



Points of Difference

Here are 10 reasons why there has never been an oven like today's Wood Stone oven.

We have chosen our Mountain Series model WS-MS-5-RFG-IR to illustrate how these differences can benefit you.

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Difference 1 One-Piece Floor

Wood Stone's cooking surface is a single piece of high-temperature, high-quality ceramic versus old-style multi-piece brick and tile floors.

Heat works like electricity—any gaps or changes in materials interrupt the passing of heat and prevent the floor temperature from remaining even.

One-piece floor construction means a consistent, unbroken heat transfer, resulting in higher production and a better quality product.

GAPS BLOCK HEAT TRANSFER

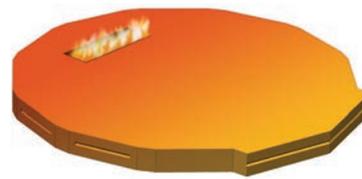
Two surfaces, no matter how close together they are placed, can never be as efficient for heat transfer as a single piece.

Each surface has small ridges which separate the main bodies creating air pockets in-between each which act as insulators and block heat transfer.

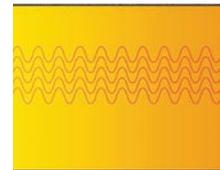
Even when mortar is used to bridge these gaps, heat flow across the floor is still affected because of the difference in makeup of the materials.

A NOTE ON DURABILITY

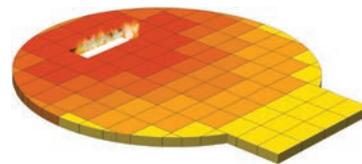
Other manufacturers report that they build their ovens out of bricks or tiles so they can replace them in the future. Our floors are built to never need replacing. Which would you rather specify in your kitchen?



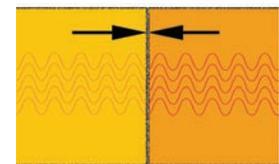
One-piece Wood Stone ceramic floor



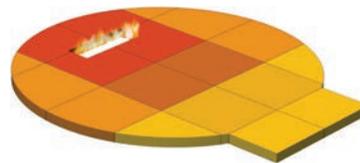
Unbroken lateral heat transfer



Brick floor



Gap interrupting lateral heat transfer



Tile floor

Difference 2 Thicker Floor

Wood Stone's single-piece floors are 3–6 inches thick (depending on the model). Floor thickness equals thermal mass. Physics tells us that the greater the thermal mass, the better the floor will retain heat during the cooking process.

Placing a cold raw pizza on the floor removes some heat below that spot. The thickness of the reservoir of heat below the pizza determines how long the floor can cook a consistent pizza.

LESSER FLOORS

Floors made of brick and tile are typically much thinner. Brick floors are often 3 inches thick or less—tile floors 1.5 inches thick or less. After several pizza rotations into a rush, cold pizzas draw significant heat out of thinner floors, resulting in an unbalanced finished product. Tops will be done, but bottoms will be undercooked.

The problem gets worse as more pizzas are placed. Waiting for the thinner floor to recover heat means stopping production, using another oven, decreasing top heat to stretch cooking times or serving a less than optimal product...all unacceptable options for a serious operator.



Typical 4" (100mm) thick Wood Stone floor
Note how our one-piece floor construction efficiently rethermalizes through lateral heat transfer



Typical 2-3" (50-75 mm) thick brick floor



Typical 1.5" (37.5 mm) thick tile floor

Note how gaps in the floor impede lateral heat transfer, resulting in less efficient thermalization

Difference 3 Underfloor Infrared Burner



For chefs requiring a consistent, high performance oven during periods of high production, Wood Stone offers the option of a thermostatically controlled, Underfloor Infrared (IR) burner. The IR burner assists in maintaining a consistent floor temperature, regardless of production demands.

The Underfloor IR burner replaces lost heat when the floor temperature falls below the desired set temperature.

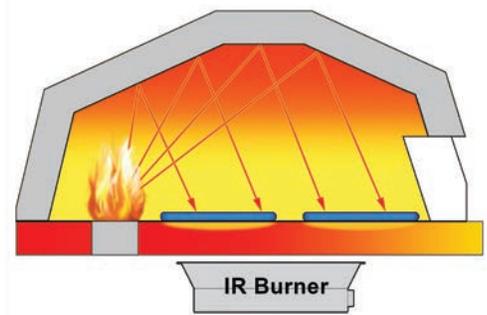
When the floor temperature is above the set point, the radiant flame is the only heat source. But during periods of high production, the IR burner comes on automatically, providing additional heat from below.

COOKING MEANS COOLING

Cooking in a stone hearth oven requires a fine balance of top and bottom heat. Heat radiates from the open radiant flame into the dome and saturates the dome and cooking surface below.

When you place a pizza into the oven, the pizza cools the floor by (1) blocking heat from the top, and (2) absorbing heat from the floor.

Relying on dome heat alone can work in lower production environments, but when the orders stack up, it's comforting to know you also have the heat down below.



The Wood Stone IR burner heats from below—but only when high production requires the assist



When the floor temp falls below the set point, the Wood Stone IR burner automatically fires up

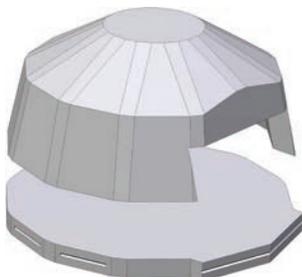
Difference 4 Single-Piece Dome Construction

Using modern materials and manufacturing processes, Wood Stone's domes are cast as a single piece—at least 3–6 inches thick (depending on the model). The tremendous mass of the dome creates the vital reservoir of heat. This “heat sink” of thermal mass provides the heat needed for consistent high performance during heavy production.

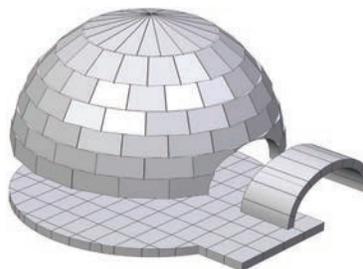
FAILURE-PRONE BRICK OR MULTI-PIECE CONSTRUCTION

Multi-piece dome construction was the traditional method for oven fabrication when builders used smaller, usually thinner, pieces which could be transported by available equipment of the day—often by hand.

A major disadvantage of multi-piece dome construction is that as the ovens heat and cool, individual blocks expand and contract. Coupled with gravity, long-term durability is reduced, and dome failures become common. Over the years, we have replaced scores of other manufacturer's ovens that have suffered terminal dome failures.



Wood Stone's thermal mass of single-piece dome construction creates a massive heat sink



Multi-piece brick dome construction



Multi-piece dome construction

Difference 5 High Dome Ceiling

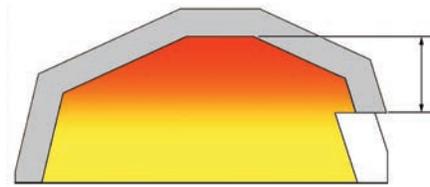
Wood Stone's single-piece domes have high ceilings, over 20 inches (520mm), providing greater dome stability and more thermal headspace.

Thermal headspace is the space between the top of the dome and the top of the doorway. In the images to the right, we compare the red "hot zone" of the thermal headspace of a Wood Stone Mountain Series high dome ceiling and a traditional lower dome ceiling.

KEEPING THE HEAT WHERE YOU NEED IT

A larger thermal headspace means heat generated in the oven stays inside the oven for cooking rather than immediately escaping out the doorway and flue. Less fuel is required with Wood Stone ovens.

The larger thermal headspace also allows wider doorways, which offer more workspace for the chef, and greater visibility for customers.



Wood Stone high dome ceiling thermal headspace



Lower dome ceiling thermal headspace



Wood Stone's superior thermal headspace makes wider doorways possible

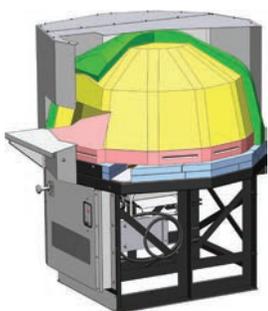
Difference 6 Efficient Space Usage

To maximize heat efficiency and retention while minimizing the amount of space required, Wood Stone dedicates the mass in the cooking chamber to its single-piece dome and not in the surrounding insulating materials.

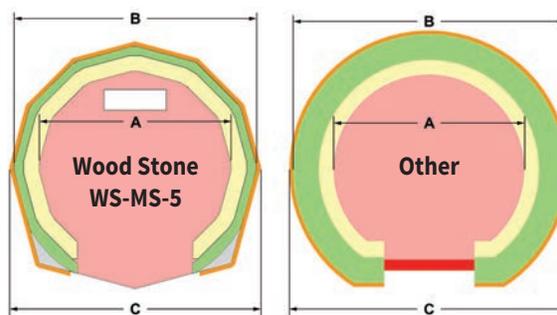
By using highly efficient insulation, Wood Stone maintains a 1-inch clearance to combustibles to minimize the footprint in the valuable real estate that is your kitchen.

THE BOTTOM LINE

As a result of our superior insulating materials, Wood Stone ovens require much less investment in valuable floor space for comparable cooking surfaces. Wasted space is wasted money.



4" of highly efficient spun ceramic fiber insulation surround the dome, with 4" of lightweight rigid insulation below the floor, minimizing the oven's footprint



Superior insulation requires a smaller footprint for the same cooking area

Let's do the math

With the same cooking area, a Wood Stone WS-MS-5 oven requires **33% less space**

	A Floor Width	B Spun Ceramic Fiber Insulation	C Clearance to Combustibles	Cooking Area	Oven Footprint	Clearances Footprint	Space Saved with Wood Stone	Rental Savings @ \$25/ft ²
Wood Stone	52"	64"	66"	14.7 ft ²	22.3 ft ²	23.7 ft ²	7.8 ft ² (33%)	\$2,340
Other	52"	74"	76"	14.7 ft ²	29.8 ft ²	31.5 ft ²		

Difference 7 Accurate Temperature Measurement

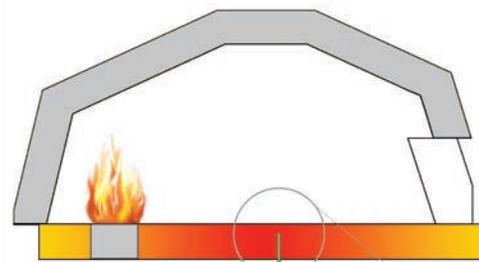
Wood Stone places the oven's temperature-measuring device, the thermocouple, in the center of the oven's floor, approximately 1 inch (25mm) below the cooking surface to measure floor temperature.

Reporting floor temperature, rather than dome air temperature, is critical. It is the floor temperature which determines how the oven performs. It is the only part of the oven that is in direct contact with what's being cooked. Plus the floor is the last thing to get hot and the first thing to get cold.

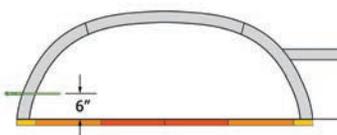
MEASURING DOME TEMPERATURE IS MISLEADING

Other manufacturers place their thermocouple in the dome, some as high as 6 inches off the floor. Placing the thermocouple in the dome gives the temperature of the air at that height, not the temperature of the actual cooking surface.

When the floor loses temperature during high production periods, the thermocouple doesn't read the change. The deeper you get in the cooking cycle, the more serious this discrepancy becomes.



The all-important floor temperature is measured by a thermocouple placed 1" below the Wood Stone cooking surface



Cooking chamber air temperature is a misleading measurement

Difference 8 Smart Design

Wood Stone ovens arrive **fully assembled**. While we ship our ovens with riggers in mind, unloading and placement requires a professional—there's no getting around that. But the end result justifies the effort. You receive an oven that has been assembled in the factory by our experienced technicians. You have the confidence the job has been done right.

Unassembled ovens from other manufacturers require skilled professionals to put the pieces back together. The final product will only be as good as the labor that constructs it. Many multi-piece ovens require additional insulation and finishing after the oven is installed. And some require an expensive and uncertain on-site inspection from a code official to gain the necessary approvals.

CHOICES

Wood Stone manufactures many different families of ovens. From the compact footprint of our Bistro Line, to the rectangular Fire Deck Series, we have the right oven for any application.

You can tailor a Wood Stone for an even better fit, choosing from an array of options. Depending on the model, add a Decorative Flame, customize your arch, add additional burners or perhaps a Viewing Window. See what is available per model on our website at woodstone-corp.com.



If you have an especially challenging installation, Wood Stone does offer additional options to help you get the job done responsibly. Visit the [Installation Solutions](#) section of our website to learn more or call us to discuss your options.

Difference 9 Trusted Support



Wood Stone offers support and guidance before and after the sale: answering initial questions, welcoming guests to the test kitchen, and providing industry-leading 24-hour service support. You are family when you choose Wood Stone.



Difference 10 Well-Deserved Reputation

Wood Stone Corporation, based in Bellingham, Washington, has been manufacturing stone hearth and specialty commercial cooking equipment for the foodservice industry since 1990. We have more than 14,000 installations in over 80+ countries around the world. We are proud that all of the ovens we've manufactured are still in good working order, including Oven Number 1.

Wood Stone has built its reputation on our family of stone hearth ovens. Our technologically advanced ceramics and engineering expertise, coupled with our high quality construction techniques and attention to detail, are typical of all of our products and relied upon by our loyal customers. Our product offerings have grown since inception and Wood Stone now also designs, engineers and manufactures a complete line of specialty commercial cooking equipment in addition to our oven offerings.



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