



Food Service Technology Center Appliance Test Summary Report

The information in this report is based on data generated at the PG&E Food Service Technology Center (FSTC). The FSTC Energy Efficiency for Foodservice Program is funded by California utility customers and administered by Pacific Gas & Electric Company (PG&E) under the auspices of the California Public Utilities Commission. California consumers are not obligated to purchase any full service or other service not funded by the program.

Manufacturer	Blodgett
Model / Serial Number	Mark-V-111 / 081211PA009S
Appliance	Full size convection oven

Report Number	501311084 -R0
Test Date	January-2012
Tested By	M. Karsz

Purpose of Testing

This testing determined the energy input rate, preheat time and energy, idle energy rate, heavy-load cooking efficiency and production capacity of the convection oven by applying the ASTM Standard Test Method F1496-99 (2005).

Cavity Volume

Internal Oven-Cavity Volume (CuFt)	8.14
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Energy Input Rate

Test Voltage (V)	240
Rate Energy Input Rate (kW)	11.00
Measured Energy Input Rate (kW)	10.60
Difference (%)	3.6

Preheat

Duration (min)	8.81
Test Voltage (V)	240
Electric Energy Consumption (kWh)	1.54
Preheat Rate (°F/min)	31

Idle Energy Rate

Idle Temperature (°F)	350
Test Voltage (V)	240
Idle Energy Rate (kW)	1.46

Heavy-Load Cooking Energy Efficiency*

Food Product	Russet Potatoes
Oven Temperature (°F)	350.00
Cook Time (min)	44.00
Test Voltage (V)	240
Electric Cooking Energy Rate (kW)	8.88
Energy to Food (Btu/lb)	227
Energy to Appliance (Btu/lb)	307
Cooking Energy Efficiency (%)	73.7 ± 1.3
Production Capacity (lb/h)	98.6 ± 1.8

*Based on a minimum of three test replicates



Blodgett Mark-V-111 Convection Oven

Blodgett
44 Lakeside Ave.
Burlington, VT 05401
Blodgett.com

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Electric Oven

Heavy-Load Cooking Test Data

Measured Values	Test #1	Test #2	Test #3
Test Date	1/18/12	1/19/12	1/25/12
Number of Pans	5	5	5
Total Potato Count	30	30	30
Initial Weight of Potatoes (lb)	72.500	71.910	72.505
Final Weight of Potatoes (lb)	63.925	63.565	63.790
Initial Temperature of Potatoes (°F)	71.6	72.2	71.7
Final Temperature of Potatoes (°F)	205	205	205
Initial Weight of Sheet Pans (lb)	17.785	17.770	17.595
Test Time (min)	44.50	43.50	44.00
Test Voltage (V)	240	240	240
Electric Energy Consumption (Wh)	6510.0	6383.0	6645.0
Gas Energy Consumption (Btu)	0	0	0
Gas Heating Value (Btu/scf)	N/A	N/A	N/A
Calculated Values			
Specific Heat of Potatoes (Btu/lb,F)	0.840	0.840	0.840
Sensible Energy (Btu)	8,124	8,022	8,119
Latent Vaporization Energy (Btu)	8,318	8,095	8,454
Total Energy to Food (Btu)	16,442	16,117	16,573
Energy to Food (Btu/lb)	227	224	229
Total Appliance Energy Consumption (Btu)	22,219	21,785	22,679
Energy to Appliance (Btu/lb)	306	303	313
Results			
Cooking Energy Efficiency (%)	74.0	74.0	73.1
Test Voltage (V)	240	240	240
Electric Cooking Energy Rate (kW)	8.78	8.80	9.06
Production Capacity (lb/h)	97.8	99.2	98.9
Cook Time (min)	44.50	43.50	44.00

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