



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	Market Forge
Model	ETP-10G
Appliance	10-Pan Steamer - Gas

Report Number	5012.08.18
Test Date	August, 2007
Tested By	C. Wallace

Purpose of Testing

This testing determined the energy input rate, preheat time and energy, idle energy rate and heavy-load potato cooking-energy efficiency of the steamer by applying ASTM F1484-05.

Energy Input Rate

Rated Energy Input Rate (Btu/h)	84,000
Measured Energy Input Rate (Btu/h)	82,226
Difference (%)	2.1
Electric Energy Rate (kW)	0.035

Preheat to 210°F

Duration (min.)	20.8
Energy Consumption (Btu)	16,690
Electric Energy Rate (kW)	0.035

Idle

Average Cavity Temperature (°F)	173
Idle Energy Rate (Btu/h)	5,694
Electric Energy Rate (kW)	0.03

Heavy-Load Energy Efficiency*

Food Product	Red Potatoes
Cook Time (min.)	26.5
Cooking Energy Rate (Btu/h)	50,694
Electric Energy Rate (kW)	0.064
Energy to Food (Btu/lb)	106.6
Energy to Steamer (Btu/lb)	280.2
Cooking Energy Efficiency (%)	39.7 ± 0.1
Production Capacity (lb/h)	181.5 ± 0.8
Water Consumption Rate (gal/hr)	7.8

* based on a minimum of three test replicates



Market Forge Industries

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Heavy-Load Potato Test Data

	Test #1	Test #2	Test #3
Measured Values			
Energy to Steamer (Btu)	22,670	22,247	22,369
Electric Energy to Oven (Btu)	95	95	97
Cook Time (min)	26.9	26.0	26.5
Initial Weight of Potatoes (lb)	80.0	80.0	80.1
Total Potato Count	500	500	500
Initial Temperature of Potatoes (°F)	73.1	72.5	72.6
Final Temperature of Potatoes (°F)	195.1	195.6	195.1
Weight of Steam Pans (lb)	27.7	27.7	27.7
Water Consumption (gal)	3.9	3.2	3.3
Average Condensate Temperature (°F)	115.0	115.0	115
Calculated Values			
Energy Absorbed by Potatoes (Btu)	8,491	8,568	8,537
Energy Absorbed by Steam Pans (Btu)	371.3	374.7	372.9
Total Energy to Food and Pans (Btu)	8,863	8,942	8,910
Energy to Food (Btu/lb)	106	107	107
Total Energy Consumed by Steamer (Btu)	22,670	22,247	22,369
Energy Consumed per Pound of Food Cooked (Btu/lb)	283	278	279
Cooking-Energy Efficiency (%)	39.1	40.2	39.8
Cooking-Energy Rate (Btu/h)	50,535	51,119	50,427
Electric Energy Rate (kW)	0.064	0.064	0.064
Water Consumption Rate (gal/hr)	8.7	7.3	7.4
Production Capacity (lb/h)	178	185	181

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