



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. California consumers are not obligated to purchase any full service or other service not funded by the program. This program is funded by the California utility rate payers under the auspices of the California Public Utilities Commission.

Manufacturer	Garland
Model	Xpress XE24
Appliance	2-foot double-sided electric griddle

Report Number	5012.08.23
Test Date	June, 2008
Tested By	D. Cowen

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 double-sided griddle by applying the ASTM F1605-95(2001) Standard Test Method.

Energy Input Rate

Rated Energy Input Rate (kW)	17.3
Measured Energy Input Rate (kW)	17.0
Difference (%)	1.70

Preheat to 350°F

	Platens Up	Platens Down
Duration (min)	15.3	14.5
Energy Consumption (kWh)	3.66	3.51
Preheat Rate (°F/min)	17.9	19.3

Idle at 350°F

	Platens Up	Platens Down
Idle Energy Rate (kW)	2.67	1.02

Heavy-Load Cooking Energy Efficiency ^a

Food Product	Hamburgers
Load Size (Count)	16
Cook Time (min)	2.33
Average Recovery Time (min)	1.07
Cooking Energy Rate (kW)	12.4
Energy to Food (Btu/lb)	450
Energy to Appliance (Btu/lb)	603
Cooking-Energy Efficiency (%)	74.6 ± 1.7
Production Capacity (lb/hr)	70.2 ± 6.3

^a based on a minimum of three test replicates.



Garland Xpress XE24 double-sided electric griddle.

Garland

185 East South Street
Freeland, PA 18224-1999
www.garland-group.com

Manufacturer	Garland
Model	Xpress XE24
Appliance	2-foot double-sided electric griddle

Report Number	5012.08.23
Test Date	June, 2008
Tested By	D. Cowen

Heavy-Load Test Data

	Repetition #1	Repetition #2	Repetition #3
Measured Values			
Electrical Energy Consumption (Wh)	4,200	4,320	4,410
Cook Time (min)	2.33	2.33	2.33
Total Test Time (min)	19.62	21.09	20.54
Weight Loss (%)	34.61	34.46	33.78
Initial Weight (lb)	23.857	23.909	23.804
Final Weight (lb)	15.601	15.669	15.764
Initial Fat Content (%)	18.7	18.7	18.7
Initial Moisture Content (%)	61.3	61.3	61.3
Final Moisture Content (%)	54.7	54.0	55.3
Initial Temperature (°F)	0	0	0
Final Temperature (°F)	162	161	160
Calculated Values			
Initial Weight of Water (lb)	14.624	14.656	14.592
Final Weight of Water (lb)	8.541	8.468	8.713
Weight of Fat (lb)	4.461	4.471	4.451
Weight of Solids (lb)	4.771	4.782	4.761
Sensible to Ice (Btu)	234	234	233
Sensible to Water (Btu)	1,898	1,897	1,862
Sensible to Fat (Btu)	289	289	284
Sensible to Solids (Btu)	154	154	152
Latent – Water Fusion (Btu)	2,106	2,110	2,101
Latent – Fat Fusion (Btu)	204	204	204
Latent – Heat of Vaporization (Btu)	5,901	6,003	5,702
Total Energy to Food (Btu)	10,786	10,892	10,539
Energy To Food (Btu/lb)	452	456	443
Total Energy to Griddle (Btu)	14,335	14,744	14,130
Energy to Griddle (Btu/lb)	601	617	594
Cooking-Energy Efficiency (%)	75.2	73.9	74.6
Cooking Energy Rate (kW)	12.84	12.29	12.09
Production Rate (lb/h)	73.0	68.0	69.5
Average Recovery Time (min)	0.94	1.18	1.09

Legal Notice

This report was prepared as a result of work sponsored by the California Public Utilities Commission (Commission). It does not necessarily represent the views of the Commission, its employees, or the State of California. The Commission, the State of California, its employees, contractors, and subcontractors make no warranty, express or implied, and assume no legal liability for the information in this report; nor does any party represent that the use of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the Commission nor has the Commission passed upon the accuracy or adequacy of the information in this report.

Disclaimer

Neither Fisher-Nickel, inc. nor the Food Service Technology Center nor any of its employees makes any warranty, expressed or implied, or assumes any legal liability of responsibility for the accuracy, completeness, or usefulness of any data, information, method, product or process disclosed in this document, or represents that its use will not infringe any privately-owned rights, including but not limited to, patents, trademarks, or copyrights.

Reference to specific products or manufacturers is not an endorsement of that product or manufacturer by Fisher-Nickel, inc., the Food Service Technology Center or Pacific Gas & Electric Company (PG&E).

Retention of this consulting firm by PG&E to develop this report does not constitute endorsement by PG&E for any work performed other than that specified in the scope of this project.