



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	Frymaster
Model	Protector 14.0 kW
Appliance	14-inch Open Deep Fat Fryer - Electric

Report Number	5012.08.26
Test Date	May, 2007
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 fryer by applying the ASTM F1361-07 Standard Test Method.

Energy Input Rate

Test Voltage (V)	208
Rated Energy Input Rate (kW)	14.0
Measured Energy Input Rate (kW)	14.7
Difference (%)	4.76

Preheat to 350°F

Voltage (V)	208
Duration (min)	14.3
Energy Consumption (kWh)	1.36
Preheat Rate (°F/min)	19.2

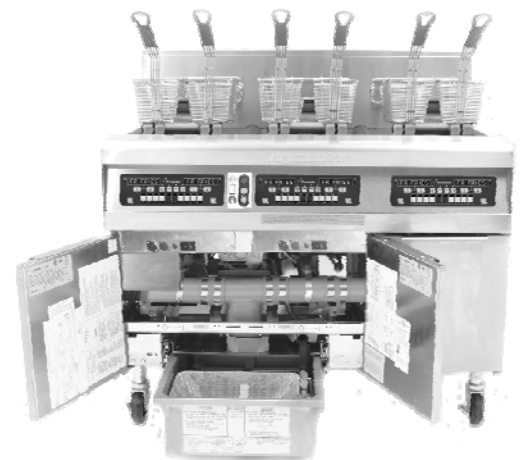
Idle at 350°F

Voltage (V)	208
Idle Energy Rate (kW)	0.79

Heavy-Load Cooking Energy Efficiency ^a

Voltage (V)	208
Food Product	French Fries
Load Size (lb)	3.00
Cook Time (min)	2.47
Average Recovery Time (sec)	< 10
Cooking Energy Rate (kW)	13.1
Energy to Food (Btu/lb)	562
Energy to Appliance (Btu/lb)	656
Cooking-Energy Efficiency (%)	85.6 ± 1.8
Production Capacity (lb/hr)	68.2 ± 2.9

^a based on a minimum of three test replicates.



**Frymaster Protector 14 kW
electric fryer.**

Frymaster

8700 Line Avenue
Shreveport, LA 71135
www.frymaster.com

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Heavy-Load Test Data

	Test #1	Test #2	Test #3
Measured Values			
Test Voltage (V)	208	208	208
Energy Consumption (Wh)	2,885	2,885	2,885
Total Energy (Btu)	9,847	9,847	9,847
Cook Time (min)	2.42	2.50	2.40
Total Test Time (min)	12.9	13.3	13.3
Weight Loss (%)	29.00	29.90	29.30
Initial Weight (lb)	15.000	15.000	15.000
Final Weight (lb)	10.644	10.515	10.600
Initial Moisture Content (%)	64.5	64.5	64.5
Final Moisture Content (%)	44.9	44.2	44.0
Initial Temperature (°F)	0	0	0
Final Temperature (°F)	212	212	212
Calculated Values			
Initial Weight of Water (lb)	9.675	9.675	9.675
Final Weight of Water (lb)	4.779	4.648	4.664
Sensible (Btu)	2,210	2,210	2,210
Latent – Heat of Fusion (Btu)	1,393	1,393	1,393
Latent – Heat of Vaporization (Btu)	4,749	4,876	4,861
Total Energy to Food (Btu)	8,352	8,479	8,464
Energy To Food (Btu/lb)	557	565	564
Total Energy to Fryer (Btu)	9,847	9,847	9,847
Energy to Fryer (Btu/lb)	656	656	656
Cooking-Energy Efficiency (%)	84.8	86.1	86.0
Electric Energy Rate (kW)	13.4	13.0	13.0
Production Rate (lb/h)	69.6	67.5	67.6
Average Recovery Time (sec)	< 10	< 10	< 10

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