

Installation and Operation Manual



BISTRO LINE

Stone Hearth Oven

Wood-Fired Models

BISTRO 4343 WS-BL-4343-W

BISTRO 4355 WS-BL-4355-W

WOOD  STONE

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**INSTALLATION AND OPERATION MANUAL FOR
THE WOOD STONE
WOOD-FIRED BISTRO LINE**

**WOOD-FIRED STONE HEARTH COOKING EQUIPMENT
COMMERCIAL INTERNAL TRANSITION MODELS
WS-BL-4343-W AND WS-BL-4355-W**

ADDITIONAL COPIES AVAILABLE UPON REQUEST



Shown: WS-BL-4343-W



**INSTALLATION AND OPERATION MANUAL FOR THE
WOOD STONE BISTRO OVEN WOOD-FIRED STONE HEARTH OVEN**

RETAIN THIS MANUAL FOR FUTURE REFERENCE

Additional copies of this manual at woodstone-corp.com.

For prompt responses to service/maintenance questions, call us at @ 1-800-988-8103.

READ ALL INSTRUCTIONS BEFORE INSTALLING AND USING THIS APPLIANCE

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

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

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

DO NOT USE PRODUCTS NOT SPECIFIED FOR USE WITH THIS OVEN.

CAUTION: Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or freshen a fire in this oven. Keep all such liquids well away from the oven when in use.

When this oven is not properly installed, a fire may result. To reduce the risk of fire, follow the installation instructions. It is recommended that this oven be installed, maintained and serviced by authorized professionals.

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



A MAJOR CAUSE OF OVEN RELATED FIRES IS A FAILURE TO MAINTAIN REQUIRED CLEARANCES TO COMBUSTIBLE MATERIAL. IT IS OF UTMOST IMPORTANCE THAT THIS OVEN BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.

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

POUR VOTRE SÉCURITÉ: Ne pas entreposer ni utiliser d'essence ou d'autres vapeurs de liquides inflammables ou des liquides dans les environs de ce ou de tout autre appareil.

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

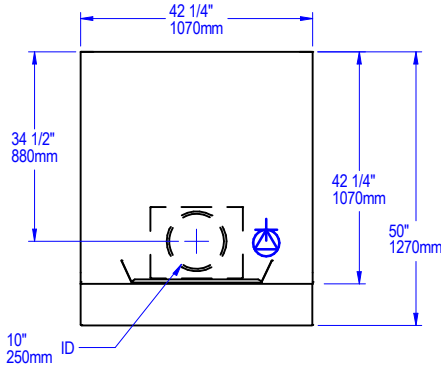
SAVE THE INSTRUCTIONS


Wood Stone ovens
have been tested and approved by Intertek Testing Services and
conform to UL 2162 and UL 737;
are certified to ULC S627;
and to NSF/ANSI 4.





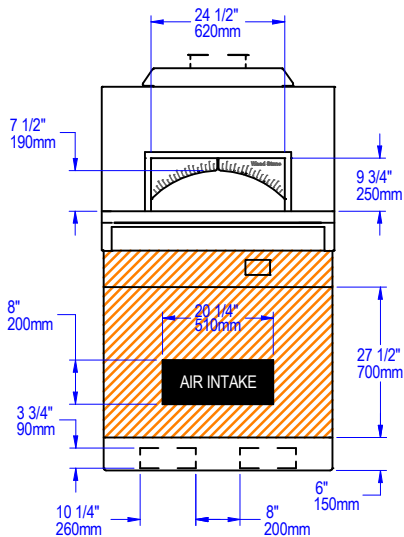
Plan view



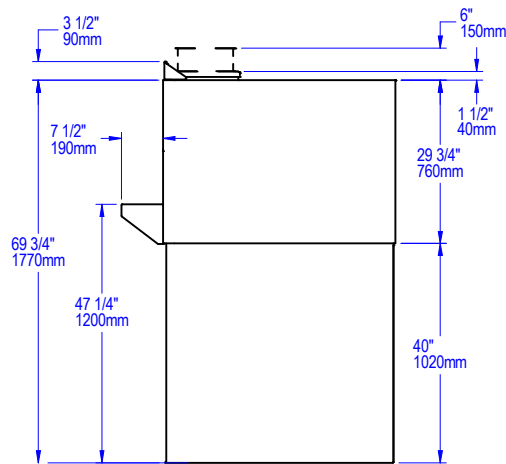
 Must be left removable for service

Actual weight: 1,650 lbs (748 kg)
Shipping weight: 2,100 lbs (953 kg)

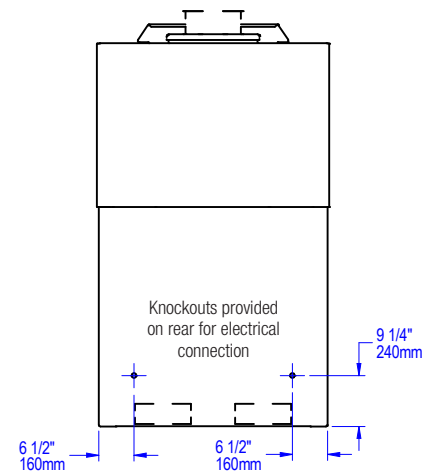
Front view



Side view



Rear view



UTILITIES SPECIFICATIONS

Electrical

120 VAC, 2 A, 60 Hz

Optional: 220-240 VAC, 1 A, 60 Hz

All utility connections made on the back of the oven control box. Remove front or rear panel for access. Use electrical knockouts on sides or rear to route electrical connection.

Refer to data plate when installing.

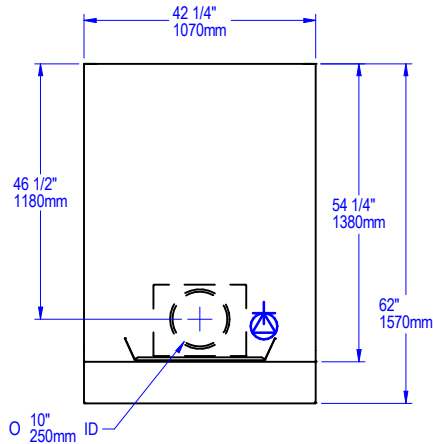
Venting


10-inch O.D. flue collar. Can be direct connected to a power-ventilated, grease-rated chimney, or can be vented with a Listed Type 1 exhaust hood, or one constructed in accordance with NFPA 96 and all relevant local and national codes for solid-fuel appliances. The flue adapter is for direct connection to a duct system only. Do not install if oven is installed under an exhaust hood. The oven must be vented in accordance with all relevant local and national codes, and in a manner acceptable to the authority having jurisdiction.

IMPORTANT: This model must be vented as a solid fuel appliance.



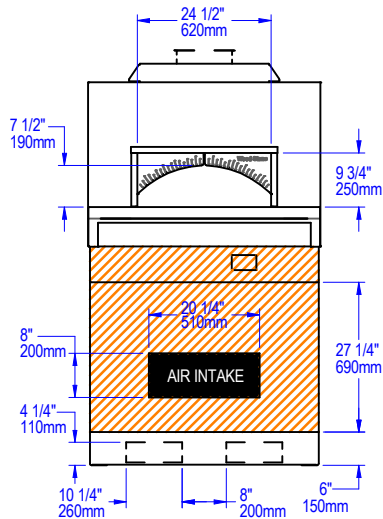
Plan view



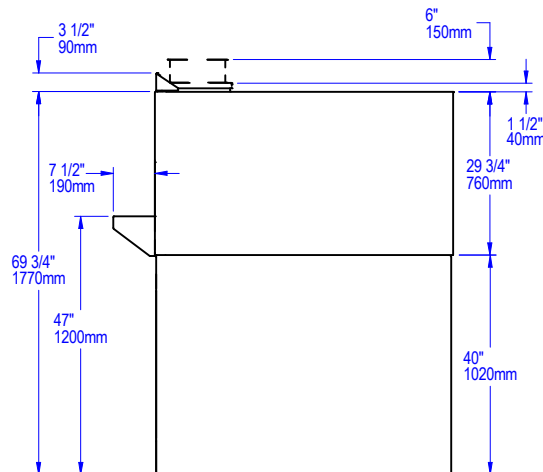
 Must be left removable for service

Actual weight: 2,200 lb. (998 kg)
Shipping weight: 2,500 lb (1134 kg)

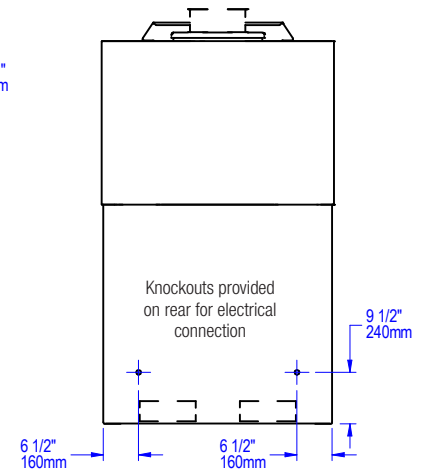
Front view



Side view



Rear view



UTILITIES SPECIFICATIONS

Electrical

120 VAC, 2 A, 60 Hz
Optional: 220-240 VAC, 1 A, 60 Hz

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IMPORTANT: This model must be vented as a solid fuel appliance.



Bistro models are shipped fully assembled. The oven can be moved into place with a Pallet Jack using the forklift pockets. If the oven is to be installed against a wall, leave access to the back of the oven to complete the utility connections.

If you need to disassemble the oven to move it through a narrow door or passageway, see the DISASSEMBLY section in this manual.

USING A FORKLIFT | PALLET JACK

Bistro ovens are very top-heavy. **If the oven tips it can cause severe injury or death. Never use a Hand Truck to move the oven.** If the oven must be moved over an inclined surface, a Forklift or other suitable means should be employed. If the installer does not have the equipment or experience required to move the oven safely, we recommend securing the services of a qualified rigging company.

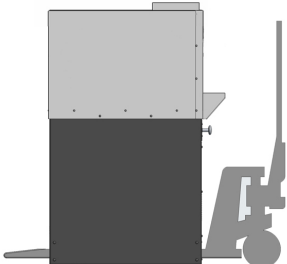
The oven should only be moved using a Pallet Jack on a smooth, LEVEL FLOOR.

LEVELING AND SHIMMING THE OVEN

The installed oven must be level. Use metal shims to level the oven if necessary. Because the weight of the oven is carried by the full perimeter of the oven stand, make certain there are no gaps larger than approximately 1/2" where the oven stand is unsupported by shims. Seal any small gaps between the oven and the floor with silicone. Failure to solidly support the full perimeter of the oven stand can result in costly damage to the oven and will void the warranty. The floor design and construction must be adequate to handle the weight of the oven.

Please see woodstone-corp.com for floor loading information.

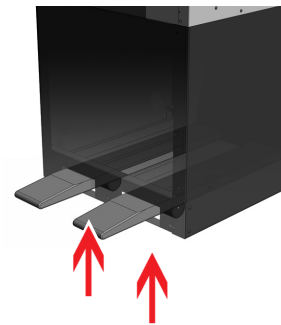
MOVING THE OVEN



The oven should only be moved using a Pallet Jack on a smooth, LEVEL FLOOR. Use a forklift or other suitable means if the oven must be moved over an inclined surface.



Never use a Hand Truck to move the oven.



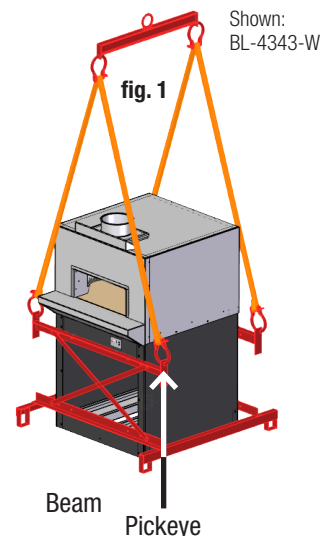
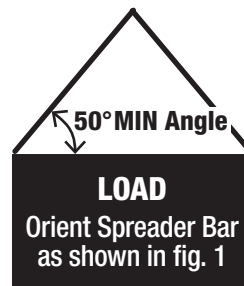
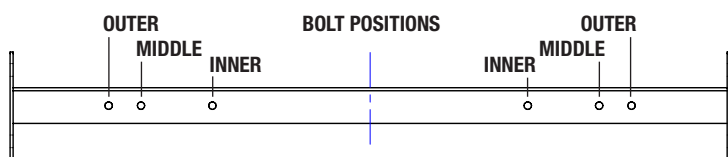
Make sure the Pallet Jack wheels do not contact the underside of the fork pocket when lifting to avoid damaging the stand.

USING A CRANE

The oven arrives with Pickeys 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, and oriented as shown in fig 1.

PICKEYE CAPACITIES PER BEAM

2,000 lbs: Middle holes (BL-4343, BL-4355)





WARNING: Do not pack required air spaces (clearance) with insulation or other material.
EN AVERTISSANT: N'emballez pas les espaces aériens requis avec l'isolation ou tout autre matériel.
When non-combustible building materials contact the body of the oven, the clearances to combustibles are transferred to those non-combustibles.

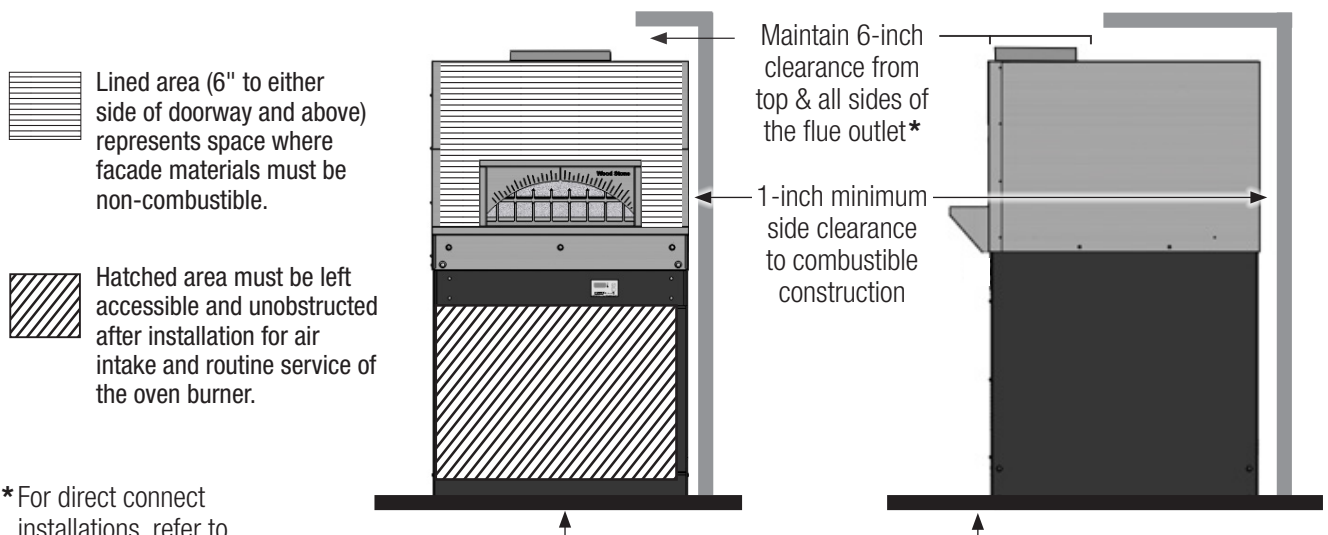


WARNING: Installation and servicing of this product could expose you to glasswool/ceramic fibers as well as calcium silicate dust. ALWAYS WEAR RESPIRATORY AND EYE PROTECTION WHEN INSTALLING OR SERVICING THIS APPLIANCE. Please read this entire manual before you install the oven. Failure to follow instructions 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 Bistro oven must have a minimum 1-inch clearance to combustibles from all sides, and 6-inch clearance to combustibles from the top. If building materials will contact the oven, they must be completely non-combustible. Please note that standard Drywall (or Sheetrock) is considered a combustible. When non-combustible building materials contact the body of the oven, the respective clearances are transferred to those non-combustibles.
2. Any facade 6 inches to either side of the oven doorway or above, must be constructed of non-combustible building materials.
3. This oven is suitable for installation on combustible floors (convient à l'installation sur un plancher combustible).
For wood-fired models, the minimum hearth extension area to be covered with a non-combustible floor surface must extend 36 inches in front of and 30 inches to either side of the oven door opening.

NOTICE: For stucco-ready appliances, the same clearances as described above apply. Non-combustible stucco mix must be used and applied to a minimum thickness of 1".



* For direct connect installations, refer to NFPA 96 and local codes for duct installation clearances

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



All of the combustion products and cooking vapors from the WS-BL-4343-W and WS-BL-4355-W Bistro models pass through the 10-inch diameter flue collar located on top of the oven, near the front. The oven can be direct connected to a power ventilated, grease-rated duct, or placed under a Type 1 hood. All wood-fired (wood only, without gas burner) models are listed to allow the burning of up to 20 lbs of wood per hour, and **MUST** be vented as SOLID FUEL equipment. **DO NOT OVER FIRE THE OVEN.**

**WOOD STONE RECOMMENDS CLEANING AND INSPECTION AT LEAST MONTHLY
ON ANY VENTILATION SYSTEM SERVING SOLID FUEL EQUIPMENT.**

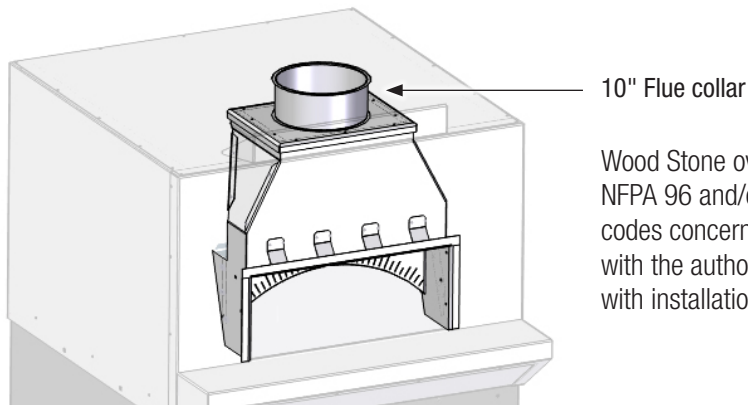
The following are the manufacturer's requirements for venting Wood Stone Bistro Line ovens. It is never appropriate to use "B vent" in any part of an exhaust system connected to a Wood Stone oven. All duct material must be manufactured to the specifications of a grease duct. Due to the possibility of sparks entering the duct, exhaust systems serving **SOLID FUEL** equipment **SHOULD NOT** be combined with exhaust systems serving other (non-solid fuel) cooking equipment.

THERE ARE TWO VENTING OPTIONS

1. A Listed building heating appliance chimney, also listed as a grease duct connected directly to the oven flue collar and provided with a power ventilator listed for restaurant appliance exhaust and rated for operation at a minimum of 300 °F, 450 °F for units burning solid fuel. Use a stack or curb mounted fan. Wood Stone does not recommend the use of an in-line fan.
A field built grease duct installed and constructed according to the requirements spelled out in NFPA 96, or the International Mechanical Code may also be used. For solid fuel applications a static pressure of -0.14 inches water column is necessary at the oven flue collar to ensure proper flue temperatures. The airflow required to attain this static pressure will depend on the configuration of your particular installation but will probably be approximately 400 CFM.
2. A Listed Type 1 Exhaust Hood or one that is constructed and installed in accordance with NFPA 96 and all relevant local and national Codes. Wood Stone offers eyebrow-type hoods designed specifically for Wood Stone ovens manufactured by Gaylord Industries.

FIRE SUPPRESSION

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



10" Flue collar

Wood Stone ovens should be vented in accordance with NFPA 96 and/or all pertinent national, regional and local codes concerning such appliances; check venting plans with the authority having jurisdiction before proceeding with installation.

If using an optional exhaust hood, a Listed exhaust hood or one that is constructed in accordance with NFPA 96, is required to ventilate this oven.

A minimum exhaust volume of 175 CFM per lineal foot of hood is required. Air flow rates were established under draft-free laboratory conditions. Greater exhaust airflow rates may be required for each specific installation to obtain complete vapor and smoke removal.



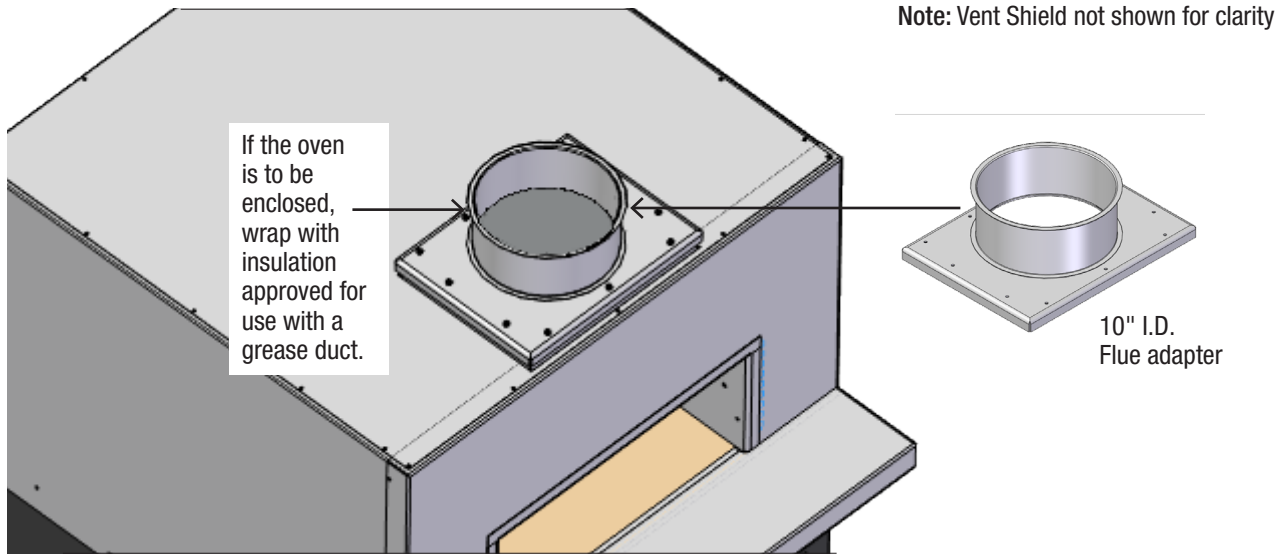
BISTRO LINE OVENS: FLUE ADAPTER INSTALLATION

The flue adapter unit is designed to facilitate connection to a round duct. Use the provided stainless steel screws and sealant provided to attach the flue adapter (10" I.D.) to the exhaust outlet on the oven.

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

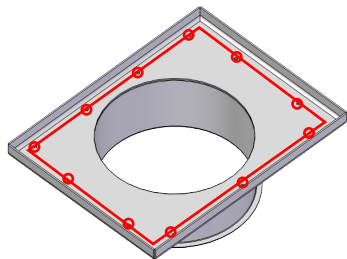
**The flue adapter is for direct connection to a duct system ONLY.
DO NOT install if oven is installed under an exhaust hood.**

FLUE ADAPTER ATTACHED TO OVEN FLUE COLLAR

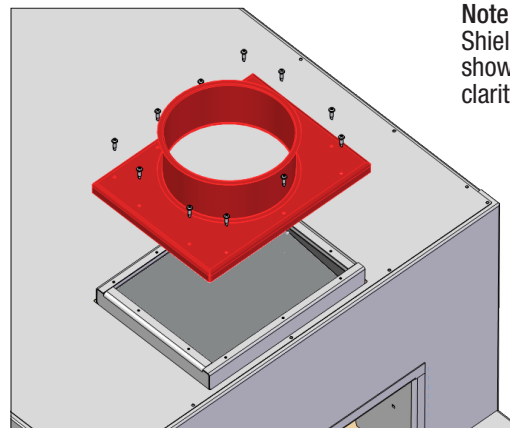


FLUE ADAPTER INSTALLATION (If not already installed)

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



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

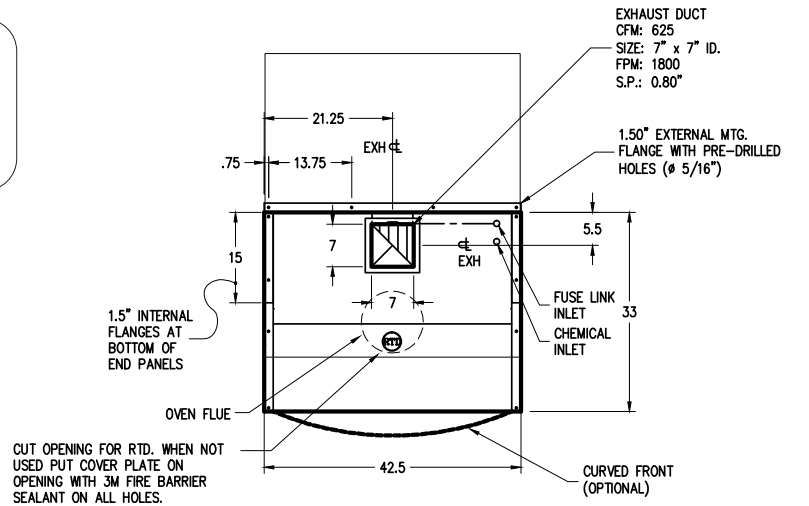


Note: Vent Shield not shown for clarity

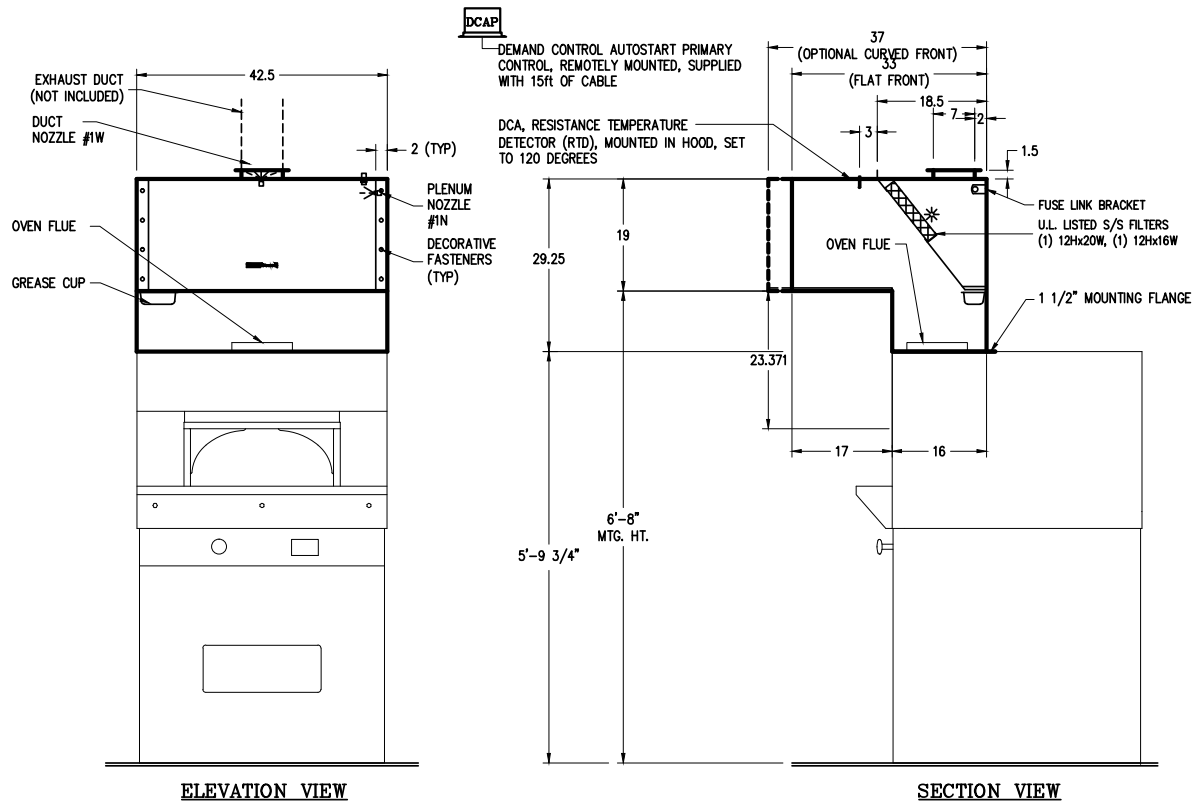
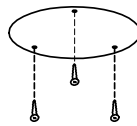


BL-4343, 4355 HOOD SPECIFICATIONS

Wood Stone Hoods by Gaylord
Required CFM - 625 CFM
Static Pressure - 0.80" W.C.
Duct Collar - 7" x 7" I.D.



PLAN VIEW



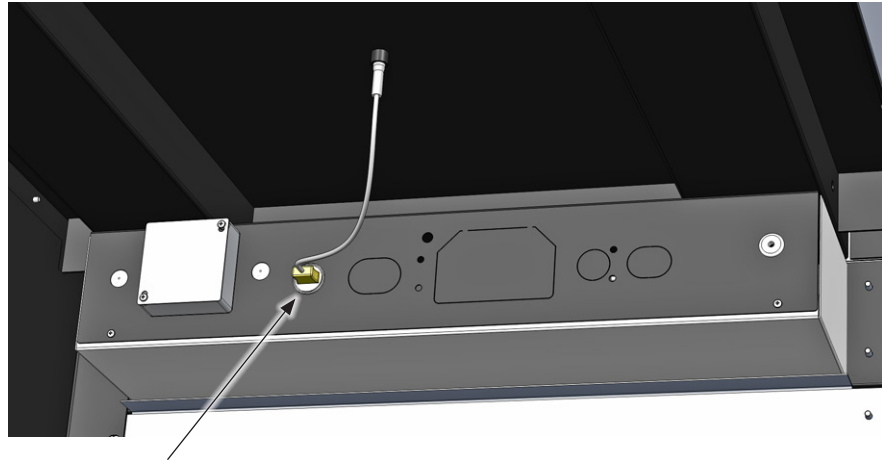
ELEVATION VIEW

SECTION VIEW



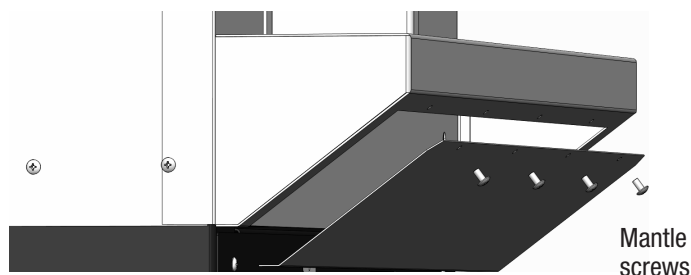
IF YOU NEED TO DISASSEMBLE THE OVEN TO MOVE IT THROUGH A NARROW DOOR OR PASSAGEWAY....

1. Unplug thermocouple wire and coil it to prevent damage while moving the oven.



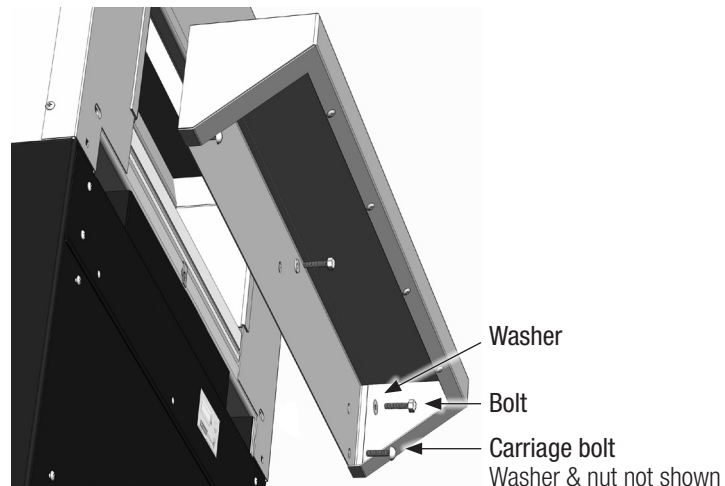
Thermocouple connection

2. To begin disassembly of the mantle, remove the 4 screws from the mantle faceplate cover.



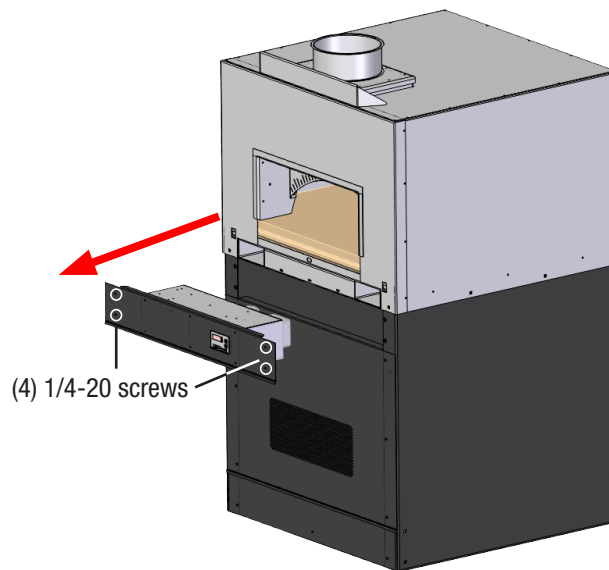
Mantle screws

3. Remove 3 bolts across the oven face and 2 carriage bolts on either end that hold the mantle in place, and remove the mantle. It may be necessary to cut the silicone at the joint between the mantle and the oven. If the oven has the optional door assembly installed, remove the door assembly.

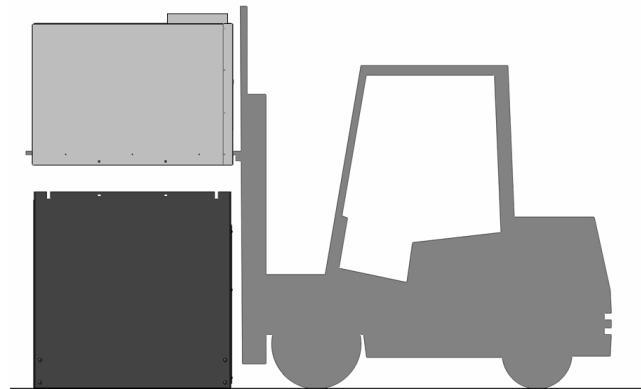




- Remove the control box from the oven as shown.



- Using the upper forklift pockets support the oven with a forklift or other suitable device. Remove the bolts that attach the oven body to the stand. Lift the oven off of the stand and place it on blocks as shown in Step 1 in the LIFTING THE OVEN section. Follow the instructions in the LIFTING THE OVEN section for tilting and moving the main body. Disassemble the stand if necessary. Follow the assembly instructions in the ASSEMBLY section to reassemble the oven.



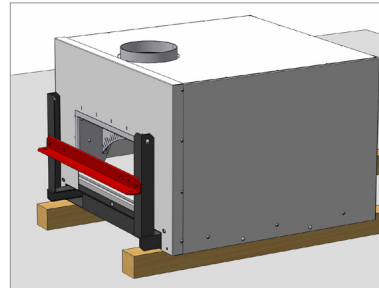
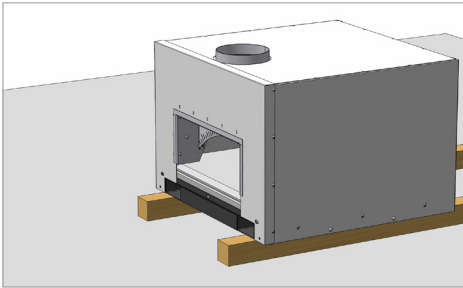
WARNING

If a forklift is not available, or forklift access is not possible, enlist the services of an experienced rigging company to lift, remove and reinstall the oven body.



**MOVING A DISASSEMBLED BISTRO OVEN THROUGH A NARROW DOOR OR PASSAGEWAY
USING THE OPTIONAL TILTING KIT**

An optional Tilting Kit is available from Wood Stone to facilitate tipping the oven body onto its back or side (as shown below). When turned on its side, the upper oven portion of Bistro or Phoenix models 4343, 4355 will be approximately 32 inches wide. This will allow for easier access through small passages.



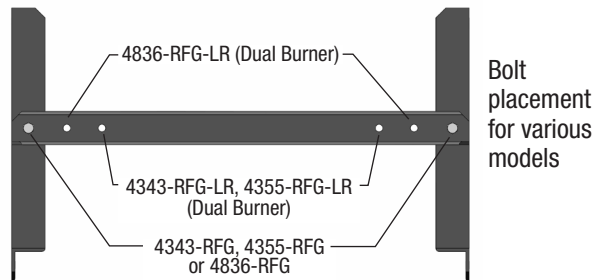
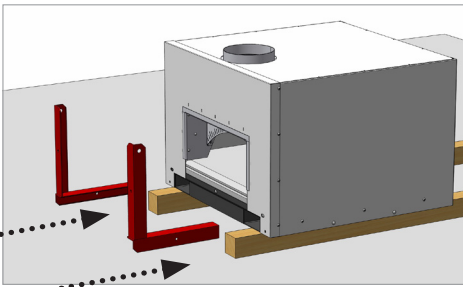
WARNING

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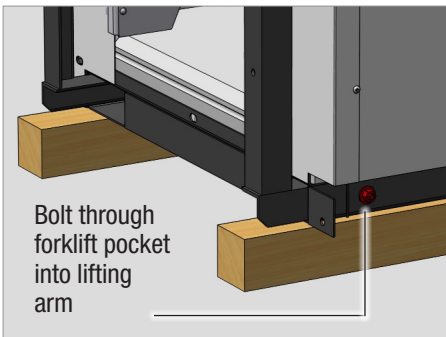
1. Use a forklift or other suitable lifting means to set the oven body onto 4x4" blocks oriented as shown. Refer to DISASSEMBLY section of manual for disassembly instructions.

4. Attach the Crosspiece using the hardware provided. See drawing below for placement of bolts on various models.

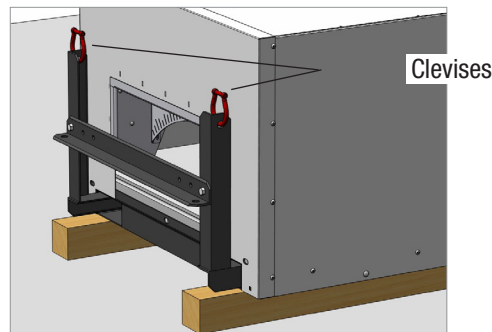
Tighten all Pickeye and Crosspiece bolts.



2. Insert the left & right Pickeye Inserts of the Tilting Kit into the forklift pockets from the oven front.



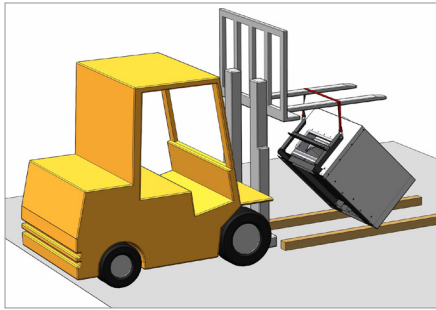
Oven cut-away view showing right Pickeye Insert of Tilting Kit in forklift pocket



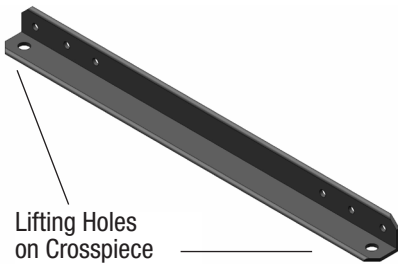
Clevises

3. Loosely bolt each Pickeye Insert to the forklift pocket as shown in the cut-away view to above.

5. Install a clevis in the Top Hole of each Pickeye Insert of the Tilting Kit.



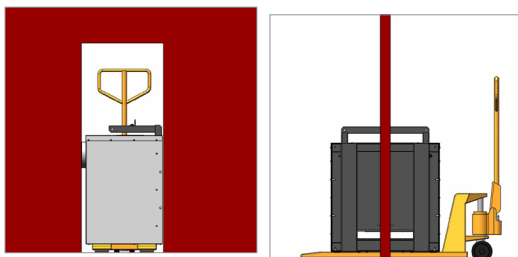
6. Attach strap to the clevises at the top of each Pickeye Insert. Using an appropriate hoist or lift, tilt the oven on its back, onto 4x4" blocks.



7. Change the position of the clevises to the Lifting Holes on the Crosspiece and attach straps.



8. Lift the oven straight up and position pallet jack under the oven.
Lower the oven, on its back, onto the pallet jack.



9. The oven can now be moved through a narrow doorway or passageway.

DANGER: Never attempt to move the oven in this manner on any type of incline or sloped floor.



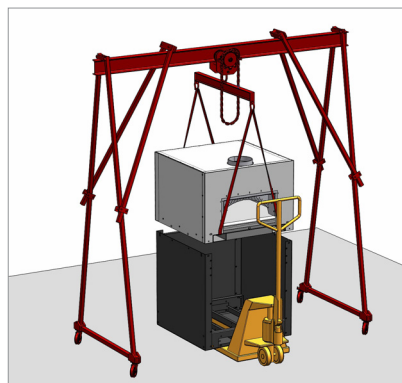
10. Once the oven is on the other side of the passageway, attach strap to the clevises at the Lifting Holes on the Crosspiece and, with a gantry crane, lift the oven straight up.
Remove pallet jack.
Lower the oven onto 4x4" blocks.



11. Move strap to the clevises at the top of the Pickeye Inserts and tilt the oven down onto the 4x4" blocks positioned as shown.
Remove the Tilting Kit from the oven.



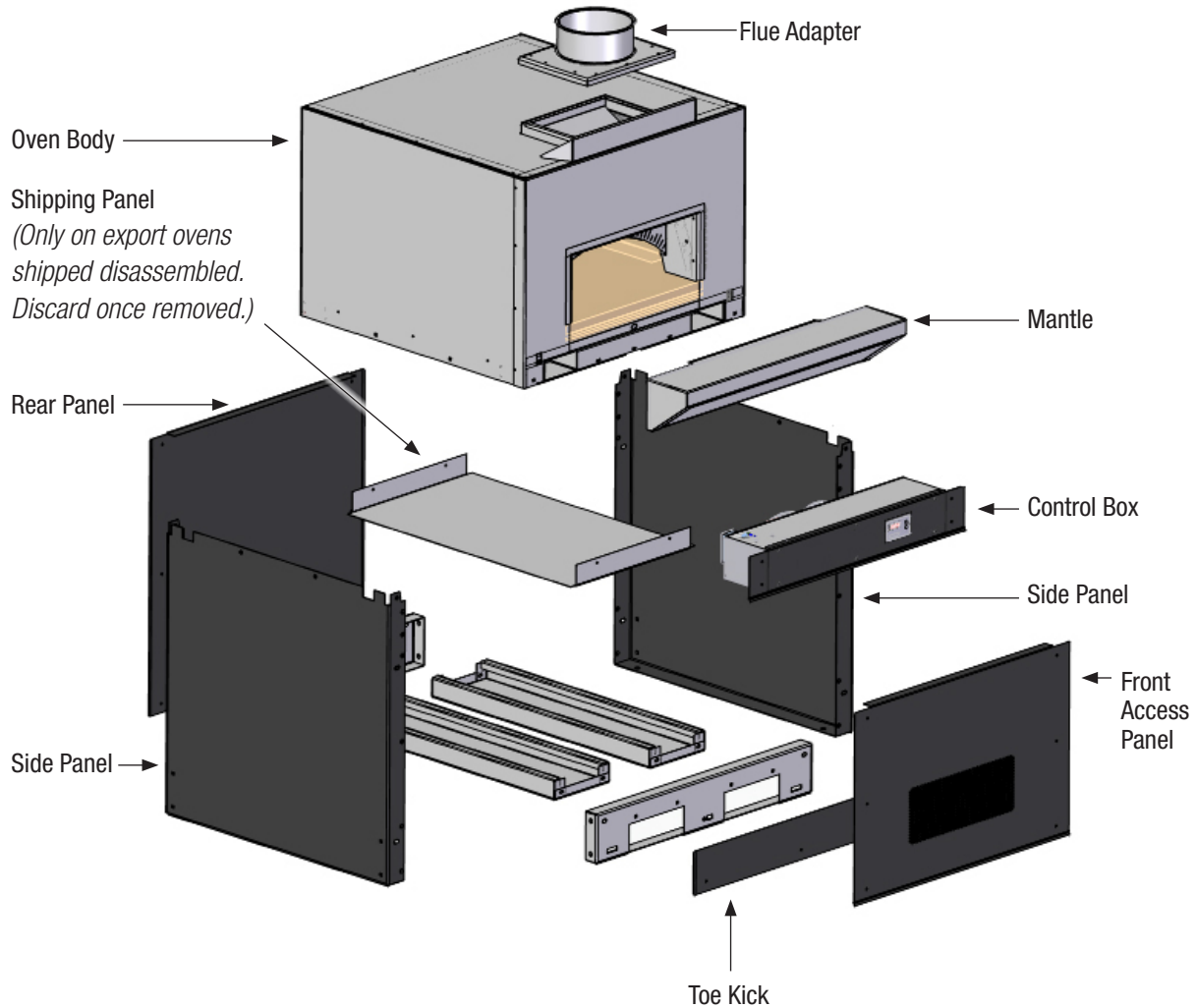
12. Run straps through forklift pockets and up to a Spreader Bar.
Note: The Spreader Bar must be wide enough so the straps clear the body of the oven.
Lift the oven straight up and remove the 4x4" blocks.



13. Maneuver oven stand into position under the oven using pallet jack.
Lower oven and secure oven to stand with bolts.



ALL PARTS SHOWN BELOW, REAR PANEL INCLUDED, PROVIDED WITH THE OVEN (EXCEPT THE SHIPPING PANEL) MUST BE INSTALLED TO ENSURE THE SAFE AND PROPER OPERATION OF THE OVEN.



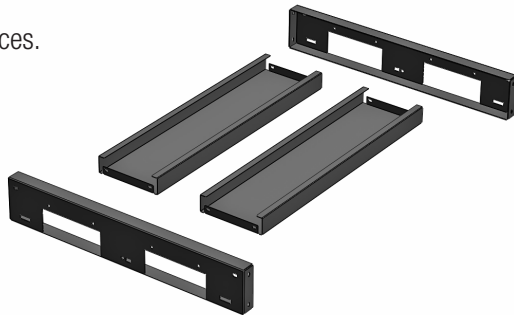


Follow these instructions only if the oven was shipped disassembled, or disassembled to move through a narrow door or passageway.

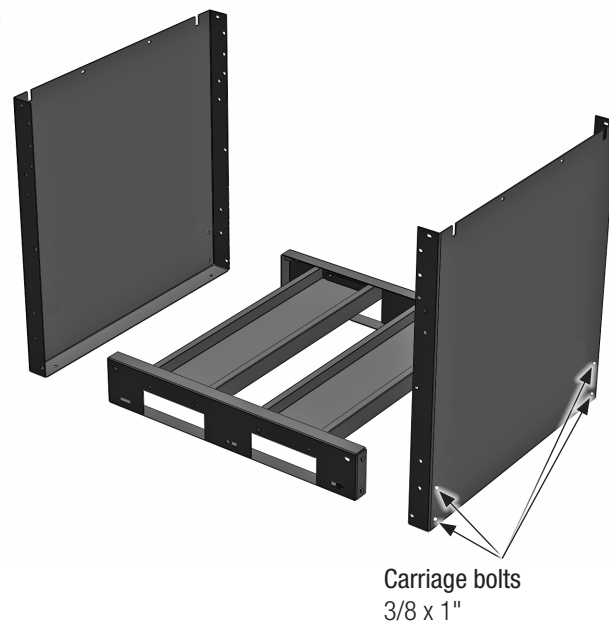
The oven should be installed on a flat level surface. The weight of the oven is carried by the full perimeter of the oven stand. If it is necessary to shim the oven for leveling purposes, it is critical that the shim material be metal, and that the shims are installed in such a way that the full perimeter of the stand is solidly supported. Any gaps created by shimming between the oven and the floor must be sealed for proper ventilation. **Failure to solidly support the full perimeter of the oven stand can result in costly damage to the oven and will void the warranty.**

The floor design and construction must be adequate to handle the weight of the oven. Please see woodstone-corp.com/installation_footprints.htm for floor loading information.

1. Layout pieces.

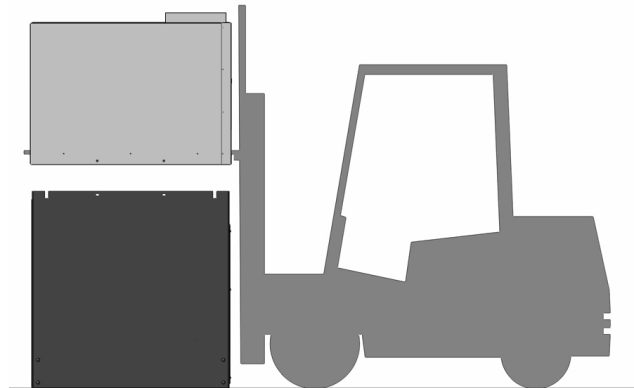


2. Use the 3/8" x 1" carriage bolts to assemble the stand. Be sure to use the washers provided and to tighten nuts and bolts securely.



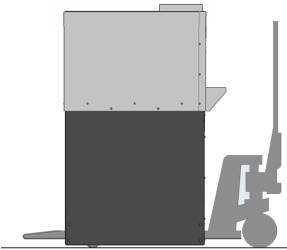


- Using a forklift, carefully lower the body of the oven on to the stand so that the bolt holes line up. While supporting the oven with the lift, install the 3/8-inch x 1-inch carriage bolts. Use the washers provided and tighten all nuts securely. Be sure to use the forklift pockets when lifting the body of the oven.

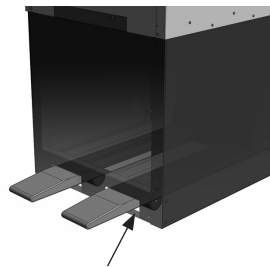


- After the oven body is bolted to the stand, the oven can be moved into place with a pallet jack using the LOWER forklift pockets. If the oven is to be installed against a wall, leave access to the back of the oven until the assembly is completed.

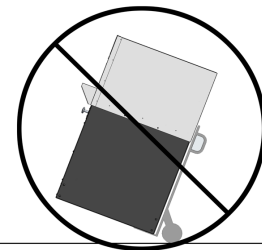
CAUTION: The 4343 model Bistro weighs approximately 1,700 lbs. The 4355 model Bistro weighs approximately 2,200 lbs. The oven is very top-heavy. IF THE OVEN TIPS IT CAN CAUSE SEVERE INJURY OR DEATH! The oven should only be moved using a pallet pack on a LEVEL FLOOR. Do not attempt to move the oven with a hand truck. If the oven must be moved over an inclined surface, a forklift or other suitable means should be employed. If the installer does not have the equipment or experience required to move the oven safely, we recommend you secure the services of a qualified rigging company.



The oven should only be moved using a pallet jack on a smooth, LEVEL FLOOR. If the oven must be moved over an inclined surface, a forklift or other suitable means should be employed.



Make sure the pallet jack wheels do not contact the underside of the fork pocket when lifting to avoid damaging the stand.



Never attempt to use a hand truck to move the oven.

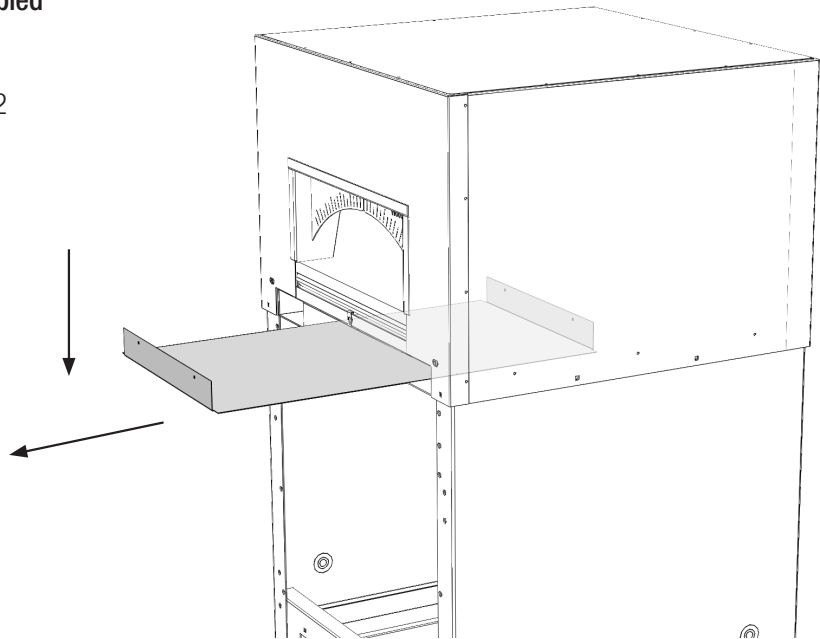
WARNING

If a forklift is not available, or forklift access is not possible, enlist the services of an experienced rigging company to lift, remove and reinstall the oven body.

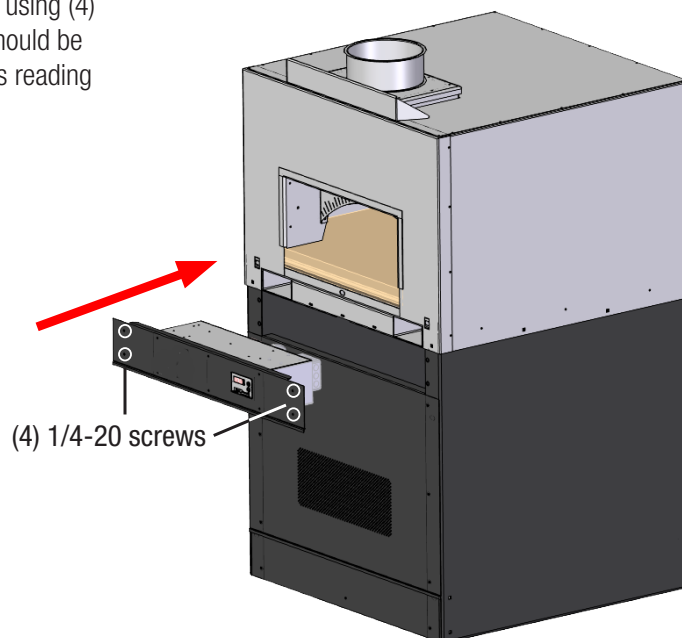


5. For Export Models shipped disassembled

only: Remove the shipping panel from beneath the oven. The shipping panel is secured with 2 screws in the front, and 2 screws in the back. Discard the shipping panel.

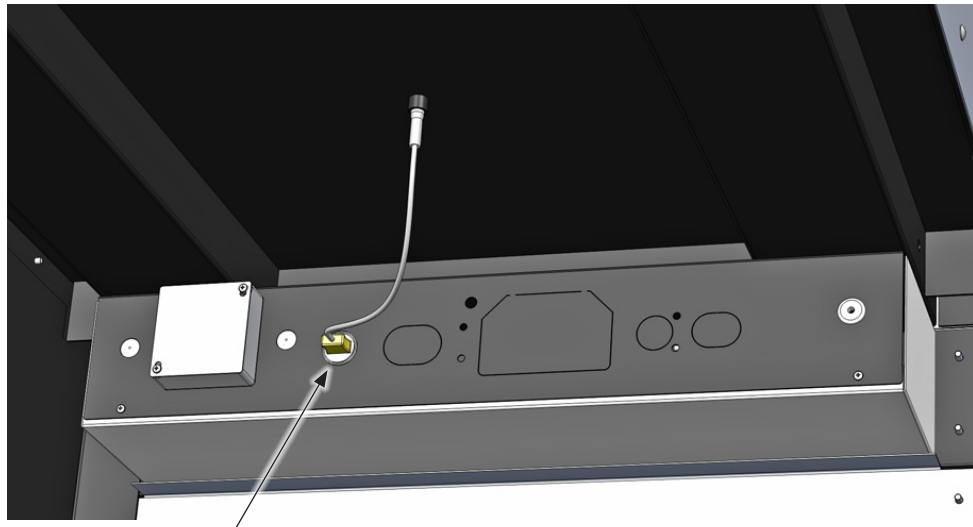


6. Attach the control box to the oven using (4) 1/4-20 screws. The control box should be oriented so temperature readout is reading right side up.



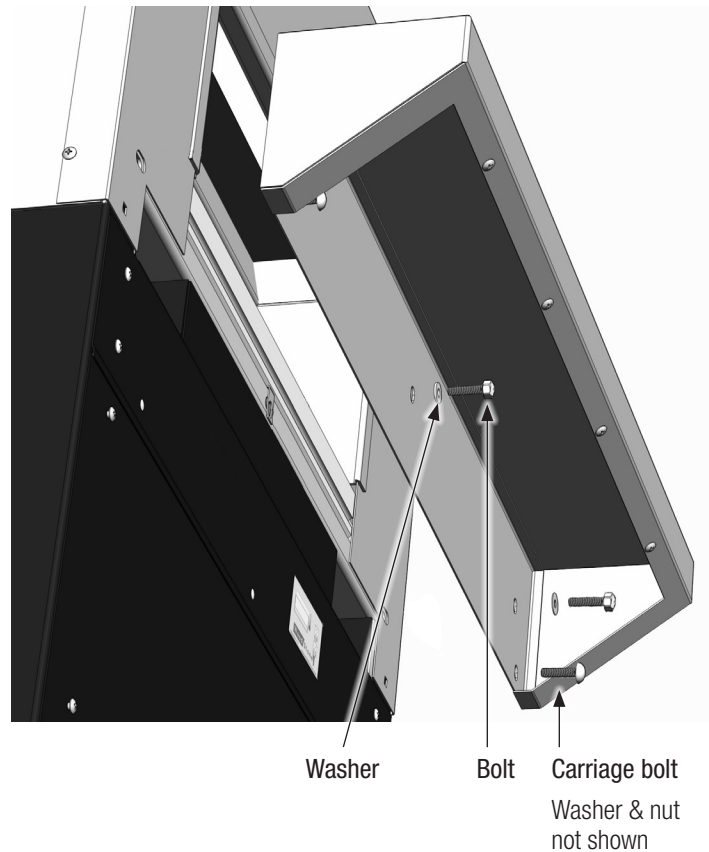


7. Connect the thermocouple at the rear of the control box.



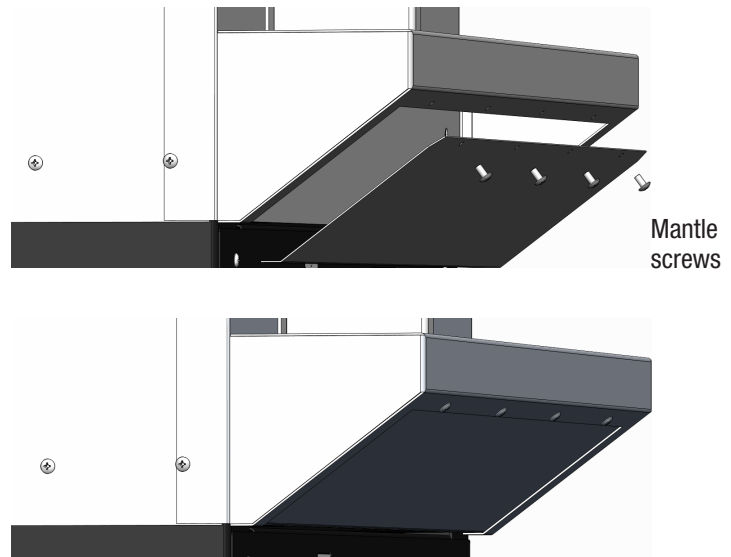
Plug in the thermocouple wire here.

8. Install the mantle. Fasten using 3 bolts and 2 carriage bolts (see illustration).
If the oven has been supplied with a granite mantle, affix the granite slab to the mounting bracket using a generous amount of the adhesive provided.

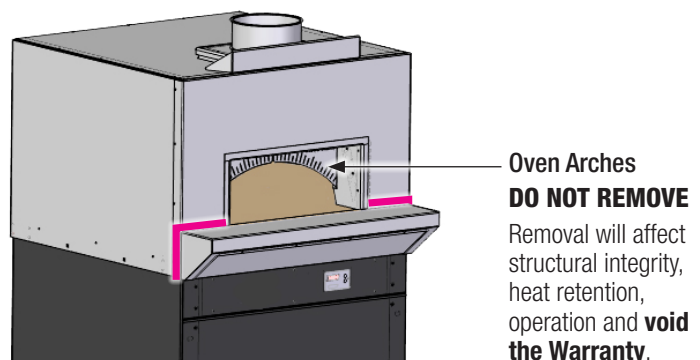




- Place the mantle faceplate cover over the open area under the top of the mantle. Install the cover plate using the 4 screws provided.



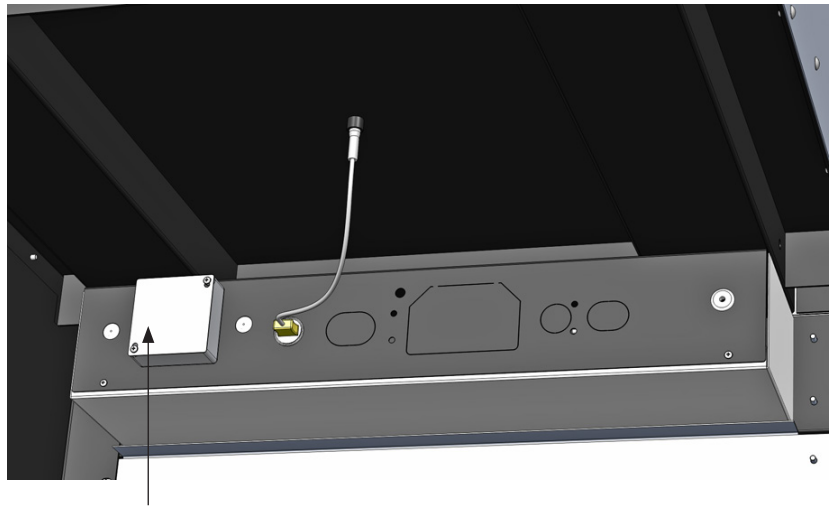
- Run a bead of high temperature silicone (provided) along visible joints where the mantle and the oven intersect—in the front and on both sides of the oven (right side not shown).





11. Make the electrical connection at the rear of the control box. Electrical connections must comply with all relevant national and local codes, and in a manner acceptable to the authority having jurisdiction.

Knockouts are provided on either side and the rear of the oven stand for the incoming electrical supply. Electrical supply should be routed in such a way that it does not block the access to the space under the oven for service.



Make the electrical connection to the terminals in this junction box. Correct voltage is specified on this junction box and the equipment data plate.

This appliance must be electrically grounded in accordance with local code, or in the absence of local code, with the national electrical code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.2, as applicable.

An electrical diagram is provided inside the bottom cover of the control box, and at the end of this manual.

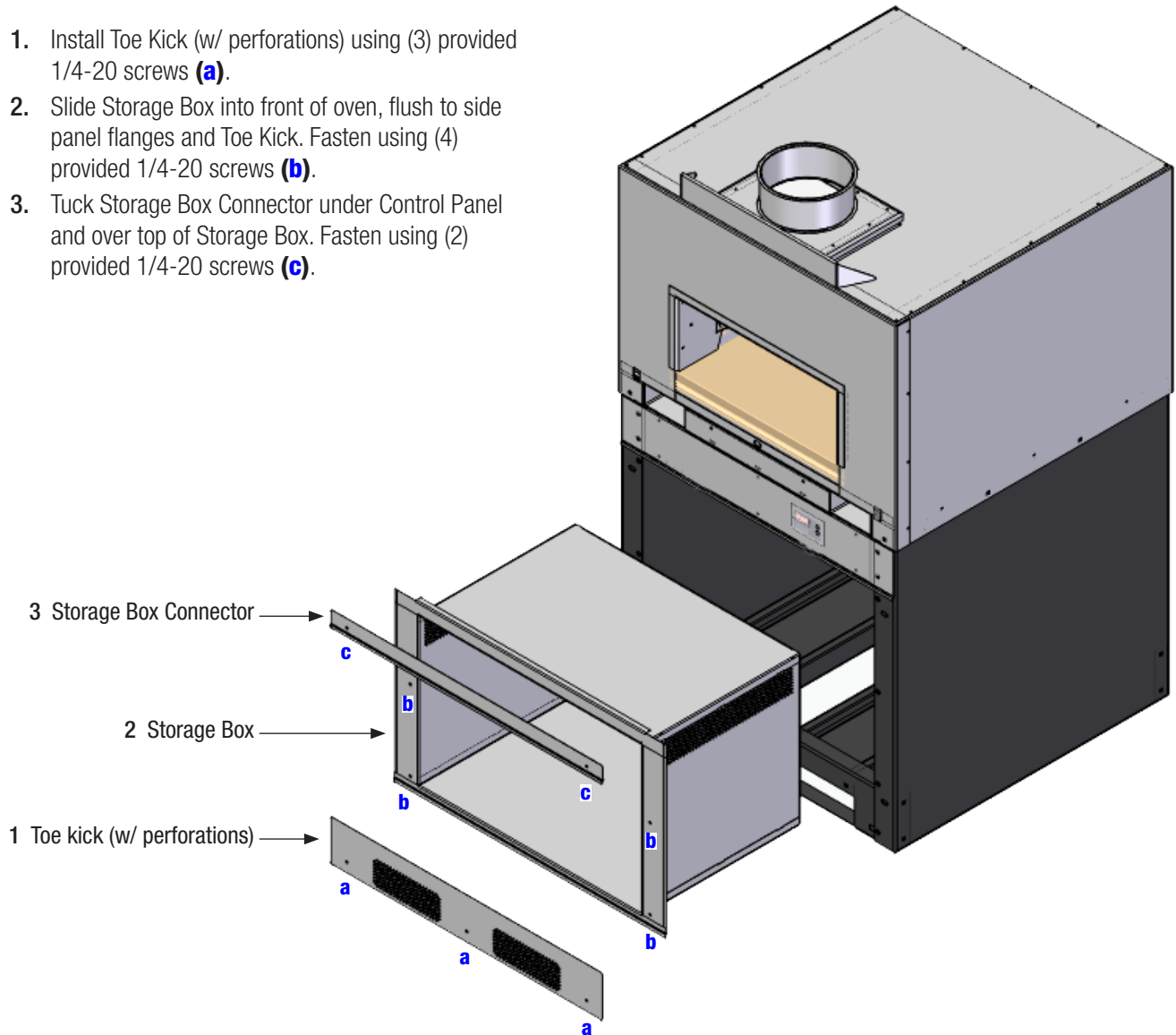
12. Install the rear panel, front panel and toe kick using the 1/4-20 screws provided. The front panel on the oven must not be covered so as to allow access for service to the oven components. The oven should be bolted to the floor using the holes provided at the base of the stand.

NOTE: Rear panel MUST be installed.



**INSTALLATION OF OPTIONAL STORAGE BOX
BL-4343 & BL-4355 ONLY**

1. Install Toe Kick (w/ perforations) using (3) provided 1/4-20 screws **(a)**.
2. Slide Storage Box into front of oven, flush to side panel flanges and Toe Kick. Fasten using (4) provided 1/4-20 screws **(b)**.
3. Tuck Storage Box Connector under Control Panel and over top of Storage Box. Fasten using (2) provided 1/4-20 screws **(c)**.





CONTROLLER FUNCTIONS

Hearth Temperature

The hearth temperature will be displayed when the oven is turned on. Sensor is embedded 1" below hearth surface. Display will read "LO" when the temperature is below 100 °F.



Temperature units

Press and hold to switch between Fahrenheit and Celsius.

ON/OFF button

Press to turn display on and off.



READ BEFORE BUILDING FIRST FIRE

Your oven was cured at the factory. However in the course of shipment, storage on site, etc. the ceramic materials will have absorbed moisture. It is critical that the procedure below be followed to ensure that this moisture is driven from the ceramic in a controlled fashion. This will minimize cracking and prevent damage to the oven that could otherwise occur by bringing the oven to temperature rapidly the first time it is used. This initial procedure need only be followed the first time the oven is fired and/or if the oven has not been used for an extended period of time.

DAY ONE

1. Build a small kindling fire of newspaper and 5–7 lbs. of heavy, hardwood. We suggest using a fire starter (paraffin/sawdust stick) to start the fire. Begin with (3) small pieces of wood (about 1–3" diameter and 14–16" in length). Build the fire directly on the floor of the oven against the side or back of the dome. The fire should be built far enough inside and of a size that doesn't permit the flame to go up the flue. Slowly bring the oven temperature up to 300–400 °F. Maintain this fire for 4–5 hours.
2. Once the oven temperature has reached 300–400 °F, increase the oven temperature by increasing the size and amount of wood being used. Based on what is already burning, gradually increase the amount of wood per hour. This will bring the oven temperature up to 500–550 °F.

NOTE: THE MORE WOOD ADDED TO THE FIRE, THE HOTTER THE OVEN WILL GET.

It is recommended that on the first day of heat-up, the oven does not exceed 550 °F within the first 8 hours. If your goal is to cook at higher temperatures, the oven should only be brought up to 550 °F on day one. Once the oven has reached the 550 °F, more wood may be added to the fire as necessary to bring the oven to the desired operating temperature. The amount of wood required to bring the oven to the specified temperatures may vary depending on the type and quality of the wood. **Never use any type of flammable liquid or fuel to start a fire in a Wood Stone oven. Doing so could cause a dangerous situation and/or damage to the oven ceramic.**

DURING THE FIRST FEW DAYS OF OPERATION, SMALL AMOUNTS OF WATER MAY APPEAR DRIPPING FROM THE OVEN. THIS IS NORMAL AND WILL STOP WITHIN A FEW DAYS.

IMPORTANT NOTES

- One pound of properly cured, heavy, hardwood produces the potential of 6,500 BTU/hr.
- The temperature sensor (thermocouple) is located at the center of the floor, one inch under the surface. The thermocouple will give false readings if the fire is placed on top of it.
- If at anytime the oven is allowed to cool to room temperature for an extended period of time, especially outdoor installations, this heat-up procedure will need to be repeated to avoid thermal shocking of the refractory stone which can cause excessive cracking.
- Small "crazing" cracks will occur with normal heating and cooling. They will not effect the performance or durability of the oven. If cracks of 1/8" or more develop, contact Wood Stone for evaluation.

DO NOT POUR OR SPRAY LIQUIDS ONTO THE OVEN DECK OR INTO THE OVEN INTERIOR AS THIS CAN DAMAGE THE CERAMIC AND WILL VOID THE WARRANTY.



THE FIRE

Use only seasoned heavy, hardwoods with a moisture content of 15–20%. Use of soft woods, such as pine, cedar, hemlock etc., and wet or “green” wood, will cause an excessive build-up of flammable residue throughout the exhaust system. (See the FUELWOOD FACTS section in this manual, or consult factory for information on what types of wood can be used for oven fuel.)

The fire should be ignited 2–3 hours before the oven needs to be at cooking temperature, it can be located practically anywhere in the oven, far enough inside and of a size that doesn't permit the flame to go up the flue.

Once the oven is being used daily, the fire may be ignited using still glowing coals from the previous day's fire. The oven is heated more evenly and effectively by a fire positioned on the side rather than in the rear of the oven. Adding about 3–7 lbs. of wood per hour should bring the oven temperature up about 100 °F per hour (this will vary slightly depending on the type and moisture content of the wood and the size of the oven).

The floor temperature is indicated by the digital thermometer and should not exceed 850 °F. Once the desired temperature is reached, maintain it by addition of wood as needed. Do not fling wood against back or side walls of oven—this may void the warranty. At the end of the work day, put optional removable stainless steel Night Heat Retention Door(s) into door opening to hold heat in the oven overnight.

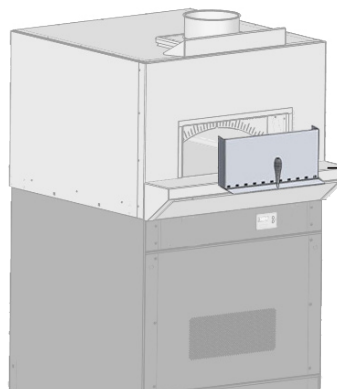
DO NOT OVER-FIRE THIS OVEN. IF FLAMES ARE SPILLING OUT OF THE DOOR OPENING, OR IF OVEN FLOOR TEMPERATURE EXCEEDS 850 °F, YOU ARE OVER-FIRING THE OVEN.

At the start of the following work day, pull the spent fuel (fly ash) off of the coal bed using your brass bristle brush. Remove with the ash shovel and place ashes into an ash dolly (metal container with a tight fitting lid). The closed container of ashes should be placed on a non-combustible floor or on the ground, a safe distance from all combustible materials pending final disposal. They should be retained in the closed container until all cinders have thoroughly cooled.

Wood Stone's stainless steel ash shovel and Double Compartment Ash Dolly disposal system is a safe and convenient way to dispose of ash. See specifications in the Tools and Accessories section on woodstone-corp.com or call your dealer or Wood Stone for details.

CAUTION: Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or freshen a fire in this oven. Keep all such liquids away from the oven while it is in use.

DO NOT POUR OR SPRAY LIQUIDS ONTO THE OVEN DECK OR THE OVEN INTERIOR AS THIS CAN DAMAGE THE CERAMIC AND WILL VOID THE WARRANTY.



NIGHT HEAT RETENTION DOOR

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

**CARE AND CLEANING****OVEN FLOOR**

As needed, brush food particles and stray fire debris from the oven floor using a long-handled floor brush. If something spills on the floor of the oven, wait for it to burn and/or dry up and then clean the residue off with the floor brush. This process can be sped up by moving a small portion of coals onto the spill causing it to bake off quickly. For removal of fine particles (burned flour or ash), wrap a warm, damp cloth around the brush head and use it to briskly wipe the floor.

DO NOT SCRAPE THE OVEN FLOOR WITH METAL TOOLS HAVING SHARP EDGES OR CORNERS!

STAINLESS STEEL SURFACES

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

EXHAUST SYSTEM

As with all commercial cooking equipment, regular cleaning and maintenance of the exhaust system is necessary to prevent the possibility of a hood and/or duct fire. The frequency of inspection and cleaning will depend upon hours of use and type and moisture content of the wood used for fuel.

AVOID FLUE FIRES—BURN GOOD QUALITY WOOD AND ESTABLISH A REGULAR CLEANING SCHEDULE. WHEN BURNING SOLID FUEL, THE DUCT AND VENTILATION SYSTEM MUST BE CLEANED AT LEAST MONTHLY.

DO NOT POUR OR SPRAY LIQUIDS ONTO THE OVEN DECK OR THE OVEN INTERIOR AS THIS CAN DAMAGE THE CERAMIC AND WILL VOID THE WARRANTY.



REMOVAL OF CREOSOTE AND SOOT

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

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool oven flue of a slow-burning fire. As a result, creosote residue accumulates in the duct. When ignited, this creosote makes an extremely hot fire. The duct serving this oven should be inspected at least twice a month during the first two months of operation, to establish rate of creosote buildup and necessary cleaning schedule. If creosote or soot has accumulated, it should be removed to reduce the risk of a flue fire.

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

DISPOSE OF ASH PER THE FOLLOWING

1. Place ashes into a metal container with a tight fitting lid.
2. Place the closed container of ashes on a non-combustible floor or on the ground.
3. Place the closed container of ashes well away from all combustible materials, pending final disposal.
4. Retain the ashes in the closed container until all the cinders have thoroughly cooled. Ashes can then be disposed of safely.



Wood Stone's optional Double Compartment Ash Dolly. View the spec sheet at woodstone-corp.com in the Tools and Accessories section.



WHAT TYPE OF WOOD SHOULD YOU USE TO FIRE YOUR SOLID FUEL COOKING EQUIPMENT?

The answer to this question depends on several considerations: geographical location, availability and relative cost of various fuelwood species and individual preferences regarding the flavor qualities of various wood types. There are a wide variety of good fuelwood species in all geographic locations. Each species of wood has different characteristics. The table below should help weigh the pros and cons of various types of wood. Wood from conifers (pine trees) is not recommended due to its poor fuelwood characteristics (low weight, low-med heat, poor coaling, high sparking and high residual creosote).

Wood Type	Heat	Lb/Cord	Lighting	Coaling	Sparks	Fragrance*
Alder	Med-Low	2500	Fair	Good	Moderate	Slight
Apple	High-Med	4400	Fair	Excellent	Few	Excellent
Ash	High	3500	Fairly Difficult	Good-Excellent	Few	Slight
Beech	High	3800	Difficult	Excellent	Few	Good
Birch (white)	Medium	3000	Easy	Good	Moderate	Slight
Cherry	Medium	2000	Fair	Excellent	Few	Excellent
Elm	High	2300	Very Difficult	Good	Very Few	Fair
Hickory	Very High	4200	Fairly Difficult	Excellent	Moderate	Excellent
Maple (red)	High-Med	3200	Fairly Difficult	Excellent	Few	Good
Maple (sugar)	High	3700	Difficult	Excellent	Few	Good
Mesquite	Very High		Very Difficult	Excellent	Many	Excellent
Oak (live)	Very High	4600	Very Difficult	Excellent	Few	Fair
Oak (red)	High	3700	Difficult	Excellent	Few	Fair
Oak (white)	Very High	4200	Fairly Difficult	Excellent	Few	Fair
Pecan	High		Fair	Good	Few	Good

*The desirability of various fragrances is largely a matter of personal preference.

Whichever type of wood you use, **MAKE SURE YOU KNOW THE MOISTURE CONTENT.** Properly seasoned wood contains 20% moisture or less. If wood contains more than 20% moisture, it should not be accepted for use. Wood should be stored off the ground and out of the rain in an environment that allows good air circulation so that the drying process can continue. Wet wood is the most common operational difficulty associated with wood-fired cooking equipment. Wood Stone's optional Mini-Ligno E Wood Moisture Meter can save you from paying for water when you thought you were paying for wood (see the Tools & Accessories section of woodstone-corp.com, contact your dealer or Wood Stone).

Calculate your approximate monthly, daily and hourly fuel-wood costs using the following formulas:
The cost of well-seasoned hardwood varies greatly with geographical location.

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

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

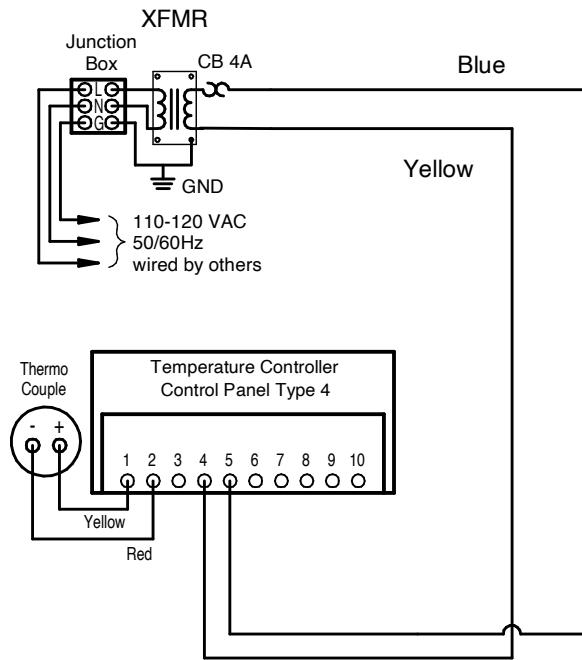
When burned, a pound of any wood releases approximately 6500 BTU/hr, so it is better to compare the price of wood by the pound rather than by the cord. A full cord of wood measures 4' x 4' x 8' when stacked.

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

Do not use pressed wood products in Wood Stone equipment. They may damage the ceramics and void the warranty.



**BISTRO 120 VAC MODELS
WOOD ONLY MODELS**



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

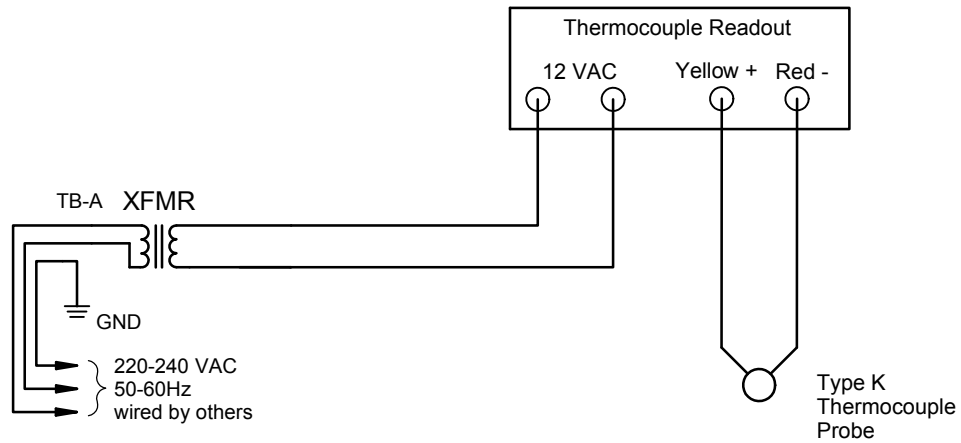
DIAG #: WD090 Rev. 1

DATE: 2/2/2017

See equipment data plate for correct voltage of your oven.



**BISTRO 240 VAC MODELS
EXPORT MODELS**



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

DIAG #: WD052 Rev. 0
DATE: 3/27/2014

See equipment data plate for correct voltage of your oven.

**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

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WOOD STONE

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Fax 360.650.1166

www.woodstone-corp.com

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