Wood Stone

DETAILED PRODUCTION COMPARISON

Fire Deck Oven vs. Traditional Deck Oven

The comparison of a Wood Stone stone hearth oven and a traditional deck oven can also be approached from a strict production capacity oriented point of view. In doing so, it is key to examine production capacity over an extended period of time, for instance independent 1-hour windows or a 2-3 hour sustained rush. It is important to do this because the Wood Stone production point of difference does not emerge on the first round of pizzas, but rather on the second, third, fourth, and so on. Here is little more detailed explanation...

HEARTH CAPACITY

One way to examine production capacity is to ask how many pizzas can be placed on the hearth at one time. We will call this a 3-Dimensional comparison because we are talking shapes and sizes. For this example we will use 16" pies, and we will use the WS-FD-8645. The 8645 can fit 6 x 16" pies at a time. For the traditional deck oven we will use a typical configuration which also fits 6 x 16" pies, but we will assume they have two decks. If production capacity were examined using just this 3-Dimensional method of comparing shapes and sizes, than it would seem the traditional deck oven posses twice the capacity of the Fire Deck. This comparison, however, is only part of the story because it neglects an important factor in production capacity; cook time.

COOK TIME

Time is the "4th dimension" of production comparison. Depending on its thickness, an average 16" pie will cook in 3-5 minutes in 8645 Fire Deck. Let's choose the conservative estimate and use a 5 minute cook time for this exercise. Meanwhile, 8 minutes is a common cook time for a traditional deck oven when the chamber is thoroughly saturated with heat. In a head-to-head comparison the two decks will obviously win round one because they have more space, but the 8645 Fire Deck has 6 pies out in 5 minutes. Two minutes into the deck ovens' second round, (now 10 minutes into the test) the 8645 Fire Deck will have another 6 pies ready to come out and will have matched total production. The Wood Stone Fire Deck gains ground. If you follow the table below, you will see how this production crunch plays out over an hours' rush.

	:05 minutes	:08	:10	:15	:16	:20	:24	:25	:30	:32	:35	:40	:45	:48	:50	:55	:56	:60
Wood Stone	6 pizzas		12	18		24		30	36		42	48	54		60	66		72
Deck Oven					24		36			48		60		72			84	
1 Hour Score: One Wood Stone 72, Two Deck Ovens 84																		

If you play this out in 5 minute increments you see that after an hour the Fire Deck would have produced 72 pizzas and the two decks 84. In this scenario the one 8645 is a little behind the two decks but definitely giving it a run, in fact at 65 minutes the 78th pizza would come out of the Fire Deck, making the spread only 6 pizzas, or roughly a 7% difference. Not bad, but remember this example assumes the cook times will stay the same for each oven.

DECK HEAT RETENTION

The Cook Time comparison above is really just an exercise in mathematics because it assumes that both the deck ovens and the Fire Deck will perform the same on each later round of pizzas as it did on the first. The reality is that the Fire Deck will and the deck ovens will not. That's a big claim, why can we say that?

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An ongoing program of product improvement may require us to change specifications without notice. **Revised August 2010**

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Because of the way each is constructed. The tremendous thermal mass of the Fire Deck – the 4" thick monolithic floor and dome – coupled with the dual radiant flame burners and infrared under-floor burner provides a constant deck temperature. The Fire Deck has almost no floor recovery issue. If on the first round of pizzas you have 5 minute cook time, you can count on a 5 minute cook time 1 hour in to your rush, 2 hours in to your rush, 3 hours in to your rush, and so on. Conversely, in a deck oven which lacks the thermal mass as well as the horsepower of the Wood Stone burner configuration, a significant increase in cook times will be experienced over the period of your rush. By the third round of pies, if not on the second, the increase will be noticeable, and by the end of an hour you could see real cook times of 12-14 minutes, almost twice what you started with. Let's look at that table. We'll give the first deck oven round a cook time of 8 minutes, but then each subsequent round they'll lose a minute until they hit equilibrium at 12 minutes.

	:05 min.	:08	:10	:15	:17	:20	:25	:27	:30	:35	:38	:40	:45	:46	:50	:55	:60
Wood Stone	6 pizzas		12	18		24	30		36	42		48	54		60	66+	72
Deck Oven		12		24	24	36		36	48		60		72			84	
1 Hour Score: One Wood Stone 72, Two Deck Ovens 60																	

EXTENDED RUSHES

The reality is that under heavy production a Wood Stone Fire Deck 8645 should begin to out produce the traditional deck oven at around 50-60 minutes, but the real test for many operators come in the 2nd and 3rd hour of their busiest times. Picture your money making Friday or Saturday night. With a traditional double stack deck oven after an hour you're past your peak performance and now into a tough production scenario where at best your cook times are 11-12 minutes. Here is how that comparison looks, remember that the Wood Stone with it's underfloor burner, higher horsepower and greater thermal mass is still producing 5 minute pizzas.

	1:00 min.	1:02	1:05	1:10	1:14	1:15	1:20	1:25	1:26	1:30	1:35	1:38	1:40	1:45	1:50	1:55	:60
Wood Stone	72 pizzas		78	84		90	96	102		108	114		120	126	132	138	144
Deck Oven		12		24	24	36		36	48		60				120		132
1 Hour Score: One Wood Stone 72, Two Deck Ovens 60																	

SUMMARY

If when comparing a Wood Stone vs. a traditional deck oven for production capacities you look beyond merely how many pies can be put on the deck at once into the more crucial issues of cook time and heat retention in the floor, you see that not only does a single Wood Stone Fire Deck keep up with multiple traditional deck ovens, it out paces the deck ovens. Moreover, it produces a superior product while giving the chef a constant cooking environment. The chef does not have to relearn how to operate the oven at 8:00pm on Friday night, it will work the same throughout the day. This is true wherever the oven is located. A Wood Stone is a superior piece of equipment even if it is placed in the back kitchen of any and every restaurant currently using a traditional deck. Of course what you also get with the Wood Stone is a tremendous show. It is a show that a deck oven can never produce. High production, tremendous theater, consistency, superior end product, the Wood Stone really does bring more to the table.

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