



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	TurboChef
Model	Tornado®
Appliance	Counter top rapid cook oven - Electric

Report Number	5012.09.12
Date	March, 2009
Tested By	G. Sorensen

Purpose of Testing

This testing determined the energy input rate, preheat time and energy, idle energy rate and heavy-load cooking-energy efficiency of the oven by applying ASTM F2238.

Energy Input Rate

Test Voltage (V)	208
Rated Energy Input Rate (kW)	5.99
Measured Energy Input Rate (kW)	5.72
Difference (%)	4.5

Preheat

Voltage (V)	208
Oven Temperature (°F)	520
Duration (min)	12.5
Energy Consumption (kWh)	0.780

Idle

Voltage (V)	208
Oven Temperature (°F)	520
Idle Energy Rate (kW)	1.48

Heavy-Load Cooking Energy Efficiency ^a

Voltage (V)	208
Food Product ^b	Cheese Pizza
Oven Temperature (°F)	520
Cook Time (min)	1.25
Test Time (min)	11.9
Cooking Energy Rate (kW)	5.01
Energy to Food (Btu/lb)	151
Energy to Appliance (Btu/lb)	337
Cooking-Energy Efficiency (%)	44.7 ± 1.5
Production Capacity (lb/hr)	35.4 ± 3.3

^a based on a minimum of three test replicates.

^b pizza was cooked with a single stage recipe:
oven temperature 520°F, microwave setting 80%, fan setting 100%.



TurboChef Technologies, Inc.

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Heavy-Load Test Data

	Test #1	Test #2	Test #3
Measured Values			
Test Voltage (V)	208	208	208
Cook Time (min)	1.25	1.25	1.25
Test Time (min)	11.6	11.6	12.4
Electric Energy to Oven (kWh)	0.990	0.990	0.990
Number of Pizzas	7	7	7
Initial Pizza Temperature (°F)	40.0	40.0	40.0
Average Final Pizza Temperature (°F)	194.5	195.1	194.0
Initial Weight of Pizza (lb)	10.040	10.095	9.975
Final Weight of Pizza (lb)	9.410	9.515	9.355
Calculated Values			
Sensible Heat (Btu)	920	928	911
Latent - Heat of Vaporization (Btu)	611	563	601
Total Energy to Food (Btu)	1,531	1,491	1,512
Energy to Food (Btu/lb)	152	148	152
Total Energy to Oven (Btu)	3,379	3,379	3,379
Energy per Pound of Food Cooked (Btu/lb)	337	335	339
Cooking-Energy Efficiency (%)	45.3	44.1	44.8
Cooking-Energy Rate (kW)	5.12	5.12	4.79
Production Capacity (lb/h)	36.2	36.2	33.9

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