



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	Blodgett
Model	XCEL
Appliance	Half-size convection oven - Electric

Report Number	5012.08.03
Test Date	November, 2006
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 F1496-99.

Energy Input Rate

Test Voltage (V)	208
Rated Energy Input Rate (kW)	10.3
Measured Energy Input Rate (kW)	10.0
Difference (%)	2.5

Preheat to 350°F

Duration (min.)	8.5
Energy Consumption (Wh)	840
Preheat Rate (°F/min.)	31.3

Idle at 350°F

Idle Energy Rate (kW)	0.63
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Idle at 300°F (Setback mode)

Idle Energy Rate (kW)	0.27
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Heavy-Load Energy Efficiency*

Food Product	Russet Potatoes
Oven Temperature (°F)	350
Cook Time (min.)	43.4
Cooking Energy Rate (kW)	4.5
Energy to Food (Btu/lb)	227
Energy to Oven (Btu/lb)	305
Cooking Energy Efficiency (%)	74.3 ± 0.9
Production Capacity (lb/h)	50.8 ± 1.2

* based on a minimum of three test replicates



Blodgett

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Heavy-Load Potato Test Data

	Test #1	Test #2	Test #3
Measured Values			
Test Voltage (V)	208	208	208
Electric Energy to Oven (kWh)	3.30	3.26	3.28
Cook Time (min)	43.7	43.3	43.1
Initial Weight of Potatoes (lb)	36.680	36.565	36.860
Final Weight of Potatoes (lb)	32.225	32.135	32.525
Initial Temperature of Potatoes (°F)	73.6	74.5	73.5
Final Temperature of Potatoes (°F)	205.0	205.0	205.0
Calculated Values			
Sensible (Btu)	4,049	4,008	4,072
Latent (Btu)	4,321	4,297	4,205
Total Energy to Food (Btu)	8,370	8,305	8,277
Energy to Food (Btu/lb)	228	227	225
Total Energy to Oven (Btu)	11,263	11,126	11,195
Energy per Pound of Food Cooked (Btu/lb)	307	304	304
Cooking-Energy Efficiency (%)	74.3	74.6	73.9
Cooking-Energy Rate (kW)	4.5	4.5	4.6
Production Capacity (lb/h)	50.4	50.7	51.3

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