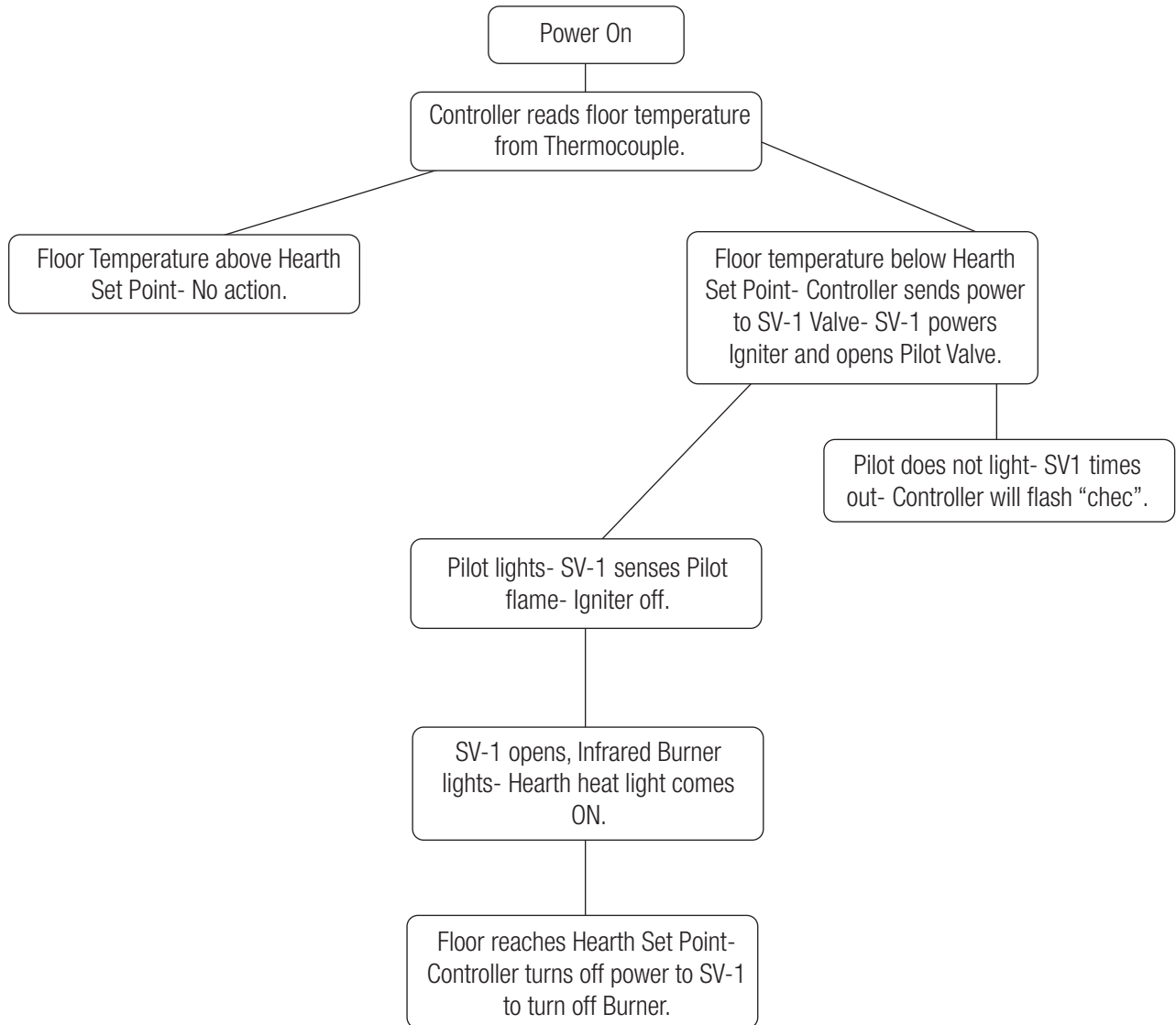
Wood (-W): Models that are equipped with the radiant flame gas Burner (-RFG in the model number) and include a (-W) in the model number are configured to allow for wood burning, up to a specified amount as detailed in the Installation and Operation Manual for that model. In this configuration the wood IS NOT the primary heat source—the gas Burner still provides the majority of the heat.

In (-W) models that do not include the RFG Burner, WOOD IS THE MAIN HEAT SOURCE, even in (W-IR) ovens that include the Infrared Burner.

Coal (-CL): These ovens are typically equipped with and RFG Burner on one side of the oven and an IR Burner. To facilitate coal burning, an air plenum and grate are provided. The coal fire is built on the grate, which is located on the opposite side from the RFG Burner. A variable speed blower moves air through the plenum beneath the oven and up through the grate to provide additional combustion air to the coal fire. A door on the front of the oven is provided to access the air plenum for daily ash removal.

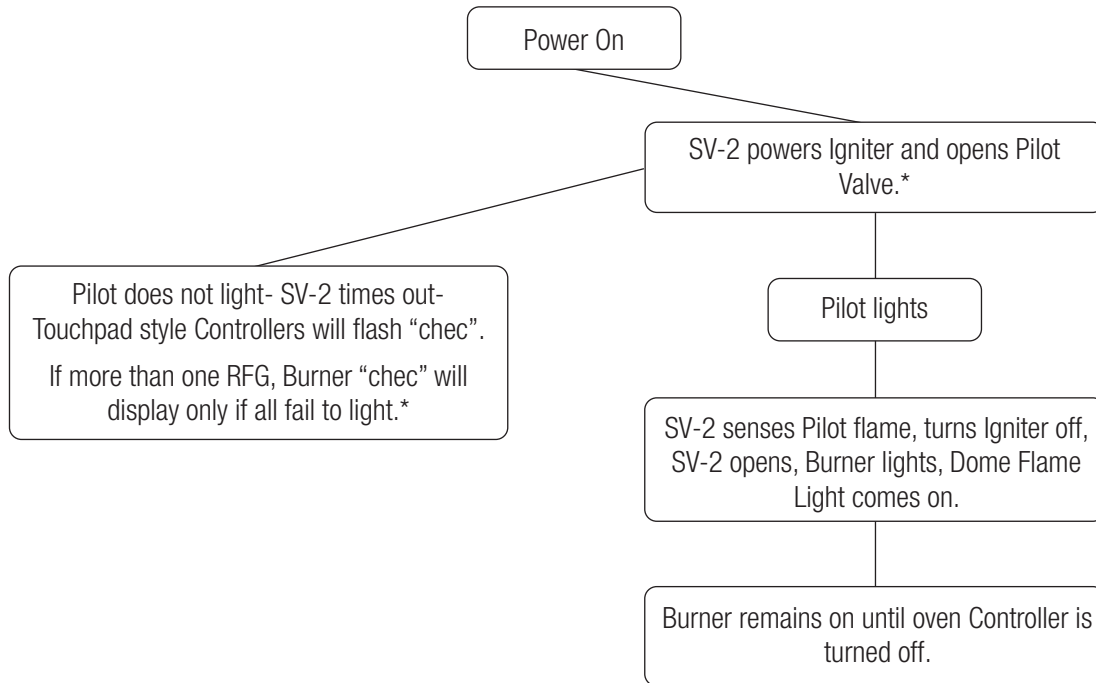


**BURNER OPERATION SEQUENCES
W-IR MODELS (OVENS WITH INFRARED BURNER (IR) ONLY)**





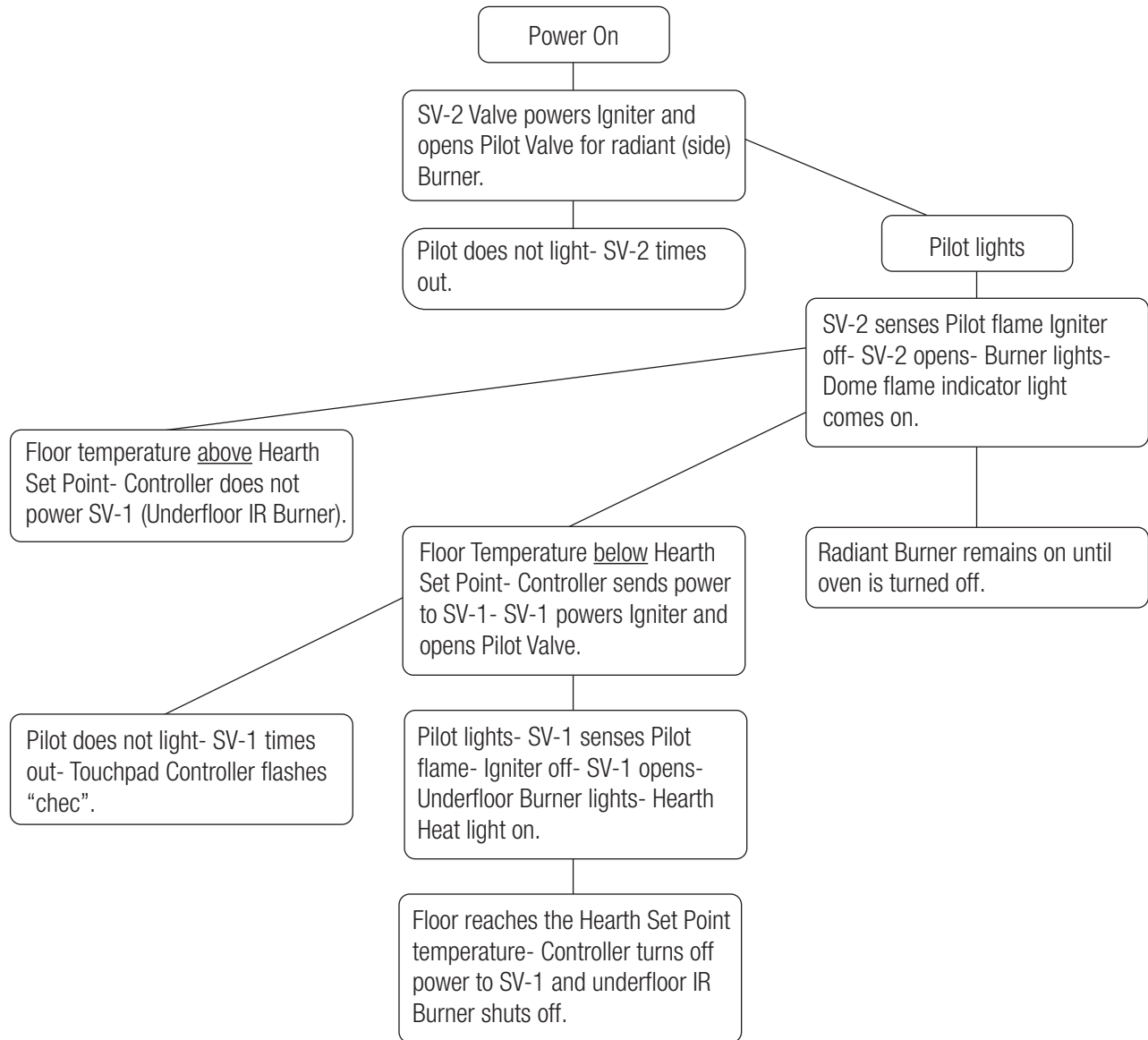
**BURNER OPERATION SEQUENCES
RFG OVEN (NO INFRARED (IR) BURNER)**



*** Note:** Ovens equipped with 2 Radiant Burners will have a second Valve, SV-3, which will be powered at the same time as the SV-2 Valve described above. The operation sequence is identical to that of SV-2. However, the “chec” display will only come on if both Burners fail to light.



**BURNER OPERATION SEQUENCES
RFG-IR OVENS - TOUCHPAD CONTROLLER**



*** Note:** Ovens equipped with 2 Radiant Burners will have a third Valve, SV-3, which will be powered at the same time as the SV-2 Valve described above. The operation sequence is identical to that of SV-2. However, be aware that as long as SV-2 or SV-3 lights, the Dome Flame indicator light will come on and the Controller will power SV-1 as necessary.

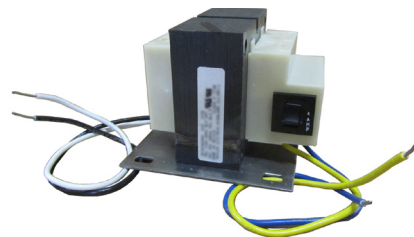


GAS OVEN COMPONENTS

The following is a list of the key electrical and gas components found in Wood Stone gas ovens, accompanied by information about the individual parts.

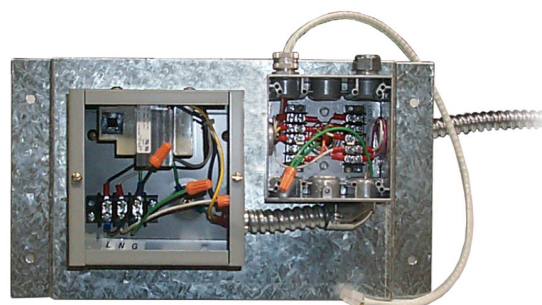
24 VOLT CLASS 2 TRANSFORMER

This Transformer incorporates a circuit breaker on its output. This unit is installed inside a Junction Box on the left side of the Transformer Plate. Incoming power is connected to the terminal strip (marked L, N, and G) inside this box. L=Line, N=Neutral, G=Ground. 24 VAC output can be measured in the adjacent junction box. 24 VAC should be present between terminal P (pink wire) and terminal 8 (white wire).



TRANSFORMER PLATE ASSEMBLY (PRIOR TO MAY 2015)

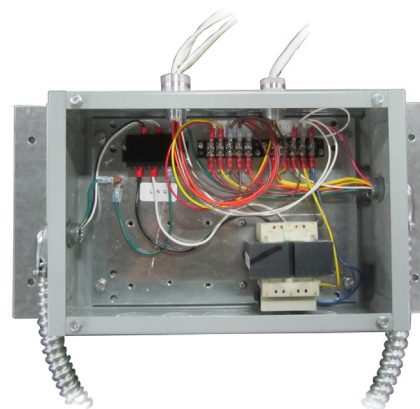
The Transformer Plate is located beneath the oven on the back stand. It consists of one of the two types of transformers and a Junction Box. All wiring within this 4x4" Junction Box is low voltage. It allows easy voltage testing to various oven components for troubleshooting. All wiring harnesses and the Thermocouple are routed through terminal strips within this box. Do not alter any wiring within this box or on the oven. Under no circumstances is high voltage (120 VAC) wiring to be connected within this box. No external equipment should be connected to the low voltage wiring of the oven. This may affect the operation of the oven and will void the oven warranty. High voltage connections are to be made only within the Transformer Junction Box. **Incoming power must be 120 VAC. Do not connect to 240 VAC!**



TRANSFORMER PLATE ASSEMBLY (AFTER MAY 2015)

The Transformer Plate is located beneath the oven on the back stand. It consists of one of the two types of transformers within an 8x12" Junction Box. It allows easy voltage testing to various oven components for troubleshooting. All wiring harnesses and the Thermocouple are routed through terminal strips within this box.

Do not alter any wiring within this box or on the oven. No external equipment should be connected to the low voltage wiring of the oven. This may affect the operation of the oven and will void the oven warranty. **Incoming power must be 120 VAC when configured with the Class 2 transformer. Do not connect to 240 VAC!**



TOUCH-PAD CONTROLLER

On the front of the touch-pad Controller is a Lexan Keypad Overlay with a Hearth Temperature display, and depending on the oven model, a Hearth Set Point display, and Dome Flame and Hearth Heat Indicator lights.

Also included on the touch-pad are On/Off, Fahrenheit/Celsius and Up and Down adjustment arrows. Other than the Controller Board, there are no other parts inside the box.

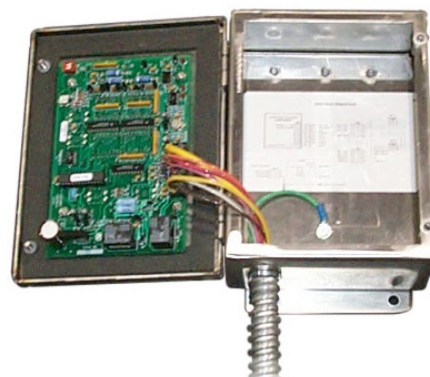
DIP SWITCH SETTINGS

The DIP switches on the Controller Board are preset at the factory and are used to configure the board for the type of oven: RFG-IR, W-IR or RFG. There should be no reason to alter these settings in the field.

RFG-IR: Both ON

W-IR: #1 OFF, #2 ON

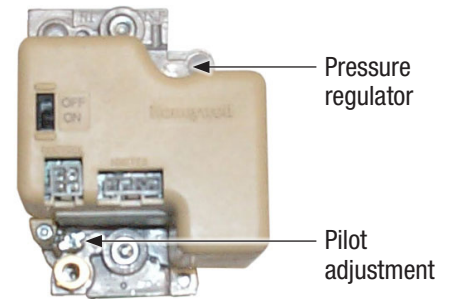
RFG: Both OFF





GAS VALVES

Wood Stone uses a “smart” type Gas Valve to control gas flow to each Burner. These Valves do not require the use of a separate ignition module, the ignition control system is integrated into the circuitry of the Valve itself. Electrical connections are made via Molex connectors. The same Valve is used regardless of oven size or model, IR or Radiant Burner. When used on the IR Burner, it is referred to as SV-1. When used on the Radiant Burner it is referred to as SV-2 and/or SV-3. An adjustable pressure regulator is incorporated into the Valve. There is also an adjustment on the Valve for the Pilot flame height. **Note:** Maximum incoming line pressure must not exceed 14" W.C. (34.8mbar). Use an external regulator if line pressure exceeds 14" W.C.



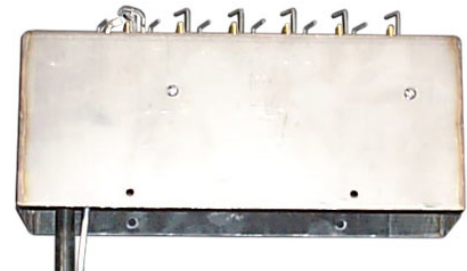
PILOT IGNITER ASSEMBLY

The Pilot/Igniter is used in conjunction with the Smart Valve to ignite the Burner and provide flame sensing (flame rectification) for the Gas Valve. It uses a tungsten Glow Coil for hot surface ignition. This coil is fragile. Flame rectification is achieved from the Flame Rod to ground through the Pilot Tubing. The Pilot/Igniter assembly wiring is connected to the Gas Valve via Molex connector. On the connector, the two wires closest to each other supply power to the Glow Coil.



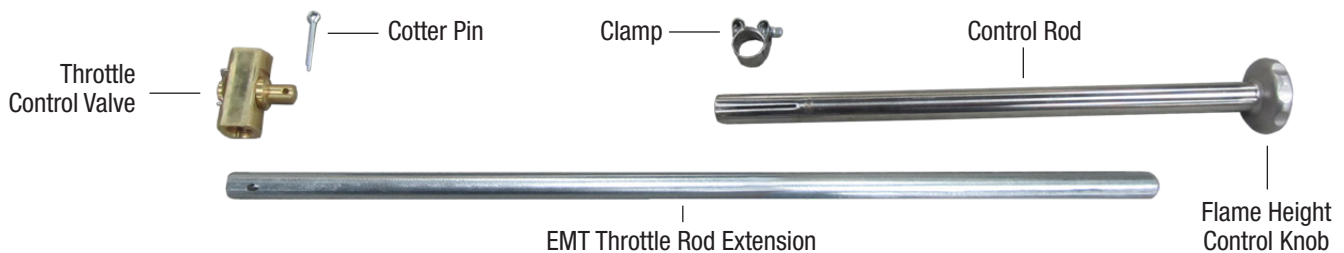
RADIANT BURNER ASSEMBLY

This Burner is located at one or both sides of the oven and produces the flames visible inside the dome. It consists of a stainless steel Burner housing, a cast iron Burner Manifold, the Burner Jets and the Flame Retention Springs that are attached to each Jet. There is an opening in the Burner Housing through which the Pilot Igniter Assembly is mounted.



THROTTLE ASSEMBLY

The Flame Height Control Knob for this Valve is located on the front of the oven. This is what the operator uses to control the flame height of the Radiant Burner only. Ovens equipped with two Radiant Burners will have a separate control for each Burner. It is not a shutoff Valve. Do not remove, or replace this Valve with anything but a Valve supplied by Wood Stone. **The use of any Valve not provided by Wood Stone will negate the ETL Listing on the oven and could effect its safe operation.**



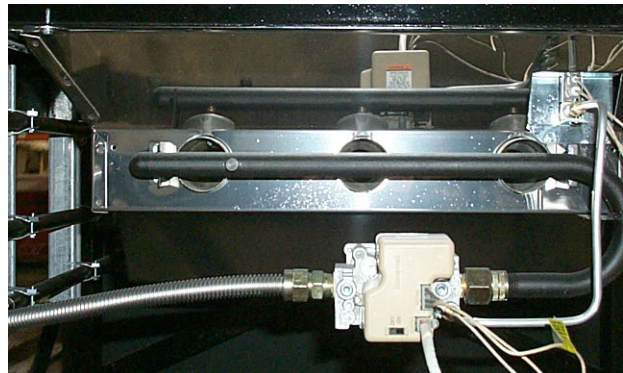


INFRARED BURNER ASSEMBLY

This is the Burner located beneath the floor of the oven. The tubes on the outside of the Burner are used to supply air to the Burner. You will not see flame in these tubes.

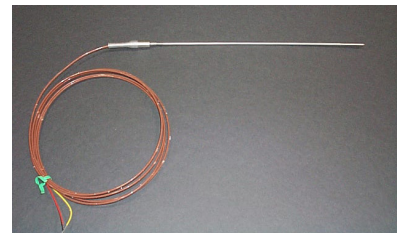
DO NOT ATTEMPT TO LIGHT THIS BURNER MANUALLY!

To visually verify that the Burner is running, look through the gap next to the Pilot assembly and you should see a reddish glow over the ceramic Burner elements. This Burner operates only when the hearth temperature is lower than the Controller's Hearth Set Point.



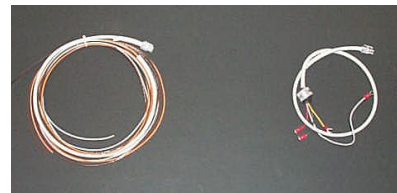
THERMOCOUPLE

A Type K Thermocouple is used to sense the temperature of the oven floor (hearth), about 1 inch beneath the hearth surface. It is located slightly to the rear of the center of the oven (behind the IR on an IR equipped oven). It is embedded in the floor of the oven, but is easily replaceable. Older 9690 models only are equipped with a second calibrated Thermocouple for the overtemp module.



SV1 AND SV2 WIRE HARNESES

These harnesses supply the voltage needed to activate and power the ignition system on the respective Valves. They also send flame verification voltage from the Valve back to the Controller.



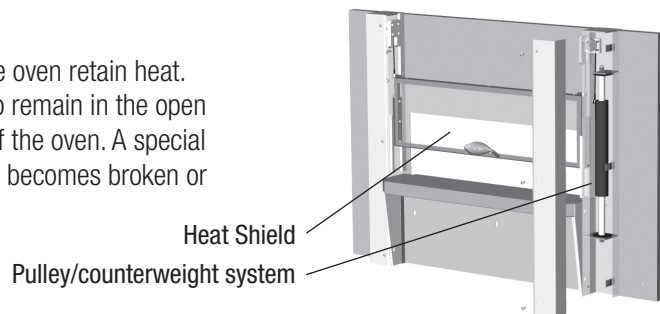
CONTROLLER WIRE HARNESS

This harness carries low voltage to and from the oven Controller. It also contains the Thermocouple wires.



HEAT SHIELD

The Heat Shield (on models FD-6045 and FD-8645) helps the oven retain heat. A pulley and counterweight system enables the Heat Shield to remain in the open position to allow easy access for moving product in and out of the oven. A special high temperature glass is used in the Heat Shield. If the glass becomes broken or damaged, replace only with glass supplied by Wood Stone.





All versions of this Controller use a touch-pad (overlay) on the face of the control to operate the unit. It has power and flame indicator lights and a hearth temperature display. IR equipped ovens will also have a Hearth Set Point display.

Symptom	Probable Cause/Solution
Oven does not turn on, Controller is blank	<p>Is the breaker and/or wall switch supplying power to the oven on? Check for loose incoming power connections at the junction box on the side of the oven.</p> <p>Is the circuit breaker on the 24 V transformer tripped? The transformer is located in the left junction box located on the Transformer Plate, beneath the oven, at the rear. If the breaker on the transformer is tripped, eliminate the short and reset the breaker. In addition to a bad Gas Valve, wiring etc., a Thermocouple that is grounding out can also cause the breaker to trip.</p> <p>Check for 24 VAC between the pink and the white wires at the terminal block on the oven control board inside the Control Box. If 24 VAC is present, make sure that the four nuts attaching the circuit board to the face of the box are tight. DO NOT OVERTIGHTEN; they should be snug enough that pressure on the touch pad activates the switches on the circuit board.</p> <p>If the Controller is still not coming on, carefully remove all wires except the pink and white from the circuit board terminal block. If the Controller comes on, it is OK but there is a defective component or damaged and/or incorrect wiring elsewhere. If with just the pink and white wires connected (and 24 VAC present), the Controller still does not come on, replace the Controller circuit board. Turn off the incoming power to the oven before removing the wires to prevent damage to the board.</p>
Temperature display reads "open"	<p>Indicates an open Thermocouple. Check for loose Thermocouple connections at the Control Board and at the J-box on the Transformer Plate below the oven before replacing. Check for continuity between the 2 Thermocouple wires. There should be NO continuity to ground through either Thermocouple lead.</p>
Temperature display scrambles and/or is erratic (may precede the transformer circuit breaker tripping). Display is fine, but the transformer circuit breaker trips instantly and/or intermittently.	<p>Thermocouple is shorting to ground. There should be no continuity between the Thermocouple leads and ground. Check Thermocouple connections at control board and J-box below the oven. Remove Thermocouple leads at J-box and retest to confirm damaged Thermocouple and not bad wire in the Control Harness.</p>



Symptom	Probable Cause/Solution
<p>RFG-IR oven: Controller is on, but dome flame does not come on.</p> <p>RFG oven: Controller is on, but dome flame is not coming on.</p> <p>W-IR oven: Controller is on but IR is not coming on.</p>	<p>Controller is fine, See Radiant and Infrared Burner Troubleshooting section of this manual.</p> <p>Note: On RF-IR ovens with 2 Radiant Burners (dome flame), the Controller will not signal the Infrared Burner to light until at least 1 of the Radiant Burners has lit.</p>
<p>RFG-IR Oven: Dome flame comes on, a short time later the display flashes “check” and the Hearth Heat Indicator Light flashes.</p>	<p>Controller is fine. It is indicating that the Controller called for IR heat, but the IR Burner did not fire within the time allowed by the Controller. See Radiant and Infrared Burner Troubleshooting section of this manual.</p>
<p>9690 RFG-IR Oven: Display is on, no Burners are lighting and Hearth Temperature is above 800 °F.</p> <p>9690 RFG-IR Oven: All Burners go out, display remains lit, Hearth Temperature is above 800 °F.</p> <p>9690 RFG-IR Oven: No Burners are lit, Hearth Temperature is below 800 °F.</p>	<p>Older 9690 models incorporate an over-temperature control that shuts off power to the Gas Valves. Once the oven floor temperature has dropped below 800 °F, it may be reset by turning the oven off and then back on. If equipped the overtemp module is located in the right side junction box on the Transformer Plate below the oven at the rear.</p>
<p>Product is overcooking and the Controller is displaying a hearth temperature that is considerably lower than the Hearth Set Point and the IR Burner is running.</p>	<ol style="list-style-type: none"> 1. Thermocouple may be shorted, causing it to read the temperature at the point of the short. Look for damage to the Thermocouple wire. 2. Operational problem. Contact Wood Stone.
<p>Product is overcooking and the floor temperature is higher than the Hearth Set Point. The IR Burner should not be running.</p>	<p>Operational problem. The operator is leaving the radiant flame at too high a setting for too long and as a result, is driving up the oven temperature through the use of too high a radiant flame. It is very easy for a radiant flame to heat the oven’s hearth temperature well above the Hearth Set Point if it is not managed correctly (especially if the oven is not under much use at the time). Call Wood Stone for operational assistance.</p>

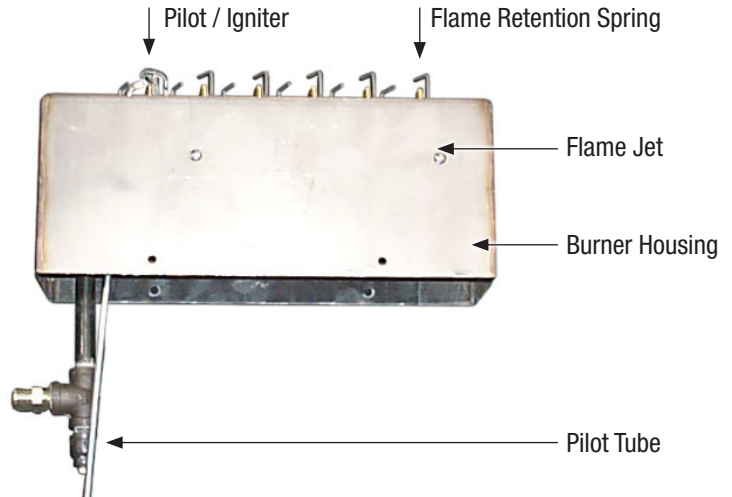


RADIANT FLAME BURNER TROUBLESHOOTING

OPERATIONAL OVERVIEW

Wood Stone gas ovens utilize “smart” type Gas Valves. With these Valves, the ignition module circuitry is incorporated into the Valve itself—there is no separate ignition module. Burner ignition is achieved via a hot surface (Glow Coil) to Pilot ignition system.

The unit will attempt Pilot ignition for 90 seconds: 30 seconds glow, 30 seconds purge and then 30 seconds with the Glow Coil again. Pilot gas will flow for the entire 90-second trial. The system will then lockout and retry after 5 minutes. Flame rectification is sensed through the Flame Rod on the Pilot/Igniter to ground via the Pilot Tube.



Radiant Flame Burner

Fire Deck ovens may have one or more Radiant Burners located at the sides of the oven. In all Radiant Burner equipped ovens, it is a primary heat source. Temperature may be controlled by adjusting the flame height at the Flame Height Control Knob (Valve) on the front of the oven. Each Radiant Burner will have its own Flame Height Control Knob.



Symptom	Probable Cause/Solution
<p>Burner does not light, oven Controller is on, and switch on the Gas Valve (SV-2 or SV-3) is in the on position, no visible glow from the side of the Burner.</p> <p>Note: On any call where the complaint is that the Radiant Burner will not light, stay lit or is going out intermittently, step one is removing the Radiant Burner for inspection and cleaning. The majority of Radiant Burner problems can be traced to debris in the Burner. See the “Common Repair Procedures” section of this manual.</p>	<ol style="list-style-type: none"> 1. Wire connections at the Gas Valve are loose or unplugged. Verify that the MOLEX connectors for the wire harness to the Valve and the Igniter wires are securely plugged into the Gas Valve. Make sure that the pins are locked into the connector body. 2. Moisture. If the Valve has gotten wet replace it. Also, the Pilot/Igniter will not function correctly if Igniter wires have gotten wet. If the Igniter wires are wet, turn the oven off and carefully uncoil the wires and separate them so there is as little contact between them as possible, then restart oven. 3. Abrasion of the Pilot Igniter wires. If there is a wire tie on the Igniter wires, carefully remove it and uncoil the wires and separate them so there is as little contact as possible between them. 4. Broken Glow Coil on the Pilot Igniter. Test for continuity at the Igniter MOLEX connector. Between the two adjacent wires on the connector you should read about 3.5 ohms. If circuit is open replace the Igniter. If this is the case, the Burner should be removed for cleaning and inspection. See the Common Repair Procedures section of this manual. If Igniter tests ok, verify 24 volts going to the Gas Valve. This can be tested at the MOLEX connector on the wiring harness. Disconnect the wiring harness from the Gas Valve before checking voltage. Do not attempt to check for voltage while it is connected to the Gas Valve. With the oven on you should read 24 VAC between the brown and white wires. If the voltage is fine replace the Gas Valve. <p>Warning: Do not attempt to read voltages at the connectors on the Honeywell Gas Valve. Doing so may damage the electronics in the Valve.</p> <p>Any time it is necessary to replace a Gas Valve or Igniter, the Burner should be removed for inspection and cleaned if necessary. Most Valve and Igniter failures are caused by debris, either through physical damage to the Igniter or causing a short to the Valve.</p>



Symptom	Probable Cause/Solution
<p>Burner does not light, there is a visible glow on one side of the Burner. Dome Flame indicator light on Controller is not lit.</p>	<ol style="list-style-type: none"> 1. Gas supply to the oven has been turned off. Check manual shutoffs, fire suppression system resets etc. 2. There may be air in the gas line. On a new oven start-up there may be air in the gas line. Turn the oven on for about 30 seconds. Turn it back off and then back on for 30 seconds. Repeat this up to five times. If you begin to smell gas and the oven is still not lighting, proceed to step 3. If oven does not light and you are not smelling gas continue with this step. It will be necessary to remove the inlet plug on the Gas Valve which will enable the air to be bled more quickly from the line. This can be done on the IR Gas Valve if equipped. TURN OFF THE OVEN AT THE CONTROLLER. EXTINGUISH ALL OPEN FLAMES BEFORE BLEEDING THE GAS LINE. Remove the plug on the inlet side of the Gas Valve using a 3/16" hex key wrench. Allow the air to bleed out until you smell gas. Re-install plug. Allow the gas to dissipate and then turn the oven on. If oven does not light after 30 seconds, turn it off and back on again, it may still be necessary to do this a few times. DO NOT LEAVE THE OVEN UNATTENDED WHILE THE INLET PLUG IS REMOVED FROM THE GAS VALVE! 4. Verify that the switch on the Gas Valve is in the ON position. The Valve will power the Igniter even if the switch is in the OFF position. 5. Check for loose wire connections at the SV-2 (or SV-3) Gas Valve. Verify that the MOLEX connectors for the wire harness and Igniter wires are securely plugged into the Gas Valve. Make sure that the pins are securely locked in to the connector body. If Burner still does not light, proceed with the following: 6. Try to determine if the Pilot is actually lighting. DO NOT CLIMB INTO THE OVEN OR PLACE FACE OVER BURNER! It can be difficult to see and can be confused with the glow from the Igniter, use an inspection mirror if possible. If the Pilot is actually lighting, make sure Flame Rod is clean and that no debris is interfering with the flame. Pilot flame should envelope 3/8" to 1/2" of the Flame Rod, and make continuous contact with the forked ground electrode. If the flame is not making good contact, gas pressure is low or Pilot orifice is dirty. If flame is overshooting, the Pilot orifice may be missing, or Pilot may be adjusted too high at the Gas Valve. If Pilot is not lighting make sure Pilot orifice is not plugged. See the Common Repair Procedures section of this manual. If flame is good, recheck Igniter wires, make sure pins are seated etc. If rectification light still does not come on and Burner is not lighting replace Pilot/Igniter. If after replacing Pilot/Igniter the Burner still does not light, replace the Gas Valve.



Symptom	Probable Cause/Solution
<p>Burner is not lighting, dome flame light is on.</p>	<ol style="list-style-type: none"> 1. Check the outlet pressure at the Gas Valve. Make sure it is adjusted as specified on the Equipment Name plate beneath the oven. If pressure is extremely low or non-existent, verify that there is sufficient pressure at the inlet side of the Gas Valve. If inlet pressure is good, check that all the pins are locked securely in the MOLEX connector attaching the wire harness to the Valve and that the connector is firmly in place. Check for damage to the wire harness. If these are all good, the Gas Valve is defective and needs to be replaced. 2. If proper gas pressure is found at the Valve outlet, verify that there is pressure at the tap below the Burner. There will normally be a slight drop in pressure from the outlet of the Valve to the Burner. If the drop is extreme, disassemble the Throttle Control Valve and check for a blockage. <p>If the pressure is good, drop the Burner and clean, make sure all Jets are clean and that Pilot/Igniter has not been knocked out of position. The base of the Pilot/Igniter assembly should be horizontal, even with the top of the Burner. Check that Pilot flame is not set too low, and that the oven is not over vented.</p>
<p>Burner goes out intermittently.</p> <p>Note: On FD-9660, 11260, 9690, 11275 and 11290 models (no Heat Shield), do not run oven with Night Heat Retention doors in place.</p>	<ol style="list-style-type: none"> 1. Debris in the Burner causing the Pilot to lose rectification. Remove the Burner and clean, see the Common Repair Procedures section of this manual. Make sure the Igniter is not damaged and that the Flame Rod is clean. 2. Gas supply to oven is being interrupted or is inadequate, or Burner gas pressure is set incorrectly. Verify the Burner gas pressure with all Burners running. There should not be a significant pressure drop at the Burner when the other Burner(s) turn on. If a drop is noted, the gas supply to the oven is inadequate and needs to be increased. 3. Check that the Igniter wires are not wire-tied, coiled or wrapped together. Spread the Igniter wires apart to minimize contact between them. Check the MOLEX connectors on the wire harness and the Igniter. 4. Incorrect Pilot adjustment. Adjust Pilot height at the Gas Valve. Turn the adjustment screw in until the Pilot goes out. Then back the screw out to just beyond the point where the Pilot relights. 5. Excessive airflow from beneath the oven causing the Pilot flame to lift away from the Flame Rod. Correct the airflow problem and make sure the Igniter gasket is in place. Ideally there should be no discernible draft below the oven. 6. Defective Pilot/Igniter—replace. If the Burner is still going out, replace the Gas Control Valve.



Symptom	Probable Cause/Solution
<p>Flame height is low. The flame should be approximately 12–15 inches tall at full-throttle.</p>	<ol style="list-style-type: none"> 1. The Burner gas pressure is low; adjust the regulator on the Gas Valve to obtain the specified pressure. If the specified pressure cannot be obtained, verify that incoming gas pressure is sufficient; check this with the oven running. If the incoming pressure is good, there may be a blockage in the throttle control valve. Disassemble and clean the Valve; see Common Repair Procedures section of this manual. 2. Debris in the Burner. Remove and clean. See Common Repair Procedures section of this manual.
<p>Soot is forming near the Burner. Note: Do not run oven with Night Heat Retention doors in place.</p>	<ol style="list-style-type: none"> 1. Some sooting is normal when the oven is cold. This will burn away when the oven reaches operating temperature. 2. Check for debris in the Burner; remove Burner and clean. See the Common Repair Procedures section. If a log set is installed, verify that it is positioned correctly. 3. If Burner is clean, check that the oven is properly configured for the gas being supplied. Call Wood Stone.
<p>Burner doesn't light or goes out, and the Igniter wires are burned.</p>	<ol style="list-style-type: none"> 1. Loose Pilot Tube, tighten and replace Igniter 2. Inadequate venting or negative air. See Installation and Operation Manual instructions.
<p>Radiant flame height is much higher on the Igniter side of the Burner. The flame on this side does not decrease when the operator turns down the flame.</p>	<p>Pilot orifice is damaged or missing. Remove Pilot/Igniter. Orifice fits between the brass Compression fitting attaching the Pilot Tube and the Igniter body. Replace with new Pilot orifice.</p>



Many Wood Stone ovens are equipped with an Underfloor Infrared (IR) Burner. The IR Burner is designed to assist the Radiant Burner or the wood fire during start-up and during times of heavy usage. It is thermostatically controlled. It is not the primary heat source for the oven. The IR Burner’s Gas Valve and Pilot/Igniter are identical to those used on the Radiant Burner.

Symptom	Probable Cause/Solution
<p>RFG-IR Models IR Burner is not lighting. The display may be flashing “check”.</p> <p>NOTE: You will not see flame at the black tubes on the front of the Burner.</p> <p>CAUTION: Never attempt to light this Burner manually. To visually confirm that the Burner is lit, look through the gap next to the Pilot/Igniter.</p>	<p>Is the Radiant Burner running? If not, proceed first with Radiant Burner troubleshooting. See previous pages of this manual</p> <p>NOTE: On RFG-IR ovens, the IR Burner will not light until the Controller has verification that the Radiant Burner has lit, or one of the Radiant Burners on ovens with 2 Radiant Burners.</p> <p>If the Radiant Burner is running, and the Controller is calling for IR heat, it will allow the IR Burner 90 seconds to light. If the Burner has not lit after this time the Controller will flash “check”. Turn the oven off and then back on to reset.</p> <ol style="list-style-type: none"> 1. If the Radiant Burner is running, is the Controller calling for heat, i.e. the Hearth Temperature is lower than Hearth Set Point? 2. Is the switch on the Honeywell Gas Control Valve in the “On” position? 3. Visually check for Igniter glow. If the Igniter does not come on when the IR Burner is called for, check that the MOLEX connectors are securely plugged into the Gas Control Valve. Make sure that the pins are securely locked into the connector body. Remove any wire ties and uncoil the Igniter wires so that there is minimal contact between them. Check the continuity of the Glow Coil at the two adjacent wires on the Igniter connector; this should be approximately 3.5 ohms. If the circuit is open, replace the Igniter. If Glow Coil tests OK, disconnect the SV-1 wire harness from the Gas Valve and with the Controller calling for heat, test for 24 volts between the yellow and white wires, and brown and white wires. Do not test for voltage at the connectors on the Gas Valve; damage to the Valve may result. If voltage is not present, see Controllers Troubleshooting section of this manual. If voltage is present replace the Igniter. If there is still no glow, replace the Gas Valve. 4. If the Igniter is glowing and the gas supply to the oven is good, but Pilot is still not lighting: Remove the Igniter and inspect for damage and/or a plugged orifice. Replace if necessary. If Pilot orifice is not plugged or damaged, replace Gas Valve.
<p>Burner will not light or shuts off sometimes, and, the Igniter wires appear to be burned.</p>	<ol style="list-style-type: none"> 1. Loose Pilot Tube: Tighten and replace Igniter. 2. Inadequate oven venting or negative air pressure: See Installation and Operation manual instructions. Call Wood Stone for information.



Symptom	Probable Cause/Solution
<p>Wood-Gas Ovens (W-IR in model #) IR Burner does not come on.</p>	<ol style="list-style-type: none"> 1. Verify that gas is being supplied to the oven and that all the air has been bled from the gas line. If necessary, the gas line may be bled by removing the inlet plug on the Gas Control Valve. Reinstall the plug when you smell that gas is present. Allow gas to dissipate before restarting oven. Do not leave the oven unattended while the inlet plug is removed! 2. Verify that the Hearth Set Point is above the Hearth Temperature. If the Burner does not come on, proceed to step 3 of the RFG-IR troubleshooting (previous page).
<p>IR Burner goes out intermittently when Controller is calling for IR heat.</p>	<ol style="list-style-type: none"> 1. Check wire connections at the Gas Valve and the Igniter. Remove any wire ties and uncoil Igniter wires to minimize contact between the wires. Also check for loose connections at the Controller. 2. Inspect the Igniter and clean it if necessary. Replace it if damaged. 3. Check for excessive air movement below the oven. This can cause the Pilot flame to lift away from the Flame Rod and cause the Burner to go out. Contact Wood Stone for assistance. 4. Check the Burner gas pressure, adjust the Valve to achieve the specified pressure (see Equipment Name Plate). Check the incoming gas pressure with the Burner running. If the incoming pressure is OK, but the Burner pressure is low and will not adjust as high as the pressure specified on the Equipment Name Plate OR if the Burner pressure is erratic, replace the Gas Control Valve. 5. If pressures are OK, replace the Igniter. If problem recurs, replace Gas Valve.
<p>Burner will not light or shuts off sometimes, and, the Igniter wires are burned.</p>	<ol style="list-style-type: none"> 1. Loose Pilot Tube – tighten and replace Igniter 2. Inadequate oven venting or negative air pressure: See Installation and Operation Manual. Contact Wood Stone for further assistance.



COMMON REPAIR PROCEDURES AND DIAGRAMS

NOTE: Remove the front panel on the oven to access all non-Controller components.

CHECKING BURNER GAS PRESSURES

Proper gas pressure settings and an adequate incoming gas supply are critically important for any gas-fired Wood Stone oven to operate correctly. All Burner gas pressure measurements should be taken at the outlet port on the respective Gas Valve. Note that this is different from Wood Stone MS Series ovens. When taking any pressure reading, make sure that all Throttle Valves are fully open (maximum flame height), and that all Burners are running; This will reveal if the incoming gas supply is adequate.

Where it is suspected that the incoming pressure is inadequate, test the incoming pressure with the oven off and then with the oven on and all Burners running. If the incoming pressure drops significantly with the oven running, and the proper pressures cannot be obtained at the Burner(s), the gas supply is inadequate. Look for regulators external to the oven that are set too low, partially closed Valves or undersized piping. The piping and Shutoff Valves supplying the oven must have a minimum O.D. that measures the same as that of the inlet connection on the oven, and depending on the length of the run it may need to be larger. Depending on the model, this will be 1" or 3/4". Consult a qualified gas piping installer to deal with any supply piping issues. Use of flex piping to supply gas to the oven is discouraged. The specified pressure for each Burner may be found on the Equipment Data Plate, located beneath the oven.

REMOVAL AND CLEANING OF RADIANT BURNER

This procedure may be performed while the oven is hot. We strongly recommend that the technician wear heat protective gloves and safety glasses/goggles when removing the Burner.

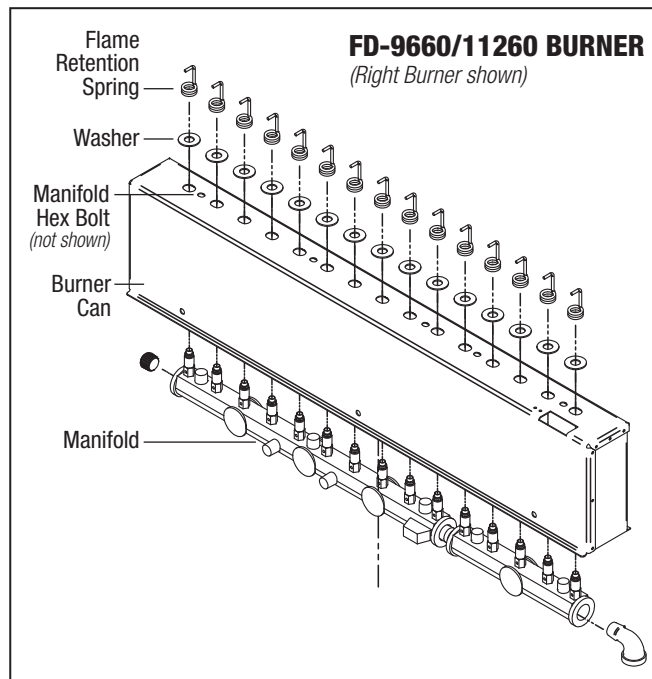
1. First turn the oven off for Burner removal. Turn off the gas supply to the oven.
2. Unplug the MOLEX connector for the Igniter from the Gas Valve.
3. Disconnect the Pilot Tube at the Gas Valve, or at the union on the Pilot Tube.
4. Disconnect the flexible gas piping where it attaches below the Burner.
5. Carefully remove the four bolts holding the Burner Can in place and lower the Burner out of the well.

Caution: Watch out for falling debris while removing the Burner.

6. Clean off any debris on the Burner.
7. Check that Burner Jets are not blocked, and that Pilot/Igniter Assembly is not dirty or damaged. If removing Igniter, be aware of the Pilot Orifice, which slips into the Igniter where the Pilot Tube is attached, can fall out if you are not careful. Any Burner Jets that are clogged should be removed from the Burner Manifold to prevent debris from entering the Manifold while cleaning.
8. To remove the Jets, first remove the Flame Retention Spring attached to each Jet by gripping the spring with a pair of pliers and pulling away from the Burner while turning the spring clockwise.
 - With FD-9660 or FD-11260 models, remove the washer.
 - Remove the hex bolts that hold the Burner Manifold in place.
 - Remove the Manifold, then remove the individual Jets. Make sure to reinstall so the hexagonal part of the Jet is closest to the Burner Manifold.
 - Make sure to reinstall the washers and Flame Retention Springs.

Note: Hand tighten Manifold hex bolts. **Do NOT use impact wrench.**

9. To reinstall Burner, follow the removal steps in reverse.
- 10 Check for gas leaks using soap solution with the Burner running. Avoid getting soap solution on Valve or Igniter wires.



**PILOT/IGNITER REPLACEMENT – INFRARED BURNER**

To replace the Pilot/Igniter assembly on an IR Burner, first turn the oven off. Then remove the Pilot Tube from the Igniter, being careful not to lose the Pilot orifice. Next remove the screw holding the Igniter in place. Slide the Igniter out of the Burner. Install the new Igniter. New Igniters are shipped with the Pilot orifice already installed between the Igniter and the brass Compression fitting attached to the Igniter.

PILOT/IGNITER REPLACEMENT – RADIANT BURNER

If replacing an Igniter on a Radiant Burner, we recommend removing the Burner—see Removal and Cleaning of Radiant Burner on previous page. While the Igniter can be replaced without Burner removal, we find that the cause for the Igniter failure is commonly debris in the Burner. Be aware of the Pilot orifice located between the brass Compression fitting and the Igniter. The Igniter is attached to the Burner can with a right angle bracket. Remove the screw holding the bracket to the Burner can, and remove the Igniter. Remove the bracket from the old Igniter. Attach the bracket to the new Igniter and reinstall. Whenever you are removing or replacing the Radiant Burner Igniter you should also replace the Igniter gasket.

GAS VALVE REPLACEMENT

Shut off gas supply to the oven. To replace the SV-1 (IR) Valve, a 1/2" Allen wrench is necessary for removing the union from the Valve. To replace an SV-2 or SV-3 Valve, disconnect the Pilot tubing and wiring from the Valve. Disconnect the Throttle Control Rod by removing the cotter key Valve. On the FD 8645 or FD 6045, it is recommended that you first disconnect the flex piping leading to the Burner, then the union located below the Valve. Disconnect the Pilot tubing and wiring from the Valve. Disconnect the Throttle Control Rod by removing the cotter key. Then remove the Gas Valve piping assembly from the unistrut.

Replace the Valve, making sure that the new Valve is oriented exactly as the original. Reinstall the piping assembly on to the unistrut. Make sure to align the assembly so that the Control Rod turns freely and does not bind. On the FD 9690 and 11290, SV-2 and SV-3 replacement simply entails removing the flex piping to the Burner. The Valve can then be replaced without removing any additional piping from the oven. After installing the new Valve, always check the gas pressure and make the proper adjustments as necessary.

The specified Manifold pressures for the SV-1 (IR), and SV-2 and SV-3 (radiants), can be found on the Equipment Data Plate beneath the oven. Make certain that the replacement Valve is properly configured for the gas being used.

CRACKING IN THE FLOOR OR DOME OF THE OVEN

Some cracking of the oven refractory, especially hairline cracking, is completely normal and in no way degrades the performance of the oven. Any abnormal or extreme cracking (larger than 1/8 inch) should be brought to the attention of the Wood Stone Service Department. Do not attempt any type of repair to the oven refractory unless specifically instructed to do so by the factory, and then, only with materials supplied by Wood Stone.



THERMOCOUPLE REPLACEMENT

1. On IR equipped ovens, it will be necessary to first remove the Infrared Burner. Disconnect the flex piping to the SV-1 Valve. Disconnect the wiring harness at the SV-1 Valve. The IR Burner is attached to the oven by two brackets at the bottom plate of the oven. It is necessary to remove only one other brackets to drop the IR Burner out of the oven. Looking inside of the IR well you will see that the Thermocouple passes through blocks of insulation before it enters the oven floor. Make sure that the new Thermocouple passes through the insulation in a similar manner.
2. Disconnect the Thermocouple wires at the junction box located on the Transformer Plate below the oven. These will be the red and yellow wires that have the brown sleeve.
3. Cut the wire off at the base of the bad Thermocouple.
4. Mark the Thermocouple where it enters the fitting; use this mark as a reference for the depth of the new Thermocouple.
5. Loosen the retaining nut that secures the Thermocouple to the bottom of the oven.
6. Slide the Thermocouple out and remove the old fitting from the oven floor.
7. Using the Compression fitting supplied with the new Thermocouple, slide the new unit in as far as it will go, then check your reference mark. Make sure the Thermocouple passes through the insulation blocks in the IR well as described in step 1. Hold the Thermocouple so that it is bottomed out in the hole before tightening the Compression fitting.
8. Retighten the nut to compress the fitting on to the Thermocouple. Again, make certain the Thermocouple is properly located before tightening the nut, as it will be impossible to relocate once the nut is tightened.
9. Attach the wire end of the new Thermocouple to the cut wire of the old Thermocouple and pull the new wiring into the conduit (if applicable) as the old wire is pulled out at the J-box end. Connect the new Thermocouple leads.

THROTTLE VALVE CLEANING / REPLACEMENT

Caution: Never replace this Valve with any Valve except one supplied by Wood Stone. Doing so will void the ETL listing on the oven and void the warranty.

To remove the Valve, first turn off the oven.

1. Remove the front access panel from the oven to allow access to the rear of the Brass Throttle (Flame Height) Control Valve.
2. If the Valve has a stainless steel handle extension, remove the cotter key holding it in place and set the handle aside.
3. Remove the Throttle Valve from the pipe Manifold.
4. Clean any excess grease or debris from the stem orifices and the openings in the Valve body.
5. Reinstall the Valve and test the oven. The flame should be at maximum height when the Valve is turned fully counter clockwise, and at its minimum when turned fully clockwise. It should never turn the flame completely off.

NOTE: If the Valve has become difficult to turn, it should be replaced with a new Valve. Replace only with a Valve supplied by Wood Stone.



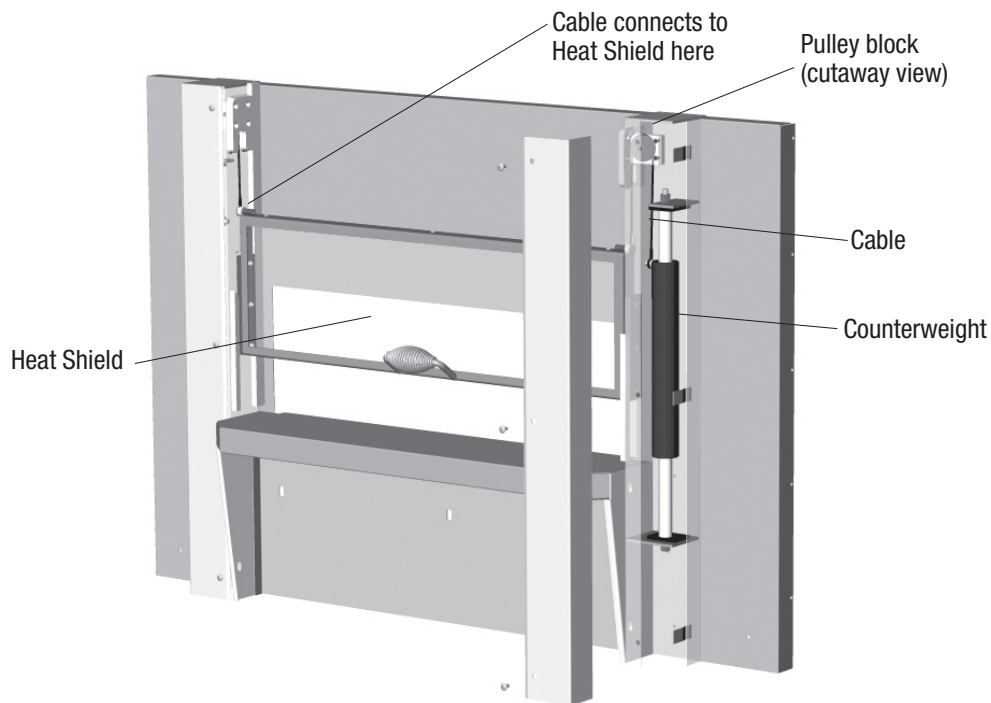
HEAT SHIELD CABLE REPLACEMENT

Please refer to the diagram below. If a cable has failed, Wood Stone recommends that you replace both cables.

1. Remove the screws that attach the counterweight covers.
2. Raise the Heat Shield up several inches and block it up. A short piece of 2x4 or anything similar works well for this. Place a block under the counterweight as well to relieve the tension on the cable.
3. Tilt the door forward. Where the cable attaches to the Heat Shield, note the position of the spacer and how the crimp of the cable eyelet is oriented towards the center of the oven. On one side of the Heat Shield only, use a 3/16" Allen wrench to remove the cable. Position the Heat Shield so it will not fall or be damaged and proceed with Step 4.
4. Continuing on the same side, remove the 9/16" nut that attaches the cable to the counterweight.
5. Continuing on the same side, remove the four Phillips screws that hold the pulley block in place. Remove the pulley block and cable.
6. Remove the "C" clip on the pulley block, and remove the pulley. Slide the new cable over the pulley and reinstall the pulley into the pulley block. Reinstall the pulley block as it was before.
7. Attach the cable eyelet to the counterweight using the 9/16" nut removed in Step 4.
8. Attach the cable eyelet to the Heat Shield using the Allen head shoulder bolt and spacer removed in Step 3.

The eyelet should be installed between the spacer and the head of the bolt, with the cable crimp oriented towards the center of the oven, overhanging the spacer.

9. Repeat steps 3–8 for the cable on the opposite side.

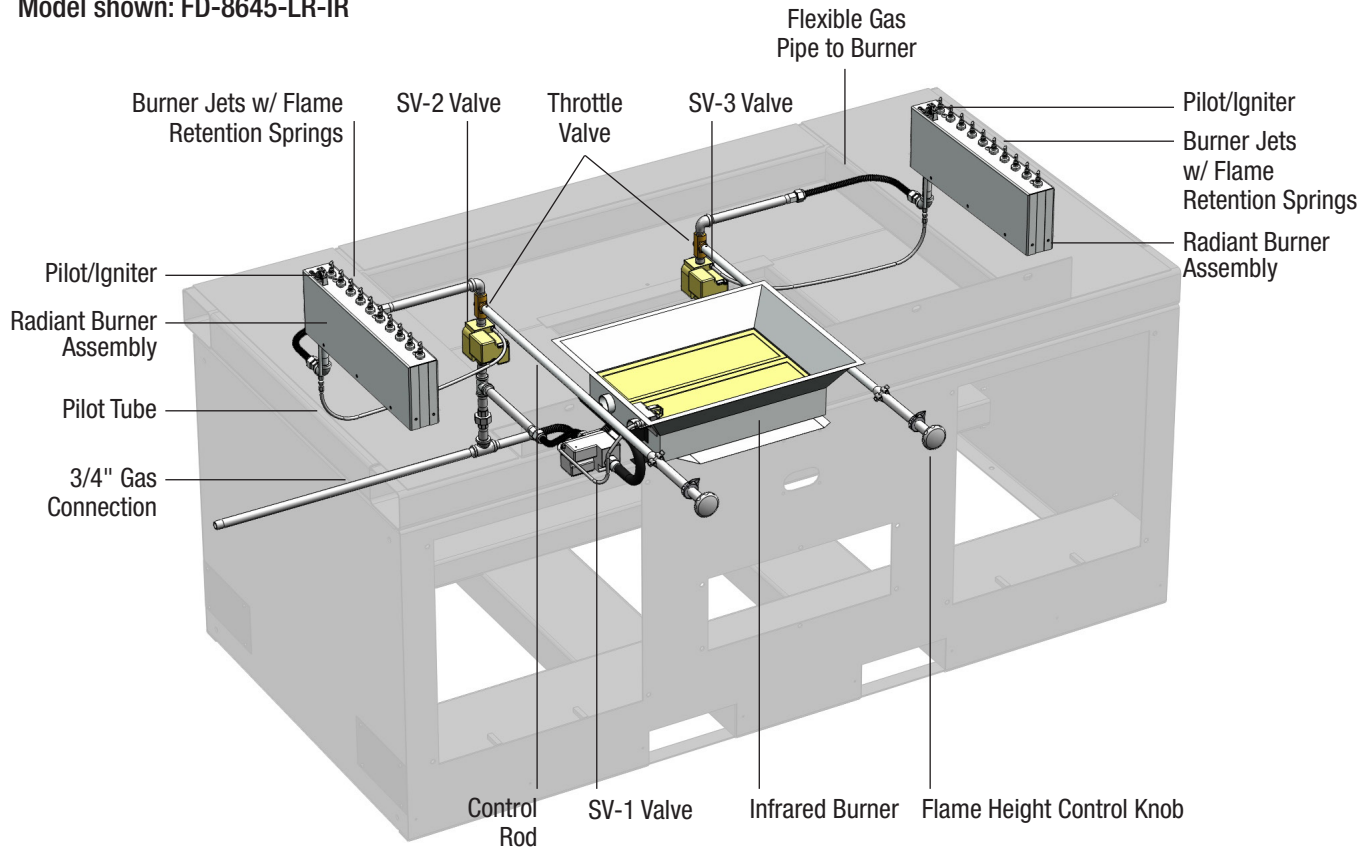




RFG-LR-IR MODELS PIPING LAYOUT

Note: Actual layouts may vary depending on the model and specific configuration of the unit.

Model shown: FD-8645-LR-IR

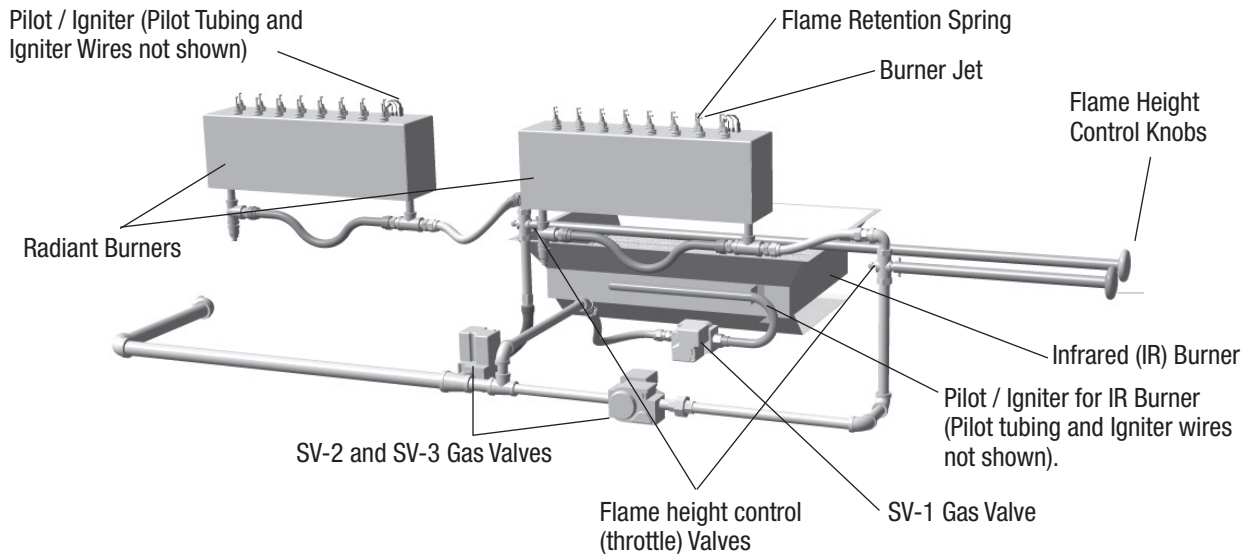




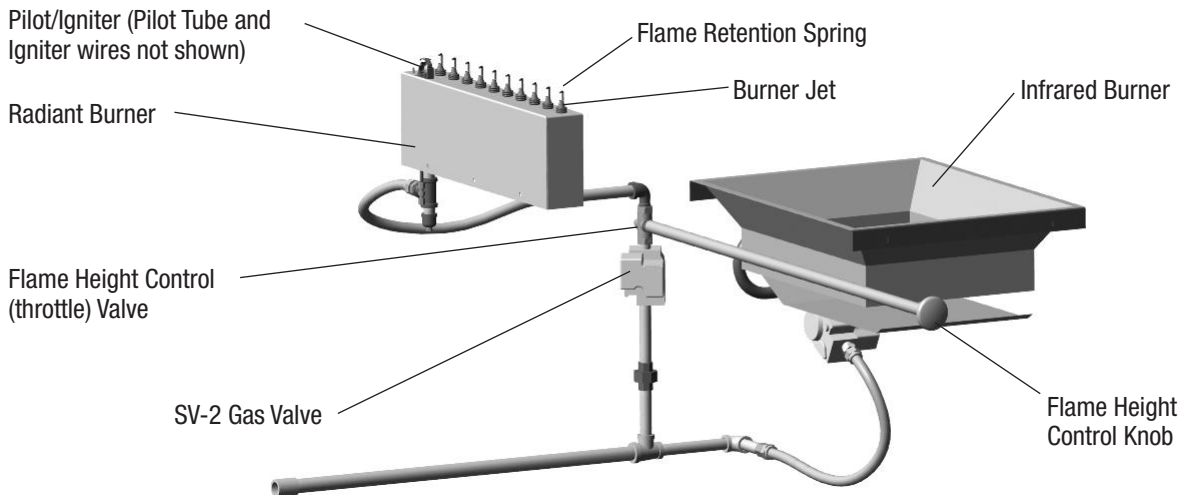
GAS PIPING LAYOUTS

Actual layouts may vary depending on the model and specific configuration of the unit.

WS-FD-9690, 11290



WS-FD-6045

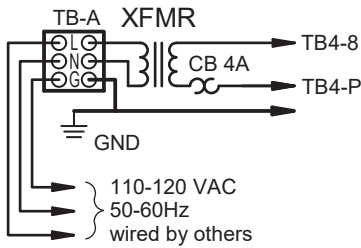
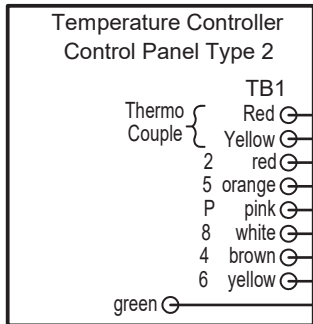


FD-8645, 9660 AND 11260 MODELS

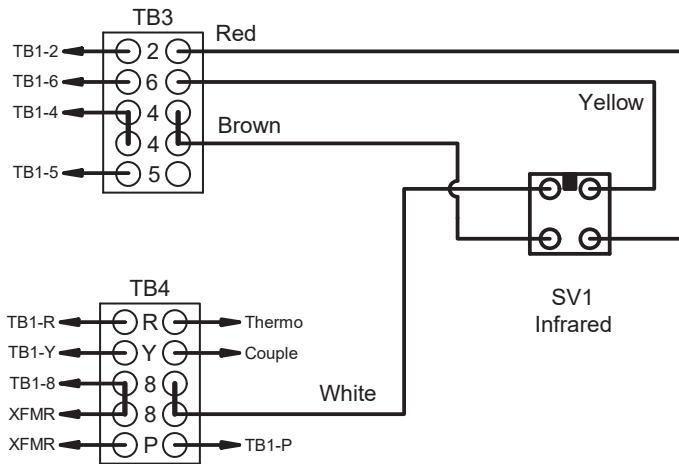
Piping will be similar to that of the FD-6045, with the exception that there can be a second Radiant Burner located on the opposite side of the oven.



FIRE DECK MODELS WITH IR BURNER ONLY



IR Only (W-IR)



WoodStone

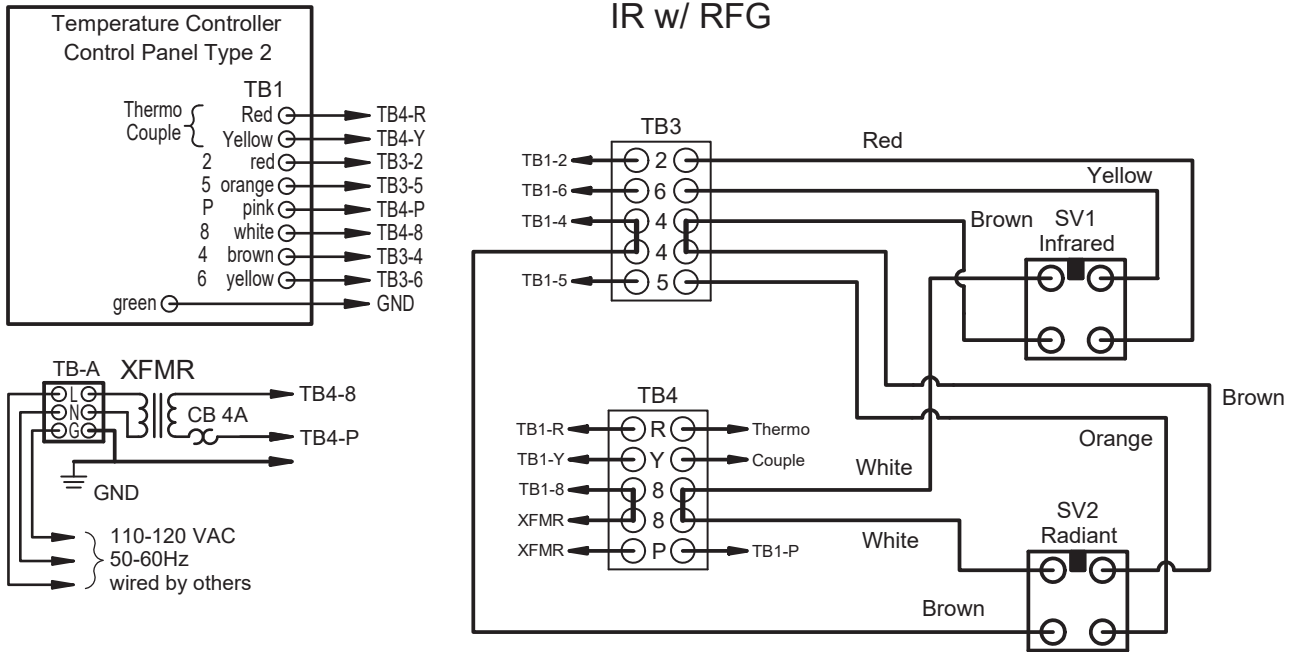
Bellingham, WA +1(360)650-1111 www.woodstone-corp.com

DIAG #: WD061 Rev. 0

DATE: 3/28/2014



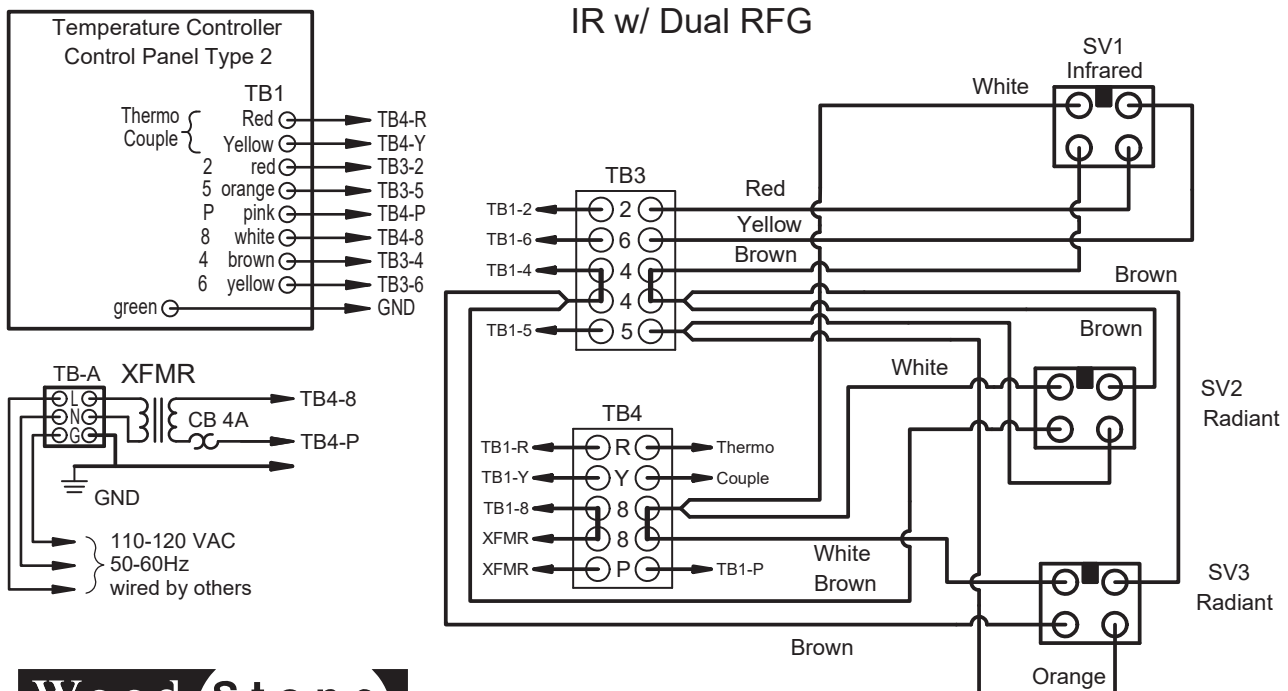
FIRE DECK MODELS WITH 1 RADIANT FLAME AND IR BURNER



Bellingham, WA +1(360)650-1111 www.woodstone-corp.com

DIAG #: WD064 Rev. 0
DATE: 3/28/2014

FIRE DECK MODELS WITH DUAL RADIANT BURNERS AND 1 IR BURNER

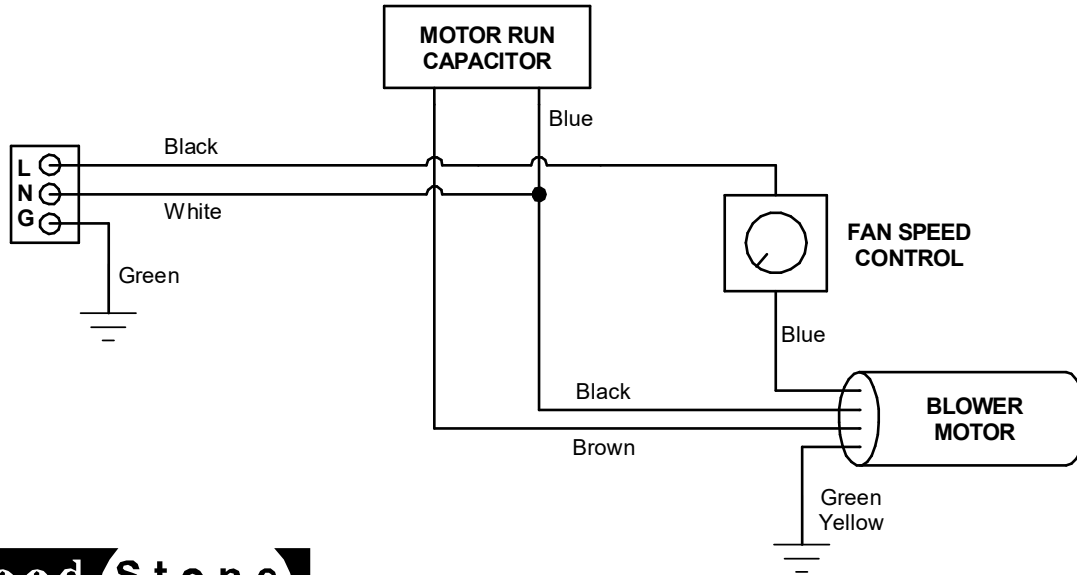


Bellingham, WA +1(360)650-1111 www.woodstone-corp.com

DIAG #: WD079 Rev. 0
DATE: 3/27/2014



COAL BLOWER MOTOR



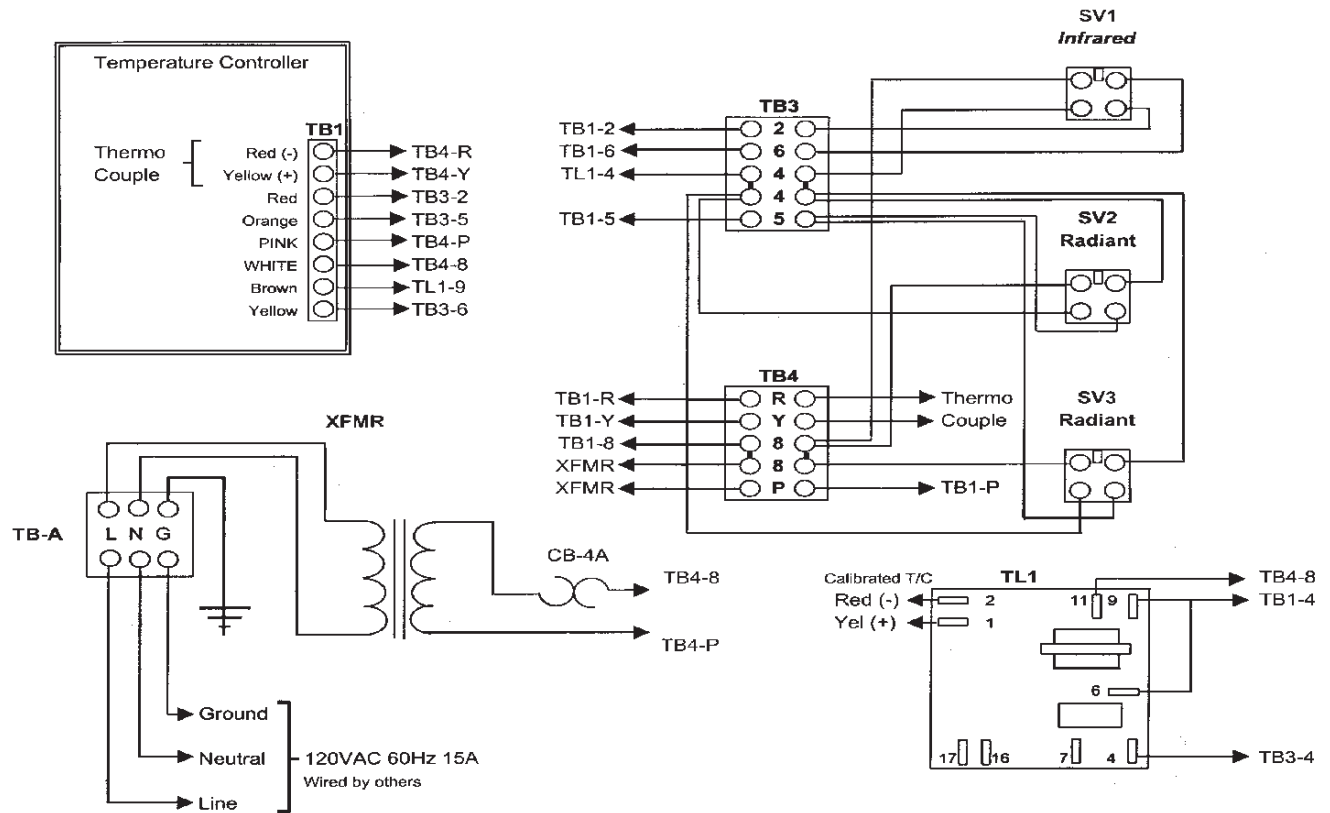
Bellingham, WA +1(360)650-1111 www.woodstone-corp.com

DIAG #: WD155 Rev. 0

DATE: 11/9/2015



FIRE DECK 9690
WITH DUAL RADIANT BURNERS AND IR BURNER - MODELS WITH OVERTEMP DEVICE





**PARTS LIST
FIRE DECK SERIES OVENS**

DESCRIPTION	PART NUMBER
Smart Valve SV-1, SV-2 or SV-3 - Natural Gas (NG)	7000-0750
Smart Valve SV-1, SV-2 or SV-3 - Propane (LP)	7000-0750 LP
Pilot / Igniter Assembly - NG	7000-0749
Pilot / Igniter Assembly - LP	7000-0749-LP
Pilot / Igniter Assembly - HLP	7000-0749-HLP
Pilot Gasket (for Radiant Burner)	7000-0777
Pilot Tube (24" bare aluminum, no fittings)	RP-0051
Pilot Tube Compression Fitting	RP-7000-0251
Pilot Tube Union	7000-0260
Controller	7000-0099
RFG-IR Lexan Keypad Overlay	7000-0900
W-IR Lexan Keypad Overlay	7000-0901
RFG Lexan Keypad Overlay	7000-0902
Temperature Probe for 6045, 8645, 9660, 11260	7000-0727-8645
Temperature Probe for 9690	7000-0727-9690
Transformer 120/24	7000-0734
Transformer 220/24	70CE-0081
Pilot Orifice- Natural Gas (NG)	7000-0748-NG
Pilot Orifice- Propane (LP)	7000-0748
Pilot Orifice- (HLP)	RP-0050
Conversion Kit for Smart Valve (to LP)	7000-0747
Conversion Kit for Smart Valve (to NG)	7000-0747-NG
Throttle (Flame Height) Control Valve - Natural Gas (NG)	7000-0182
Throttle (Flame Height) Control Valve - Propane (LP)	7000-0183
Flame Retention Spring	RP-0017
Door Cable	5190-1316
Replacement Glass- 6045	4120-1001
Replacement Glass- 8645	4120-1001-1
Glass Gasket (specify model)	6100-0003



**PARTS LIST
FIRE DECK SERIES OVENS--BURNER JETS**

DESCRIPTION	PART NUMBER
Radiant Burner Jet for 6045 NG (BR)	7000-0583
Radiant Burner Jet for 6045 LP (BT)	7000-0596
Radiant Burner Jet for 6045 HLP (K)	7000-0559
Radiant Burner Jet for 8645 NG (D)	7000-0539
Radiant Burner Jet for 8645 LP (P)	7000-0544
Radiant Burner Jet for 8645 HLP (K)	7000-0559
Radiant Burner Jet for 9660/11260 NG (D)	7000-0539
Radiant Burner Jet for 9660/11260 LP (P)	7000-0544
Radiant Burner Jet for 9660/11260 HLP (K)	7000-0559
Radiant Burner Jet for 9690/11290 NG (F)	7000-0541
Radiant Burner Jet for 9690/11290 LP (E)	7000-0540
Radiant Burner Jet for 9690/11290 HLP (K)	7000-0559
IR Burner Jet - Natural Gas NG (BA)	7000-0751-NG
IR Burner Jet - Propane LP & HLP (BB)	7000-0751



FD-6045 GAS SPECIFICATIONS

FACTORY SPECIFIED MAXIMUM HOURLY BTU INPUT RATES / BURNER MANIFOLD PRESSURES

Model number	Underfloor IR Burner	Left Side Burner	Right Side Flame Burner	Wood Fire Optional	Wood Fire Mandatory	Optional Decorative Flame	Natural Gas (NG)	Propane (LP)	Propane (HLP)	Maximum Gas BTU/hr Input	Valve Outlet Pressure (W.C.)	
											SV-1	SV-2
WS-FD-6045-RFG-(L or R)-IR-W	X	L or R		-W			NG			160,000	3.5"	4.25"
								LP			8"	8"
									HLP	135,000	7.5"	8"
WS-FD-6045-RFG-(L or R)-IR	X	L or R					NG			160,000	3.5"	4.25"
								LP			8"	8"
									HLP	135,000	7.5"	8"
WS-FD-6045-RFG-(L or R)		L or R					NG			90,000		4.25"
								LP			75,000	
									HLP	90,000	7.5"	8"
WS-FD-6045-IR-W	X				X		NG			45,000	3.5"	
								LP		50,000	8"	
									HLP	50,000	8"	
WS-FD-6045-W					X				NA		NA	
Optional Decorative Flame Burner <i>The Optional Decorative Flame Burner adds 15,000 BTU/hr to total rated input.</i>						-DF	NG			+15,000		5"
								LP				8"
									HLP	Call		

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 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. The Manifold pressure is checked at the outlet port on the SV-2 gas valve.

The Burner Manifold pressures have been adjusted and tested at the factory. A variety of factors can influence these pressures, so be sure to test the individual Burner Manifold pressures and adjust the valves as necessary to achieve the required pressures.

NOTE: The gas valves are shipped in the **ON** position.



FD-8645 GAS SPECIFICATIONS

FACTORY SPECIFIED MAXIMUM HOURLY BTU INPUT RATES / BURNER MANIFOLD PRESSURES

Model number	Underfloor IR Burner	Left Side Flame Burner	Right Side Flame burner	Wood Fire Mandatory	Optional Decorative Flame	Natural Gas (NG)	Propane (LP)	Propane (HLP)	Maximum Gas BTU/hr Input	Valve Outlet Pressure (W.C.)		
										SV-1	SV-2	SV-3 / SV-4
WS-FD-8645-RFG-LR-IR	X	X	X			NG			225,000	3.5"	5"	5"
							LP		200,000	8"	8"	8"
								HLP	225,000	8"	8"	8"
WS-FD-8645-RFG-(L or R)-IR-W	X	L or R		X		NG			135,000	3.5"	5"	
							LP		125,000	8"	8"	
								HLP	135,000	8"	8"	
WS-FD-8645-IR-W	X			X		NG			45,000	3.5"		
							LP		50,000	8"		
								HLP	50,000	8"		
WS-FD-8645-W				X		NA			NA			
Optional Decorative Flame Burner <i>The Optional Decorative Flame Burner adds 15,000 BTU/hr to total rated input.</i>					-DF	NG			+15,000			5"
							LP					8"
								HLP	Call			

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 IR Burner. The Manifold pressure is checked at the outlet port on the SV-1 gas valve.

SV-2 (and SV-3 / SV-4, if equipped) are the gas control valve(s) that operate the interior Radiant Burner(s). The Manifold pressure is checked at the outlet port on the the individual gas valve.

The Burner Manifold pressures have been adjusted and tested at the factory. A variety of factors can influence these pressures, so be sure to test the individual Burner Manifold pressures and adjust the valves as necessary to achieve the required pressures.

NOTE: The gas valves are shipped in the **ON** position.



FD-9660 AND FD-11260 GAS SPECIFICATIONS

FACTORY SPECIFIED MAXIMUM HOURLY BTU INPUT RATES / BURNER MANIFOLD PRESSURES

Models	Underfloor IR Burner	Left Side Flame Burner	Right Side Flame Burner	Wood Fire Optional	Wood Fire Mandatory	Optional Decorative Flame	Natural Gas (NG)	Propane (LP)	Propane (HLP)	Maximum Gas BTU/hr Input	Valve Outlet Pressure (W.C.)		
											SV-1	SV-2	SV-3 / SV-4
WS-FD-(9660 or 11260)-RFG-LR-IR	1	1	1				NG			350,000	3.5"	5"	5"
								LP			9"	10"	10"
									HLP		7"	7"	7"
WS-FD-(9660 or 11260)-RFG-(L or R)-IR	1	L or R		-W			NG			225,000	3.5"	5"	
								LP			9"	10"	
									HLP		7"	7"	
WS-FD-(9660 or 11260)-W-IR	1				X		NG			100,000	3.5"		
								LP			9"		
									HLP		7"		
WS-FD-(9660 or 11260)-RFG-(L or R)-W		L or R		X			NG			125,000		5"	
								LP				10"	
									HLP			7"	
WS-FD-(9660 or 11260)-RFG-(L or R)-CL	1	L or R					NG			225,000	3.5"	5"	
								LP			9"	10"	
WS-FD-(9660 or 11260)-W					X		NA			NA	NA		
*Optional Decorative Flame Burner <i>The Optional Decorative Flame Burner adds 15,000 BTU/hr to total rated input.</i>						+DF	NG			+15,000			5"
								LP					10"
									HLP				10"
Optional FD-11260 Second IR Burner <i>(Adds 75,000 BTU/hr To total rated input)</i>	2nd						NG			+75,000			3.5"
								LP					9"
									HLP				7"

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

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.

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 (and SV-3 / SV-4 if equipped) are the gas control valve(s) that operate the interior Radiant Burner(s). The Manifold pressure is checked at the outlet port on the the individual gas valve.

The Burner Manifold pressures have been adjusted and tested at the factory. A variety of factors can influence these pressures, so be sure to test the individual Burner Manifold pressures and adjust the valves as necessary to achieve the required pressures.

NOTE: The gas valves are shipped in the **ON** position.



FD-9690, FD-11290 AND CS-90-112 GAS SPECIFICATIONS

FACTORY SPECIFIED MAXIMUM HOURLY BTU INPUT RATES / BURNER MANIFOLD PRESSURES	Underfloor IR Burner	Radiant Flame Burner(s)	Wood-Fire Optional	Wood-Fire Required	Optional Decorative Flame	Natural Gas (NG)	Propane (LP)	Maximum Gas BTU/hr Input	Valve Outlet Pressure (W.C.)		
									SV-1	SV-2	SV-3 / SV-4 / SV-5
Models	1	2				NG		347,000	3.5"	4.6"	4.6"
							LP	369,000	9.2"	9.5"	9.5"
FD-9690-RFG-LR-IR or FD-11290-RFG-LR-IR	1	2				NG		295,000	3.5"	4.6"	4.6"
							LP	282,500	9"	9.5"	9.5"
FD-11275-RFG-LR-IR	1	2				NG		347,000	3.5"	4.6"	4.6"
							LP	369,000	9.2"	9.5"	9.5"
FD-9690-RFG-(LL or RR)-IR-(W) or FD-11290-RFG-(LL or RR)-IR-(W)	1	2	-W			NG		347,000	3.5"	4.6"	4.6"
							LP	369,000	9.2"	9.5"	9.5"
FD-9690-RFG-(LL or RR)-IR-CL or FD-11290-RFG-(LL or RR)-IR-CL	1	2				NG		347,000	3.5"	4.6"	4.6"
							LP	369,000	9.2"	9.5"	9.5"
FD-11275-RFG-(LL or RR)-IR-(W)	1	2	-W			NG		295,000	3.5"	4.6"	4.6"
							LP	282,500	9"	9.5"	9.5"
FD-11275-RFG-(LL or RR)-IR-CL	1	2				NG		295,000	3.5"	4.6"	4.6"
							LP	282,500	9"	9.5"	9.5"
FD-9690-(L or R)-IR-(W) or FD-11290-RFG-(L or R)-IR-(W)	1	1	-W			NG		220,000	3.5"	4.6"	
							LP	225,000	9.2"	9.5"	
FD-9690-(L or R)-IR-CL or FD-11290-RFG-(L or R)-IR-CL	1	1				NG		220,000	3.5"	4.6"	
							LP	225,000	9.2"	9.5"	
FD-11275-RFG-(L or R)-IR-(W)	1	1	-W			NG		187,500	3.5"	4.6"	
							LP	177,500	9"	9.5"	
FD-11275-RFG-(L or R)-IR-CL	1	1				NG		187,500	3.5"	4.6"	
							LP	177,500	9"	9.5"	
FD-9690-IR-W or FD-11290-IR-W	1			X		NG		97,000	3.5"		
							LP	85,000	9.2"		
FD-11275-IR-W	1			X		NG		80,000	3.5"		
							LP	72,500	9"		
FD-9690-W or FD-11275-W or FD-11290-W				X		NA		NA	NA		
WS-FD-11275-RFG-LLRR-IR	1	4				NG		510,000	3.5"	4.6"	4.6"
							LP	492,500	9"	9.5"	9.5"
WS-CS-90-112-RFG-LL-IR-(W) or WS-CS-90-112-RFG-RR-IR-(W)	1	2	-W			NG		347,000	3.5"	4.6"	4.6"
							LP	369,000	9.2"	9.5"	9.5"
Optional Decorative Flame Burner <i>The Optional Decorative Flame Burner adds 15,000 BTU/hr to total rated input.</i>					-DF	NG		+15,000			4.6"
							LP				9.5"



IF YOU ARE CONVERTING A WOOD STONE OVEN FROM LP TO NATURAL GAS, OR NATURAL GAS TO LP, CONTACT THE WOOD STONE SERVICE DEPARTMENT TO OBTAIN THE NECESSARY PARTS TO CARRY OUT THIS PROCEDURE. THIS PROCEDURE ENTAILS CHANGING THE BURNER JETS, PILOT ORIFICES AND GAS VALVE REGULATOR SPRINGS, AS WELL AS ADJUSTING THE BURNER MANIFOLD PRESSURES AS SPECIFIED FOR THE NEW GAS TYPE.

GAS CONNECTION

The Fire Deck 8645 and 6045 come equipped with a 3/4" FNPT connection. All gas piping up to the oven must have a minimum inside diameter of 3/4", including all fittings and shut off valves, which should be of the full flow type.

The Fire Deck 9690, 11290, 11275, 9660, 11260 models are equipped with a 1" FNPT gas connection. All gas piping up to the oven must have a minimum inside diameter of 1", including all fittings and shut off valves, which should be of the full flow type.

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 A FLAME TO TEST FOR LEAKS!**

Wood Stone recommends that the Fire Deck be equipped with a manual, individual shutoff valve, located between the oven and the main gas supply, and that this 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.

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

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 insure 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 (14" W.C.) (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 (14" W.C.) (3.45 kPa).

**ELECTRICAL**

The incoming 120 VAC 15 A electrical connection is made beneath the oven at the terminal strip inside the transformer box (9690, 11290, 11275), or at the junction box located at the rear left or right side all other Fire Deck models. An external cover plate provides access to this junction box. Wiring diagrams may be found inside the Control Box, and on the transformer cover plate. Export models may have different electrical requirements, which will be clearly marked on the wiring diagrams and the Transformer Plate.

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.

INTERLOCKING

If it is necessary to interlock the oven with an exhaust fan, Wood Stone recommends the following: Wire the installation in such a way that incoming 120 VAC power to the oven is supplied only when the exhaust fan is turned on. A two pole switch controlling the power to the fan and to the oven may be used. Consult a qualified electrician. NEVER attempt to wire into the oven Control Box or low voltage junction box. **ADDING TO OR ALTERING ANY OF THE WIRING IN THE OVEN CONTROL BOX OR LOW VOLTAGE JUNCTION BOX WILL VOID THE WARRANTY.** Please call Wood Stone if you have any questions.

**START-UP INFORMATION**

Wood Stone ovens should not normally require any start-up procedures to be performed by a service technician.

The gas installer is responsible for making sure the gas supply to the oven is properly purged (bled) and that the piping and pressure is adequate for the BTU/hr requirements of the oven. Burner gas pressures are preset at the factory.

The electrical connection to the oven should be made by a licensed electrician.

A Wood Stone representative may be available to visit the site to verify that the oven is functioning correctly and address any questions the customer may have.

We do understand that in some situations a customer may request a service technician to perform an additional start-up on the oven for peace of mind, etc. Typically this additional start-up will not be covered by Wood Stone, unless it was necessary due to a defect on the oven itself. Problems arising from improper installation will be the owner's responsibility. See the complete warranty in this manual. It can also be found in the Installation and Operation Manual. Please call the factory if you have any questions.



OVEN LOCATION: _____ DATE ____ / ____ / ____

SERVICE COMPANY: _____ TECHNICIAN NAME: _____

OVEN SERIAL NUMBER: **F** **D**

CHECKLIST ITEMS

<input type="checkbox"/> Yes <input type="checkbox"/> No	1. Incoming Gas Piping properly sized: Minimum 1" O.D. (Depends on oven model. Must be same size as inlet on oven—minimum.) Unrestricted to oven.												
<input type="checkbox"/> Yes <input type="checkbox"/> No	2. Gas Line Shut Off Valve is minimum 1" O.D. (Must be same size as inlet on oven—minimum.)												
	3. Static (No Load) Incoming Gas Pressure is: <input type="text"/> W.C.* <i>*For NG: Minimum: 6" w.c. Not to exceed 14" w.c.</i>												
	4. <input type="checkbox"/> Verify all Burners are lighting. <input type="checkbox"/> Under Load Incoming Gas Pressure with all Burners running is: <input type="text"/> W.C.												
	5. Burner Manifold Pressures with all Burners running and throttle full. <i>This reading is taken at the outlet of the respective gas valve.</i> Note: If these pressures cannot be met, call Wood Stone Service Dept.												
	<table border="1"> <thead> <tr> <th></th> <th>W.C.</th> <th>SHOULD BE:</th> </tr> </thead> <tbody> <tr> <td>Left Radiant</td> <td>W.C.</td> <td>5" W.C.</td> </tr> <tr> <td>Right Radiant</td> <td>W.C.</td> <td>5" W.C.</td> </tr> <tr> <td>Underfloor IR</td> <td>W.C.</td> <td>3.5" W.C.</td> </tr> </tbody> </table>		W.C.	SHOULD BE:	Left Radiant	W.C.	5" W.C.	Right Radiant	W.C.	5" W.C.	Underfloor IR	W.C.	3.5" W.C.
	W.C.	SHOULD BE:											
Left Radiant	W.C.	5" W.C.											
Right Radiant	W.C.	5" W.C.											
Underfloor IR	W.C.	3.5" W.C.											
	6. Burner Manifold Pressures with all other gas appliances fired (if possible). <i>This reading is taken at the outlet of the respective gas valve.</i>												
	<table border="1"> <tbody> <tr> <td>Left Radiant</td> <td>W.C.</td> </tr> <tr> <td>Right Radiant</td> <td>W.C.</td> </tr> <tr> <td>Underfloor IR</td> <td>W.C.</td> </tr> </tbody> </table>	Left Radiant	W.C.	Right Radiant	W.C.	Underfloor IR	W.C.						
Left Radiant	W.C.												
Right Radiant	W.C.												
Underfloor IR	W.C.												
<input type="checkbox"/> Done	7. Check all Control Board Wires for tightness at the Terminal Strip.												
<input type="checkbox"/> Done	8. Verify all Controller Functions are working correctly.												
<input type="checkbox"/> Done	9. Visually inspect Igniter Wires and Wiring Harnesses for damage.												
<input type="checkbox"/> Done	10. <input type="checkbox"/> Check that Pilot/Igniter Mounting Screws are tight. <input type="checkbox"/> Verify tightness of Pilot Tubes and Check for Leaks.												
<input type="checkbox"/> Done	11. Leak check all Gas Fittings including the Incoming Gas Connection.												
<input type="checkbox"/> Done	12. Check tightness of Burner Mounting Bolts and Screws.												
<input type="checkbox"/> Done	13. Verify all Unistrut Mounting Bolts and Pipe Clamps are tight.												
<input type="checkbox"/> Done	14. Verify <u>all</u> Fork Lift Pocket Covers have been installed: <input type="checkbox"/> Left side <input type="checkbox"/> Right side <input type="checkbox"/> Rear												
<input type="checkbox"/> Done	15. Verify the customer has the Installation & Operation Manual.												
<input type="checkbox"/> Done	16. Make sure the customer understands: <ul style="list-style-type: none"> <input type="checkbox"/> Make-Up Air and AC vents are not directed at oven opening. <input type="checkbox"/> An accessible Gas Shut Off Valve is required on line to oven. <input type="checkbox"/> An accessible Power Disconnect or Breaker is marked for oven. <input type="checkbox"/> Controller Functions and Programming. <input type="checkbox"/> The Flame Height Control Knob operation and its use. <input type="checkbox"/> To remove the Night Doors when the oven is running. (Night Heat Retention doors are used only on ovens <i>without</i> the Glass Heat Shield (Heat shield models: FD-6045 & FD-8645) <input type="checkbox"/> The Initial Oven Start-Up (break in) procedure as found in the Installation and Operation Manual. <i>It is not necessary for the technician to be present for this procedure.</i> <input type="checkbox"/> The importance of keeping Debris out of the Radiant Burner, and that this is their responsibility. <input type="checkbox"/> The Warranty: What is and is not covered. Call Wood Stone if you have any questions. 												
<input type="checkbox"/> Done	17. Fax this form to Wood Stone within 24 hours of service at 360.650.1166												

If all Fork Lift Pockets have not been installed, call the Wood Stone Service Department

Sales Order # _____
FOR OFFICE USE ONLY

**ALL WARRANTY SERVICE MUST BE PRE-APPROVED BY WOOD STONE**

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

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

EXCLUSIONS

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

1. In the event that the equipment is improperly installed. Proper installation is the responsibility of the installer; proper installation procedures are prescribed by the Wood Stone Installation and Operation Manual.
2. In the event the equipment is improperly or inadequately maintained. Proper maintenance is the responsibility of the user; proper maintenance procedures are prescribed in the Wood Stone Installation and Operation Manual. Burner problems resulting from debris or ash in the Burner Well will not be covered by the warranty. Call with questions regarding maintenance frequency.
3. In the event that the failure or malfunction of the appliance or any part thereof is caused by abnormal or improper use or is otherwise not attributable to defect in material or manufacture.
4. In the event that the appliance, by whatever cause, has been materially altered from the condition in which it left the factory.
5. In the event that the rating plate has been removed, altered or obliterated.
6. On parts that would be normally worn or replaced under normal conditions.
7. Normal cracking due to expansion and contraction stress relief in the ceramic firebox.
8. In wood-fired equipment configurations, in the event that pressed log products of any type have been burned in the equipment.
9. In coal-fired oven configurations, in the event any type of coal other than anthracite coal fuel has been used.
10. Damage resulting from the use of chemical cleaning products in the oven, as well as any damage from liquids or chemicals, including water, being poured or sprayed into the oven.

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

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

LIMITATIONS OF LIABILITY

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

TO SECURE WARRANTY SERVICE

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

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

Phone 1.800.988.8103 or 1.360.650.1111

Blank page

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

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