



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	Garland
Model	MWG2W
Appliance	3-foot double-sided gas griddle
Griddle Plate	36 x 24 inch

Report Number	501310031
Report Date	August, 2010
Tested By	K.Sham

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 (2007) Standard Test Method.

Energy Input Rate

Rated Gas Energy Input Rate (Btu/h)	64,000
Measured Gas Energy Input Rate (Btu/h)	65,602
Difference (%)	2.50
Rated Electrical Energy Input Rate (kW)	11.1
Measured Electrical Energy Input Rate (kW)	11.2
Difference (%)	0.89

Preheat to 350°F

	Platens Down
Duration (min)	10.09
Gas Energy Consumption (Btu)	9,199
Electric Energy Consumption (kWh)	1.76
Preheat Rate (°F/min)	26.07

Idle at 350°F

	Platens Up	Platens Down
Gas Idle Energy Rate (Btu/h)	5,680	3,395
Electrical Idle Energy Rate (kW)	1.39	1.08
Normalized Idle Energy Rate (Btu/hr/ft ²)		1,180

Heavy-Load Cooking Energy Efficiency ^a

Food Product	Hamburgers
Load Size (Count)	12
Cook Time (min)	2.92
Average Recovery Time (min)	<1
Gas Cooking Energy Rate (Btu/h)	27,450
Electric Cooking Energy Rate (kW)	3.37
Energy to Food (Btu/lb)	449
Energy to Appliance (Btu/lb)	859
Cooking-Energy Efficiency (%)	52.3 ± 3.9
Production Capacity (lb/hr)	45.3 ± 1.0

^a based on a minimum of three test replicates.



Garland MWG2W double-sided gas griddle.

Garland

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

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Heavy-Load Test Data

	Repetition #1	Repetition #2	Repetition #3
Measured Values			
Gas Energy Consumption (Btu)	11,440	10,704	10,708
Electric Energy Consumption (Wh)	1,360	1,350	1,320
Cook Time (min)	2.92	2.92	2.92
Total Test Time (min)	24.21	23.64	23.96
Weight Loss (%)	35.32	34.27	34.59
Initial Weight (lb)	18.12	18.02	18.10
Final Weight (lb)	11.76	11.84	11.84
Initial Fat Content (%)	19.5	19.5	19.5
Initial Moisture Content (%)	60.5	60.5	60.5
Final Moisture Content (%)	54.4	54.2	53.2
Initial Temperature (°F)	0	0	0
Final Temperature (°F)	163	161	162
Calculated Values			
Initial Weight of Water (lb)	10.97	10.91	10.96
Final Weight of Water (lb)	6.40	6.42	6.33
Weight of Fat (lb)	3.53	3.50	3.52
Weight of Solids (lb)	3.62	3.60	3.62
Sensible to Ice (Btu)	176	175	175
Sensible to Water (Btu)	1,438	1,406	1,422
Sensible to Fat (Btu)	230	226	228
Sensible to Solids (Btu)	118	116	117
Latent – Water Fusion (Btu)	1,580	1,571	1,578
Latent – Fat Fusion (Btu)	166	165	166
Latent – Heat of Vaporization (Btu)	4,436	4,354	4,493
Total Energy to Food (Btu)	8,114	8,013	8,180
Energy To Food (Btu/lb)	449	445	452
Total Energy to Griddle (Btu)	16,080	15,311	15,213
Energy to Griddle (Btu/lb)	887	850	840
Cooking-Energy Efficiency (%)	50.6	52.3	53.8
Gas Cooking Energy Rate (Btu/h)	28,350	27,170	26,820
Electric Cooking Energy Rate (kW)	3.37	3.43	3.31
Production Rate (lb/h)	44.9	45.7	45.3
Average Recovery Time (min)	<1	<1	<1

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