

Carrabba's Italian Grill



- ▶ **Using Ranges with Eight 30,000-33,000 BTU/hr. Burners**
- ▶ **Evaluated Turbo Pots to Reduce Energy Usage**
- ▶ **Reduced Burners to 15,000 BTU/hr. and Maintained Boil Time**
- ▶ **Decreased Per Burner Energy Consumption by 50%**
- ▶ **Payback on Pot Purchase and Burner Conversion: 5 - 6 Months**

Innovative New Pots Save Energy While Preparing Perfect Pasta!

Currently there are 232 Carrabba's Italian Grills operating in 32 states, each run by local proprietors. Staying true to the culinary roots and values of the founders, Johnny Carrabba and Damien Mandola, Carrabba's serves authentic Italian cuisine that combines family recipes passed down through generations, with innovative dishes inspired by fresh, seasonal ingredients. A typical Carrabba's is a 6300 square foot self-standing platform that includes dining room and bar seating for 246 guests, plus seasonal patio seating.

The focal point of Carrabba's interior design is a lively and interactive natural gas-fueled exhibition kitchen. The goal is to create a comfortable neighborhood bistro environment that offers several distinct dining experiences, including a relaxed pasta bar on the edge of the busy exhibition kitchen, a cozy bar, and both communal dining tables and intimate booths in the main dining room. They are open for dinner only and offer call-ahead, car-side pickup and large party carryout meal options.

Carrabba's Relies on Natural Gas Equipment

Carrabba's kitchen relies on cooking with natural gas equipment to meet the demands of cooked-to-order production. In addition to better temperature control and quick recovery, gas equipment helps deliver drama and that WOW factor in display kitchens. The natural gas

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Joel Barker, Carrabba's Vice President of R & D and Kitchen Operations





equipment lineup includes: fryers, a pasta cooker, a charbroiler, infrared cheesemelter, convection ovens, three or four eight-burner ranges and a wood-fired, gas-assisted pizza oven.

All Carrabba's kitchens have multiple gas-fired eight-burner ranges that handle the pasta and sauté cooking chores. Typically the four back burners are used for boiling pasta water, while the four front burners handle sautéing, saucing and fresh ingredient combinations. Up to 13 backup stock pots are spaced between rear burners to preheat and await their turn in pasta production. A three-tier plate shelf is positioned directly above the rear burners where waste heat can be used to warm plates.

Naturally, speed in bringing pasta water to a boil and boil recovery are critical for meeting the dinner rush and handling production orders from the pasta bar. Carrabba's started out using 20,000 BTU/hr. range burners but increased burner output until they were specifying 30,000 and 33,000 BTU/hr. burners, provided by two different gas range manufacturers. With that power output they could bring pasta water to a boil in about 20 minutes.

Eneron's Turbo Pot Changes the Game

Joel Barker is Carrabba's Vice President of R & D and Kitchen Operations. He is a 22-year veteran of Carrabba's, having started as a line cook for Outback Steakhouse in 1989 and then transferring to Carrabba's as a Kitchen Manager in 1993. One of Joel's responsibilities is to evaluate energy usage and its impact on Carrabba's operating costs and profitability.

"With over 230 restaurants in the system, we use a lot of natural gas for cooking," commented Barker. "We have used the Food Service Technology Center (FSTC) in San Ramon, California to evaluate and test

equipment, with the objective of reducing energy usage and our carbon footprint. The FSTC had been testing two variations of Eneron's fin-bottom pots and sent one to our OSI R&D Center in Tampa, Florida."

"Jay Smith, one of our R&D specialists saw the pot, was intrigued and ran a water boil test on a 33,000 BTU/hr. range burner. He called to tell me he brought water to a boil in just seven minutes. I didn't believe him. After confirming those impressive results, we contacted Lee Huang, President of Eneron and inventor of the Turbo Pot. We offered to work with them and test their new pots under real-world restaurant conditions."

Eneron's unique pots and sauté pans have closely spaced fins covering a special heat-sink bottom, greatly increasing surface area and efficiency in transferring heat into the pot. Turbo Pots were specifically designed to increase open burner gas range-top cooking performance.

"Testing showed we could in fact boil water in seven minutes and recover the boil in only 30 seconds after adding more water," says Barker. "That was spectacular but we decided it made more sense to reduce burner power, save that energy and maintain the same 20-minute boil time, without modifying our standard kitchen procedures and ticket times. We were able to throttle-back burner power to 15,000 BTU/hr., literally cutting per burner gas consumption in half, when compared to the 30,000 or 33,000 BTU burners we were using.

The modification required changing orifices and some air flow adjustment at a cost of about \$20 per burner. The only other change we made was changing handle locations so the pots directed heat toward the rear plate shelves, because they weren't getting as hot with less waste heat."

"We still had to build a strong return-on-





An Eneron Turbo Pot Energy & CO2 Emissions Calculator*

Key Assumptions: Based on 360 operating days per year and moderate 40% energy savings. Average cost per therm = \$1.00. 1 therm = 12 pounds of CO2. Rates and conditions may vary.

Potential Energy Savings - Per Turbo Pot-Burner			Potential Emissions Savings - Per Turbo Pot-Burner		
Hours Used Per Day	Typical 20,000 BTU Burners	Typical 30,000 BTU Burners	Hours Used Per Day	Typical 20,000 BTU Burners	Typical 30,000 BTU Burners
2	\$57.50	\$86.40	2	690 pounds	1037 pounds
3	\$86.40	\$129.60	3	1037 pounds	1555 pounds
4	\$115.20	\$172.80	4	1380 pounds	1728 pounds
5	\$144.00	\$216.00	5	1728 pounds	2582 pounds
6	\$172.28	\$259.20	6	2074 pounds	3110 pounds

*Results will vary with actual hours of use, fuel costs and actual burner output.

For independent test results, visit: http://www.fishnick.com/publications/appliancereports/rangetops/Eneron_Pot_Testing.pdf

investment case to convince our Finance Group to invest in 13 new Turbo Pots for each restaurant; pots that would cost more than the old flat-bottom pots. We got enough Turbo Pots to equip three restaurants, two in St. Petersburg and one in Port St. Lucie, Florida. We derated (reduced) the BTU input on those ranges, metered them and tracked energy usage. With that hard data we calculated the resulting cooking load savings and payback.”

“The payback on our out-of-pocket expenses for the 8.5 quart Eneron sauce pots and the service cost of derating range burners was five to six months, from cooking energy savings alone. Those pots are on-boil four to six hours each day. Even without factoring in potential space conditioning (A/C) savings from less waste heat, it was easy to justify a full rollout of the Turbo Pots into all Carrabba’s.”

Lift-Off Griddle Plates Add Broiler Versatility

Carrabba’s is also known for their steaks and fresh seafood. They use a gas char broiler for marking and grilling steaks, chicken and seafood.

“We have had some issues with broiling delicate products like fish fillets — the high heat and pieces falling through the grates,” according to Barker. “We worked with Eneron to adapt their fin-bottom technology to make aluminum griddle plate inserts that could be used to replace two or more broiler top grate sections, depending on the balance of grilled-to-broiled product needed. We created 5-, 10- and 14.5-inch wide lift-off griddle plate inserts and have introduced them system-wide, in two rollouts. With the help of Eneron, we can grill delicate items without adding a griddle and the additional energy costs.”



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