



Food Service Technology Center Appliance Test Summary Report

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Manufacturer	Ultrafryer Systems, Inc.
Model	BE20-18
Appliance	18-inch Open Deep Fat Fryer - Electric

Report Number	5012.09.02
Report Date	January, 2009
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 F2144-07 Standard Test Method.

Energy Input Rate

Test Voltage (V)	208
Rated Energy Input Rate (kW)	20.0
Measured Energy Input Rate (kW)	19.1
Difference (%)	4.73

Preheat to 350°F ^a

Voltage (V)	208
Duration (min)	19.2
Energy Consumption (kWh)	2.34
Preheat Rate (°F/min)	14.1

^a The preheat incorporated a melt cycle to prevent scorching the frying medium.

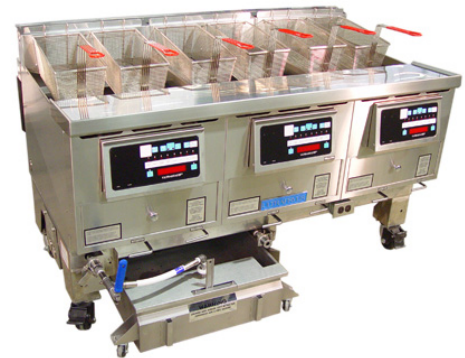
Idle at 350°F

Voltage (V)	208
Idle Energy Rate (kW)	1.08

Heavy-Load Cooking Energy Efficiency ^a

Voltage (V)	208
Food Product	French Fries
Load Size (lb)	5.00
Cook Time (min)	2.50
Average Recovery Time (sec)	43.2
Cooking Energy Rate (kW)	18.5
Energy to Food (Btu/lb)	564
Energy to Appliance (Btu/lb)	679
Cooking-Energy Efficiency (%)	83.2 ± 0.8
Production Capacity (lb/hr)	93.2 ± 1.3

^a based on a minimum of three test replicates.



Ultrafryer BE20-18 electric fryer.

Ultrafryer Systems, Inc.

302 Spencer Lane
San Antonio, TX 78201
www.ultrafryer.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)	5,000	5,000	4,920
Total Energy (Btu)	17,065	17,065	16,792
Cook Time (min)	2.50	2.50	2.50
Total Test Time (min)	16.1	16.2	16.0
Weight Loss (%)	30.00	30.00	30.00
Initial Weight (lb)	25.000	25.000	25.000
Final Weight (lb)	17.502	17.498	17.491
Initial Moisture Content (%)	69.8	69.8	69.8
Final Moisture Content (%)	52.5	53.0	53.7
Initial Temperature (°F)	0	0	0
Final Temperature (°F)	212	212	212
Calculated Values			
Initial Weight of Water (lb)	17.450	17.450	17.450
Final Weight of Water (lb)	9.189	9.274	9.393
Sensible (Btu)	3,684	3,684	3,684
Latent – Heat of Fusion (Btu)	2,513	2,513	2,513
Latent – Heat of Vaporization (Btu)	8,013	7,931	7,815
Total Energy to Food (Btu)	14,210	14,128	14,012
Energy To Food (Btu/lb)	568	565	560
Total Energy to Fryer (Btu)	17,065	17,065	16,792
Energy to Fryer (Btu/lb)	683	683	672
Cooking-Energy Efficiency (%)	83.3	82.8	83.4
Electric Energy Rate (kW)	18.6	18.6	18.5
Production Rate (lb/h)	93.0	92.8	93.8
Average Recovery Time (sec)	43.8	43.8	42.0

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