Modena2G Compare

We know that you have a number of choices in the market, and that it can be difficult deciding which commercial pizza oven is right for your restaurant. Our approach is break down the commercial pizza oven into the core functional components, describe how they work, and why certain designs and materials are inherently better. In this comparison we address the basics of the oven dome and cooking floor construction, the importance of both insulation efficiency and thickness, why proper oven proportions, including dome height and the size of the oven opening, are essential, and most importantly—why these are all critical to baking perfect Pizza Napoletana.

If you are confused, or having trouble understanding why various wood and gas-fired pizza oven are different, we think we can help. Our comparison tries to use clear (and colorful) graphics and direct language to make sense of oven design and the different refractory materials and insulators used in pizza oven production. Visually, the colors have meaning—where red is hot, while orange and yellow are increasing cooler; and blue is cold, while green is warmer. Equally, the relative thicknesses of the oven components shown in the drawings give an accurate visual representation of their shape and size.

Optimal Dome Thickness

Forno Bravo

A Thin Dome Cannot Retain High Heat

Some ovens are based on a thinner dome and/or a lower grade refractory material and a lower quality one-sided casting process. The result is that the oven dome does not hold heat as efficiently for high heat baking, and wears out more quickly.
The Forno Bravo oven uses 18"x18"x2 1/2" true firebrick baking tiles—the optimal thickness and material for baking Pizza Napoletana. The 2 1/2" floor can be fully heated to an 800°F pizza baking temperature, which allows for continuous baking, without the floor cooling down. The oven fire (either gas or wood) can recharge the floor to keep up with even high throughput baking. Unlike a cast oven floor (refractory material mixed with water and left to dry), our industrial baking tiles are compressed (2,700psi) and kiln fired (2,650°F), creating a material (through sintering) that is significantly more durable and less likely to crack—while the large 18"x18" tile size presents few seams.

Some ovens use a too thick 4" floor constructed with cast and air dried refractory material—which is too much mass to fully heat up to pizza baking temperature. The bottom of the floor remains cool and continually wicks heat away from the inside of the oven, and the baking floor is always cooling down. While this is fine for baking 5-9 minute pizzas at 500°F, it does not work for Pizza Napoletana or other serious artisan pizzas. Because air cast material is much softer and less durable than a true firebrick tile, these floors are much more likely to crack and wear down. In all likelihood, it is the relatively soft, non-ceramic nature of the cast floor material that resulted in the overly thick floor design.

Some ovens use very small and thin 12"x12"x1 1/2" baking tiles. While it is very easy to bring a thin baking tile floor up to the proper temperature for baking a pizza, the tile is too thin, and does not retain enough heat for continuous pizza baking. After baking a series of pizzas, the floor significantly cools down—and the pizza chef can either bake the pizzas for a longer period of time, or wait for the floor temperature to recover. Further, the small 12"x12" tiles result in too many oven floor seams.
Insulation Efficiency #1

Right
The Forno Bravo ovens use 4” (side) - 6” (top) ceramic insulation over the oven dome and 4” ceramic board insulation under the oven. This ultra thick, ultra efficient insulation retains heat inside the oven for optimal baking, while minimizing the oven footprint in the kitchen.

Low Efficiency Loses Heat
Many ovens use inexpensive castable insulation (clay or vermiculite mixed with Portland cement) that is 50% less efficient than ceramic insulation. That means the oven does not retain heat as well for baking—even if the insulation is 4” thick. Plus, the escaping heat can make the kitchen uncomfortably hot.
**Insulation Efficiency #2**

**Forno Bravo**

**Right**

The Forno Bravo ovens use 4\(^{"}\) (side) - 6\(^{"}\) (top) ceramic blanket insulation over the oven dome and 4\(^{"}\) ceramic board insulation under the oven. This ultra thick, ultra efficient insulation retains heat inside the oven for optimal baking, while minimizing the oven footprint in the kitchen.

**Low Efficiency Insulation Wastes Space**

Castable insulation (clay or vermiculite mixed with Portland cement) is 50% less efficient than ceramic insulation, so that the oven needs twice as much insulation to maintain proper oven temperature. As result, the oven wastes valuable floor space in the kitchen—at a significant cost to the restaurant owner.
Right
The Forno Bravo ovens use 4" (side) - 6" (top) ceramic insulation over the oven dome and 4" ceramic board insulation under the oven. This ultra thick, ultra efficient insulation retains heat inside the oven for optimal baking, while minimizing the oven footprint in the kitchen.

An Under Insulated Oven Loses Heat, Wastes Fuel
Some other ovens simply use thinner layers of ceramic insulation. Again, that means the oven does not retain heat well for baking. Plus, the escaping heat wastes fuel, and can make the kitchen uncomfortably hot.
The Forno Bravo oven's low 16.5” internal oven dome height is in proper proportion to the cooking floor diameter, and evenly bounces heat onto the cooking floor for consistent, high temperature pizza baking at 800ºF+. The heat of the fire continuously re-charges the cooking floor.

**High Dome Cannot Bake Italian Pizza Napoletana**

The dome height is too high in proportion to the oven floor diameter. Heat must travel too far from the fire to the dome, and then to the cooking floor, resulting in inconsistent, low temperature pizza baking. Further, the fire is not able to adequately maintain a hot cooking floor.
A 22" wide oven opening is in perfect proportion with the oven chamber volume. It is wide enough to easily add and remove pizzas and a range of baking dishes—while retaining optimal heat.

**Right**

**A Too Wide, Too Tall Opening Loses Heat**

An extra wide, extra tall oven opening might look exciting, but it is a serious problem for high throughput pizza baking. The large oven opening vents large amounts of heat, cooling the oven down, wasting fuel, and making it virtually impossible to make great Pizza Napoletana.
The Forno Bravo modular oven kits are constructed with interlocking joints for a tight fit, easy assembly, and excellent heat retention and durability. Each piece can be lifted by two people and carried up stairs and through a standard doorway. Our oven kits are complete, with insulation and mortar, and the oven pieces can be efficiently packed in a wooden crate for cost-effective shipping. If you need a modular oven kit, this is the right choice.

The Forno Bravo assembled ovens feature a monolithic dome—cast as a single piece. The massive oven dome and integral vent have no seams, offering industry-leading cooking performance and durability. The single piece dome is also more resilient than a pre-assembled oven kit during shipment from the factory to your restaurant. If you are looking for the best assembled oven, this is the right choice.

Some producers build their assembled ovens using modular oven kits. Their oven kits are manufactured in Europe and shipped to the US in pieces, where they are assembled—and then shipped again to your restaurant. This is not the best choice of your restaurant. Other producers only make assembled ovens cast as a single dome. If you do not have forklift access to your kitchen, you can’t install the oven.
Right
Designed for high temperature, high throughput baking, the Forno Bravo ovens excel at baking Pizza Napoletana and other artisan pizza in 1 1/2 - 2 minutes at 800°F+, with great crust and great char marks.

Designed for Low Temperature Baking
Ovens designed for lower temperature baking cannot deliver the sustained high temperatures required for authentic Italian pizza. 5-9 minute pizzas can be dry, tough and chewy and they don’t develop the distinctive chocolate brown char marks that characterize great pizza.
Right
The Forno Bravo ovens use an atmospheric burner that works like wood, creating a bright, tall cone of flame that bounces off the oven dome and heats the oven—the same as a wood fire. The oven can operate in gas-only, or gas/wood combo, and produce high throughput Pizza Napoletana without cooling down.

Low Flame Cannot Heat the Oven
Other oven burners produce a low, wide flame that cannot fully heat the oven. Pizza baking times slow down during peak use, and 2 minute Pizza Napoletana is out of the question. In response, an under-oven burner is available that is both expensive and ineffective.
# Modena2G Oven vs. The Other Guys

<table>
<thead>
<tr>
<th>Feature</th>
<th>Forno Bravo</th>
<th>The Italian Oven</th>
<th>The French Oven</th>
<th>The American Oven</th>
</tr>
</thead>
<tbody>
<tr>
<td>4” Commercial-Grade, High-Density Dome</td>
<td>✔</td>
<td>No.</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>2 1/2” Commercial-Grade, Kiln-Fired</td>
<td>✔</td>
<td>✔</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Cooking Floor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proper Dome Height and Oven Opening</td>
<td>✔</td>
<td>✔</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Proportions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100% Ceramic Blanket Dome Insulation</td>
<td>✔</td>
<td>No.</td>
<td>No.</td>
<td>✔</td>
</tr>
<tr>
<td>100% Ceramic Board Floor Insulation</td>
<td>✔</td>
<td>No.</td>
<td>No.</td>
<td>✔</td>
</tr>
<tr>
<td>Modular Kit and Fully Assembled Oven</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>No.</td>
</tr>
<tr>
<td>Gas with Gas/Wood Combo Option</td>
<td>✔</td>
<td>No.</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Gas Burner Works Just Like Wood</td>
<td>✔</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>UL737, UL2162, NSF-4, ANSI-Z83a</td>
<td>✔</td>
<td>No Gas.</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Certified with UL103 Chimney</td>
<td>✔</td>
<td>✔</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Certified with Type 1 Hood</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

Copyright Forno Bravo, LLC 2010. All Rights Served.